TOWN OF SHELBURNE

Closed First-Generation Landfill

Drilling and Environmental Monitoring Report – Final

June 2026 – 22-5099

Submitted by
Dillon Consulting Limited

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June 22, 2026

Town of Shelburne
168 Water Street
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Attention: Sarah Mattatall
Chief Administrative Officer

Closed First-Generation Landfill – Drilling and Environmental Monitoring Report, 31 Morvan Road, Shelburne, NS

Dillon Consulting Limited (Dillon) is pleased to submit the consolidated drilling and environmental monitoring report for the closed first-generation landfill site in Shelburne, NS. It contains a description of the site, background information on work completed by Dillon since 2022, and results of the 2025 drilling and monitoring well installation program, and the groundwater and surface water monitoring undertaken in Fall 2025 (monitoring wells only) and Spring 2026.

Please contact the undersigned should you have any questions or comments.

Sincerely,

Dillon Consulting Limited

Penny Allen, CET
Project Manager

Beverley Smith, P.Geo., FGC
Project Hydrogeologist

BCT:sk

Our file: 22-5099

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Executive Summary

This summary presents the findings of the environmental services completed by Dillon Consulting Limited (Dillon) on behalf of the Town of Shelburne for the closed first-generation landfill at 31 Morvan Road (referred to below as "the Landfill"). The full technical report contains detailed data and analysis; this document translates those findings into plain language for residents and members of the public.

The environmental services relate to a drilling and monitoring well installation program, sampling and analysis of soil, groundwater and surface water, and a residential well sampling program.

Between July 2025 and Spring 2026, Dillon's environmental team carried out the following work:

- Installed eight groundwater monitoring wells at the Landfill and collected some soil samples (checking soil for metals and organic compounds) to understand conditions at and immediately surrounding the site.
- Tested groundwater at the Landfill twice, in Fall 2025 and again in Spring 2026, checking for metals, dissolved solids (via general water chemistry) and organic compounds.
- Tested surface waters (streams on either side of the site along Morvan Road) in Spring 2026 for the same parameters as groundwater and biological oxygen demand. Note: the Fall 2025 attempt to sample surface waters was unsuccessful due to the drought conditions.
- Tested eight nearby homes in Spring 2026, as part of a voluntary sampling program, and collected drinking water samples from private residential wells, testing for metals and general water chemistry. Note: an earlier attempt in Fall 2025 was postponed because many wells were dry due to drought.

Lab results were compared to applicable provincial or federal guidelines. Indicator parameters were also assessed to check for any landfill influence.

The most important findings:

Soil - samples collected from the site were not impacted (iron considered background).

Groundwater at Landfill - some exceedances observed, including turbidity, total dissolved solids (TDS), iron, manganese, cobalt and uranium, as well as low pH. Note: cobalt and uranium occurred at one location (25-MW2S/D in the southeast).

Groundwater flow – shallow groundwater flows towards the south and southeast (towards the wetland that borders the Landfill), deep groundwater flows towards the south and southeast.

Surface waters - exceedances observed for aluminum and low pH. Surface water turbidity levels were low.

Residential groundwater – drinking water results showed primarily exceedances of aesthetic objectives or naturally occurring metals (such as, iron, manganese and arsenic).

Indicator Parameters - Although some landfill monitoring wells appear to be impacted by the Landfill (such as, 25-MW2S/D in the southeast), there do not appear to be any off-site impacts to residential groundwater or surface water. As noted, a wetland borders the immediate assumed downgradient perimeter of the Landfill.

The following table summarizes what was found in each area tested and what it means in plain terms.

Testing area	What was found?	What it means?
Soil (on-site)	Iron levels in two soil samples were above provincial guidelines.	The levels are considered background: a naturally occurring condition of the local geology.
Groundwater at Landfill (on-site monitoring wells)	Some parameters, including turbidity (cloudiness), total dissolved solids, iron, manganese, cobalt, and uranium, exceeded provincial or federal guidelines at one or more monitoring wells; and pH observed below the recommended range. Shallow and deep groundwater flow directions are to the south and southeast. A wetland borders the Landfill in these areas.	Elevated levels in some wells at the Landfill. Cobalt and uranium were found at one location (25-MW2S/D) where water was also turbid (cloudy). The presence of turbidity can affect test results. Concentrations of iron and manganese at the Landfill were higher (with the exception of upgradient 25-MW4S/4D, which was consistent with background). The highest indicator parameters were found in the downgradient area (i.e., in the southeast). The lowest were found up gradient of the Landfill (as expected).

Surface water (nearby streams)	Water was slightly acidic (low pH) and had elevated aluminum levels. Surface water turbidity levels were low.	These conditions are consistent with the natural characteristics of this watershed.
Residential groundwater (drinking water wells)	Some wells showed elevated levels of colour, cloudiness (turbidity), iron, manganese and/or arsenic. Each well contained low pH.	These are naturally occurring minerals common in Nova Scotia groundwater and groundwater in the region is often acidic.

It is natural to see some variation in the water quality when testing private wells in any rural area of Nova Scotia. The minerals found in some residential wells, such as iron, manganese and arsenic, occur widely in the bedrock and soils of this region. Dillon's assessment found higher levels of indicator parameters occurred at the Landfill (particularly in the southeast portion, which is down gradient of the site based on the groundwater flow direction). Homeowners who have concerns about their personal water quality are encouraged to contact Nova Scotia Department of Environment and Climate Change or have their well tested independently.

Conclusions

Although some landfill monitoring wells appear to be impacted by the Landfill, there does not appear to be any off-site impacts to groundwater or surface water. As noted, a wetland borders the immediate assumed downgradient perimeter of the Landfill. There was no indication of landfill impacts in the off-site well water or adjacent watercourses.

What happens next?

While the results of this environmental testing and monitoring are reassuring, Dillon has recommended the following actions in relation to the closed Landfill site:

- Ongoing monitoring: Establish a formal groundwater and surface water monitoring program for the Landfill site.
- Semi-annual groundwater testing: Sample on-site monitoring wells twice per year (semi-annually) to evaluate any changes in groundwater conditions over time and allow for trend analysis.
- Semi-annual surface water testing: Sample the three established surface water stations (SW1, SW2, and SW3) twice per year to monitor conditions and compare results to the Landfill site.

This Executive Summary is to be read in conjunction with the remainder of this report and is subject to the Disclaimer provided in Section 7.0 of this report.

1.0 Introduction

Dillon Consulting Limited (Dillon) undertook environmental consulting services for the Town of Shelburne (herein “the Town”), for the closed first-generation landfill located at 31 Morvan Road in Shelburne, Nova Scotia (herein “the Landfill”), presented on Figure 1 (attached). This report covers environmental services related to a drilling and monitoring well installation program, sampling and analysis of soil, groundwater, and surface water, and a residential well sampling program. As detailed herein, prior to the drilling program a site reconnaissance visit was undertaken to stake locations and drill pads were constructed within the wetland.

2.0 Background

The Landfill is located at 31 Morvan Road, in Shelburne Nova Scotia as presented on Figure 1 and Figure 2 (attached) and encompasses approximately 1.2 hectares. The Landfill originated in the 1940s and accepted waste material from the Town of Shelburne and surrounding generators, including the Town of Lockeport, Canadian Forces Station Shelburne, and Eastern Shelburne County. Material was delivered to the Landfill for disposal, and some of the delivered materials were buried under on-site soil. Often, material was burned to reduce volume.

The Landfill was closed in 1996 and capping activities were completed in 1998. These included: re-shaping the landfill contours; grading the side slopes to a uniform 2H:1V slope, placement and compacting of 300 mm of on-site soil (high silt/clay content) on the top and side slopes; relocation of metals and auto bodies; and, hydro-seeding the top and side slopes.

Provincial legislation banned the disposal of Municipal Solid Waste in “first-generation” (natural attenuation landfills) after December 31, 2005. The Landfill was also utilized as a transfer station for white goods and metals until 2016. Since 2016, at the request of the Nova Scotia Environment and Climate Change (NSECC), storm event brush debris has been stockpiled at the top of slope at the southern end of the Landfill.

In 2016, the Town contracted Englobe Corp. to complete an L1 Soil Remediation Program, ultimately resulting in the removal of 15.89 tonnes of petroleum impacted soil. This work was undertaken following an inspection by Nova Scotia Environment and Climate Change (NSECC) which identified visible surficial staining on the ground beneath two oil tanks covering areas measuring approximately two (2) square metres at each location. Shallow test pits were excavated in each area, with visibly stained soil removed for off-site disposal. Soil samples were collected by Englobe following the removal of the impacted soil. One area required additional soil removal and confirmatory testing to meet the applicable provincial guidelines. The Soil Remediation and Closure Report concluded that no further work was recommended.

3.0 Previous Site Activities by Dillon

3.1 2022 Site Visit and Visual Assessment

In January 2022, Dillon completed a site visit and visual assessment of the Landfill (Dillon, 2022). The objective of the visual assessment was to evaluate the Landfill conditions from an engineering perspective (i.e., landfill construction characteristic), biological/natural environment perspective (i.e., surrounding environment) as well as an environmental/hydrogeological perspective (i.e., local/regional groundwater flow regime). Recommendations from this assessment included:

- Engineering Considerations – legal and topographic surveys and a test pitting program to characterize soil characteristics (i.e., landfill cover) in the former landfill;
- Biological Considerations – delineation of the wet areas surrounding the landfill; and
- Environmental Considerations – based on historical site usage, environmental assessment and monitoring activities to characterize site soil, groundwater, and surface water conditions.

The Landfill was found to be stable and secured with fencing, though municipal solid waste (MSW) was visible on the surface in some areas. Wet areas were observed along the east, south, and western limits of the Landfill. No groundwater monitoring wells were found or had been historically identified. Dillon noted that, based on available topographic data, regional groundwater flow was likely west towards Shelburne Harbour. Dillon recommended legal and topographic surveys, a geophysical survey, a test pit program to assess the landfill cover (i.e., soil cover thickness), and the delineation of surrounding wet areas. Dillon also recommended environmental activities, including soil, groundwater and surface water sampling, be undertaken since the Landfill had not been previously assessed (Dillon, 2022). Eight groundwater monitoring wells were recommended as a means to assess groundwater quality and local hydrogeological conditions. In addition to monitoring wells, Dillon also recommended that surface water monitoring stations be established.

3.2 2023 Test Pitting Investigation, Wetland Assessment, and Geophysical Survey

Following the 2022 recommendations, Dillon returned in 2023 to conduct a more detailed technical program (Dillon, 2023). Dillon excavated a total of 22 test pits to inspect the Landfill's existing cover (15 in June 2023 and 7 in September 2023). The soil cover thickness was found to be highly inconsistent, ranging from 0 mm to 900 mm. Permeability tests on the silty sand cover measured $1.1x10^{-5}$ cm/sec and $7.2x10^{-6}$ cm/sec. Dillon concluded that the existing cap did not meet provincial standards for first-generation landfills, which typically require 1,000 mm of low-permeability soil plus a vegetative layer.

Recommendations included placing a new 500 mm low-permeability soil cover and 200 mm of vegetative soil across the Landfill.

A single continuous swamp feature was identified during the wetland delineation program. The swamp feature was found to immediately surround the Landfill boundary to the east, south and west. Therefore, it was recommended that three access roads (if needed) and drill pads should be installed along the southern edge of the landfill to provide access for the installation of monitoring wells. This would involve contacting NSECC to determine if a Wetland Approval would be required (where placing a relatively small amount of material to construct the drill pads into the edge of the wetland).

Results of the geophysical survey, completed by CSR GeoSurveys Ltd. in the summer of 2023, identified areas of high electrical conductivity, which often signal buried debris or potential groundwater impacts. The approximate cap area and inferred extent of waste based on the geophysical survey are presented in Figure 2 and Figure 3 (attached). In September 2023, Dillon returned to the site to conduct additional test pits (i.e., seven of the 22 in total) in the northern and western areas (where the geophysical survey noted high conductivity results), and waste was observed in each of these test pits.

Of note, Dillon has also been retained to conduct the recommended capping activities at the Landfill. A design was developed and tendered during 2025; however, due to higher than anticipated construction bids and limited available funding, this work was deferred to 2026. These activities are being undertaken separately from the environmental monitoring program.

3.3 2024 Drill Pad Installation

In April 2024, Dillon provided a site figure depicting the proposed locations of four monitoring well couplets (i.e., each couplet would contain one shallow monitoring well and one deep monitoring well), at one location topographically up gradient of the Landfill and three locations down gradient of the Landfill. For the three down gradient couplets, located on the west, south and east sides of the Landfill, permanent drill pads with dimensions of 4.6 by 9.2 metres were recommended to be constructed prior to monitoring well installation, as the wetland borders the immediate assumed downgradient perimeter of the Landfill, based on the geophysical survey, at these locations. The drill pads were proposed to facilitate drill rig access, provide a stable and safe work surface, and decrease standing water.

In line with provincial requirements, on August 20, 2024, Dillon submitted an application for a wetland alteration approval to NSECC, requesting to alter a total area of 0.01 hectares of wetland, in anticipation of constructing drill pads at the proposed down gradient groundwater monitoring locations. On October 7, 2024, NSECC requested additional information to complete the application, which Dillon submitted on October 21, 2024. NSECC issued an Approval for a wetland alteration (no. 2024-3596954-00) on November 19, 2024. Dillon submitted an application to amend the wetland alteration approval

on January 23, 2025, which would increase the footprint size of the wetland to be altered from 0.1 to 0.3 hectares, and a new Approval (no. 2024-3596954-01) was issued March 5, 2025. The Approval for wetland alteration requires post-construction wetland monitoring for one year, three years and five years post-construction of the drill pads by December 31st of the calendar year. The first post-construction wetland monitoring event was required in 2026 (completed in Spring 2026 and detailed throughout this report).

4.0 Drilling and Environmental Monitoring Program Methodologies

4.1 Drilling Program

4.1.1 Site Reconnaissance Visit

On December 17, 2024, Dillon staff conducted a site walkover with Town personnel, and personnel from Logan Geotech and Harlow Construction Ltd. to stake the locations of the proposed-up gradient monitoring well couplet and three down gradient monitoring well couplets, as well as stake out the footprints of the proposed drill pads for the proposed down gradient monitoring well locations. Site access was also evaluated to assess whether the drill rig could maneuver throughout the area without obstruction.

4.1.2 Drill Pad Construction

The drill pads were designed by Dillon during 2024 and constructed by Harlow Construction Ltd. on May 13 and 14, 2025. Daniel Campbell of Dillon was on-site to observe the drill pad construction. Prior to commencing pad construction, siltation fencing was placed around the exterior limits of each pad. The pads were built with 75 mm clear stone. The stone was prewashed of fines to prevent fines from entering the wetland. The drill pads were placed at the downgradient wells (i.e., 25-MW1S/D, 25-MW2S/D, 25-MW3S/D) and ranged in thickness from 0.57 m to 0.88 m.

4.1.3 Drilling Program and Soil Sampling

From July 2 to 6, 2025, the drilling, soil sampling and monitoring well installation program was undertaken onsite. Dillon personnel monitored the advancement of eight boreholes at four locations, with each borehole completed as a monitoring well installation. Logan Geotech was engaged to complete the drilling activities. A 55-CME track-mounted drill rig was used for the program. Prior to mobilization at the drill pad (i.e., at the site of each proposed down gradient monitoring well couplet), siltation fencing was installed around each drill pad to prevent sediment from entering the wetland. Water was obtained from the local fire station and used during rock coring. Discharge hoses and pumps were used to direct return water during rock coring away from the wetland into hay bales.

It is important to note that depths referenced in this report are exclusive of the drill pad thickness (i.e., this information was removed from the logs), and the ground surface elevation represents the original ground surface. Monitoring wells (i.e., 25-MW1S/D, 25-MW2S/D, 25-MW3S/D, 25-MW4S/D) were installed to depths ranging from 4.61 to 13.31 metres below ground surface (mbgs). Shallow wells

ranged from 4.61 to 7.03 mbgs and deep wells ranged from 11.21 to 13.31 mbgs. Each borehole was advanced using a split-spoon sampler and HQ core barrel for coring bedrock where necessary. During the advancement of each borehole, the soil stratigraphy was continuously logged. Soil type, colour, and visual/olfactory evidence of the presence/absence of petroleum hydrocarbon impacts were recorded. Soil samples were continuously collected during the advancement of each borehole (where possible) using a split-spoon sampler at 0.6 m intervals until sufficient depth had been achieved. When sufficient soil was recovered from the split-spoon, volatile organic compound (VOC) headspace concentration measurements were obtained from the recovered soil sample using a RKI Eagle photoionization detector (PID) operated in methane elimination mode and calibrated to hexane. Immediately after collection, the available soil was placed in laboratory-supplied sampling containers (collected using a 10 mL Terracore sampler and stored in two 40 mL vials containing a methanol preservation agent, as well as 60 mL and 250 mL glass containers) and were placed on ice in a cooler. Samples were selected for laboratory analysis based on field observations, VOC headspace results and using industry standard procedures. No waste was encountered in the boreholes during the drilling program.

Soil samples were submitted for petroleum hydrocarbons, or PHCs (i.e., benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbon (TPH)) with silica gel cleanup, polycyclic aromatic hydrocarbon (PAH), and total metals analysis. A silica gel cleanup was requested due to the presence of organics (i.e., naturally occurring due to the presence of the wetlands) in the samples. Soil samples were submitted to ALS Canada Ltd. (ALS), which is accredited by the Canadian Association of Laboratory Accreditation (CALA) to the ISO 17025 Standard for each of the analytical methods used. ALS possesses in-house QA/QC programs to govern sample analysis and analytical data quality assurance.

After completion of each borehole designated for monitoring well installation, 50 mm Schedule 40 PVC screen and casing were installed to complete the wells. Shallow monitoring wells were constructed with screen extending from the bottom of the well to above the groundwater table. Deep monitoring wells were screened within the bedrock unit. A filter pack was applied to the annulus between the screened PVC pipe and surrounding borehole with No. 2 silica sand to a minimum length of 0.3 m above the top of the PVC screen. For the deep wells, bentonite grout was applied between the filter pack above the screen and then a bentonite seal was applied above grout. Silica sand was then added until the remaining annulus was filled to near ground surface. The monitoring wells were then secured with a compression j-plug, above-ground protective casing and locks.

4.1.4 Monitoring Well Survey

Monitoring well locations were surveyed (for x, y and z) on July 14, 2025, using a Trimble Survey unit which uses survey grade global positioning system (GPS) with vertical and horizontal accuracy of less than 10 cm based on the active control network coordinates system (i.e., NAD83). Monitoring well locations are presented in Figure 2 (attached).

4.1.5 Surface Water Survey

Surface water stations were surveyed (for x, y and z) on March 30, 2026, using a Trimble Survey unit (NAD83). Surface water stations are presented in Figure 3 (attached). Dillon also measured the water level at nine locations within the on-site wetland, immediately to the southeast and southwest of the Landfill, with water levels presented on Figure 3 (attached).

4.2 Well Development, Monitoring and K Testing

4.2.1 Monitoring Well Development

On July 14 and 15, 2025, the monitoring wells were developed (a minimum of five well volumes) to facilitate the removal of initial drilling sediments in the wells or water introduced during rock coring, and to promote silica sand filter pack effectiveness. In order to reduce the potential of cross contamination between wells, and to provide a simple means of development and sampling, each well was installed with a dedicated pumping unit. This involved equipping each well with a 25-millimetre diameter foot valve attached to a 13 mm diameter discharge line (i.e., Waterra tubing). This pumping unit may remain indefinitely in the well or can easily be removed and/or replaced if damaged.

4.2.2 Groundwater Monitoring and Sampling

Two groundwater monitoring and sampling events were undertaken at the site: one on October 7, 2025, and one on March 30, 2026. The monitoring wells were purged and sampled during each event. Prior to purging, depth of groundwater was measured in each monitoring well from an established reference point (top of PVC) using an electronic interface probe. The wells were then sampled via macro-sampling methods, drawing representative water into the well from the surrounding hydrogeologic unit. Field measurements were taken (pH, conductivity and temperature) and recorded, along with water clarity observations. Monitoring well general inorganic chemistry, metals (including mercury) and dissolved organic carbon (DOC) aliquots were field filtered, and the metals aliquots were pre-charged by the lab with nitric acid for field preservation. Groundwater samples were collected via Waterra tubing into laboratory supplied containers.

Samples were submitted for analysis of general inorganic chemistry, metals (including mercury), volatile organic compounds (VOCs), total kjeldahl nitrogen (TKN), chemical oxygen demand (COD), phenols and total phosphorus. A field duplicate sample was taken at 25-MW2D (Fall 2025) and at 25-MW4S (Spring 2026). Samples were submitted to ALS which, as noted above, is accredited by CALA to the ISO 17025 Standard for each of the analytical methods used and have in-house QA/QC programs to govern sample analysis and analytical data quality assurance.

4.2.3 Hydraulic Conductivity (K) Tests

Hydraulic conductivity (K) testing was completed on select monitoring wells (i.e., two shallow and two deep) during the Spring 2026 event. This involved a rising head test, where the static water level in the well was measured, the water was then purged (or drawn down) and water level recovery measurements were taken at select intervals. The field data was compiled and assessed to estimate hydraulic conductivity.

The hydraulic conductivity values were estimated using AquiferTest® software (via the Hvorslev method). The Hvorslev method assumes the following:

- Unconfined or non-leaky confined aquifer of “apparently” infinite extent;
- Homogeneous, isotropic aquifer of uniform thickness;
- Water table is horizontal prior to the test;
- Instantaneous injection/withdrawal of a volume of water results in an instantaneous change in water level;
- Inertia of water column and non-linear well losses are negligible;
- Fully penetrating well;
- The well is considered to be of an infinitesimal width; and
- Flow is horizontal toward or away from the well.

4.3 Surface Water Monitoring and Sampling

Potential surface water locations were scouted during October 7, 2025, sampling program with intention to sample. Surface water locations to the east (one station) and to the west (two stations) of the Landfill, along Morvan Road were scouted. The two stations to the east were topographically down gradient of the Landfill, while the station to the east was similar in elevation to the Landfill. Due to the on-site wetland surrounding the Landfill footprint, on-site surface water stations (i.e., with flowing water) could not be established.

Due to the severe drought conditions during the summer of 2025 (190.5 mm recorded between June and September 2025 vs 390.4 mm the summer before at the Shelburne Sandy Point weather station) and the moderate drought conditions the area[1] was experiencing during the time of sampling, potential surface water locations were dry. No samples could be obtained.

[1] Source: https://agriculture.canada.ca/atlas/data_donnees/canadianDroughtMonitor/maps_cartes/en/conditionMap/2025/cdm_2509_en.pdf accessed on December 17, 2025. The drought classification for the area of Shelburne, NS experienced a D1- moderate drought conditions “Many regions across Atlantic Canada have recorded one of the driest July, August, September periods on record.”

Dillon revisited surface water locations during the wet season (Spring 2026) and was able to collect samples at three surface water monitoring stations (SW1, SW2, and SW3), as detailed in Table 4-1 below and presented on Figure 3 (attached).

Table 4-1: Surface Water Monitoring Stations

Surface Water Station ID	Description
SW1	East of Landfill; located along Morvan Road
SW2	Downgradient (west) of Landfill; located along Morvan Road in an unnamed watercourse flowing west
SW3	Downgradient (west) of Landfill; downgradient of SW2; located along Morvan Road, downstream of the confluence of two unnamed watercourses

Surface water samples were collected as unfiltered grab samples and were collected directly into laboratory supplied containers and placed in a cooler with ice until submission to the laboratory. Field measurements were recorded for pH, temperature, conductivity and dissolved oxygen and visual observations of flow. A field duplicate sample was taken at SW3.

Samples were submitted to ALS for analysis of general inorganic chemistry, total metals (including mercury), VOCs, TKN, COD, phenols, total phosphorus and biological oxygen demand (BOD). A field duplicate sample was taken at SW3.

4.4 Residential Well Sampling

A total of twelve (12) residents located near the Landfill were invited to participate in a voluntary domestic water sampling program. Dillon staff distributed invitation letters in person (or left them in mailboxes when residents were not home) on October 7, 2025. Due to the drought conditions, many participants reported that their wells were dry. Consequently, the domestic water sampling was postponed.

Dillon returned in Spring 2026 to re-attempt domestic water sampling. Prior to the sampling event, Dillon mailed invitation letters, and, during the event, Dillon followed up by door-knocking. In the end, samples were collected from eight residences that voluntarily participated. Where treatment systems were in place, samples were collected from an untreated supply tap, or the treatment system was disabled. The water supply was allowed to run for approximately 15 minutes prior to sample collection in order to collect a representative sample (no stagnant or treated water). Samples were submitted to ALS for analysis of general inorganic chemistry and total metals.

4.5 Data Assessment

Analytical data were compiled in tables using Esdat™ software (Dillon's in-house geochemical tool). Analytical results for soil were assessed in comparison to the latest Nova Scotia Tier I Environmental Quality Standards (NS Tier I EQS) for Soil (i.e., commercial, potable, coarse-grained), revised October 2022, and the Canadian Council of Ministers of the Environment (CCME) Canadian Environmental Quality Guidelines (CEQGs) Soil Quality for the Protection of Environmental and Human Health (Commercial). Analytical results for groundwater monitoring wells were assessed in comparison to the latest NS Tier I EQS for groundwater (i.e., commercial, potable, coarse-grained), revised October 2022 and the Health Canada Guidelines for Canadian Drinking Water Quality (HC GCDWQ), December 2025 Summary Table. Analytical results for surface water locations were assessed in comparison to the latest NS Tier I EQS for surface water (i.e., freshwater), revised October 2022 and the CCME CEQGs for the Protection of Freshwater Aquatic Life (short-term and long-term values). Residential groundwater results were assessed in comparison to the HC GCDWQ.

In addition, groundwater quality results were assessed in relation to typical leachate indicator parameters (chloride, hardness and TDS, as well as sodium and sulphate).

Groundwater levels recorded in each well on October 7, 2025, and March 30, 2026 were converted to groundwater elevation using the well survey data. Groundwater elevations were then assessed in relation to the shallow (overburden) wells and the deep (bedrock) wells to assess inferred groundwater flow directions for each. The groundwater elevations recorded at each shallow and deep couplet were also used to assess vertical gradients.

For the Fall 2025 event, historical information regarding the presence of water during the 2023 test pitting program had been incorporated during shallow groundwater contour development (in the absence of surface water information due to the drought). However, for the Spring 2026 event, the surface water survey information was incorporated during shallow groundwater contour development and the wetland water levels collected in March 2026 were also taken into consideration.

4.6 Quality Assurance/Quality Control

Quality Assurance/Quality Control (QA/QC) protocols were established and followed throughout the monitoring program. This included the collection of duplicate samples. Methods used during the field work followed Dillon's Standard Environmental Field Procedures which are based on industry standards and described in the respective sections above.

Field duplicate samples were collected during the assessment including: two duplicate groundwater samples and one duplicate surface water sample.

Sample bottles were labelled with sample/location ID, project name and number, company name (Dillon), and time and date of collection. Once collected, samples were immediately placed in coolers containing ice to maintain a temperature of less than 10°C. To minimize the potential for cross contamination, new nitrile gloves were used to collect each sample, and non-dedicated sampling equipment was decontaminated between each sampling location.

To evaluate the precision associated with sampling and analytical methods, the samples and their duplicates were used to calculate the relative percent difference (RPD). The RPD is defined as the absolute value of the variation between a sample's analytical concentration and its duplicate, when compared to the average concentration of the original and the duplicate in detected samples. The RPD is calculated using the following equation:

$$= \frac{|V_1 - V_2|}{\frac{(V_1+V_2)}{2}} \times 100$$

RPD is used to assess the validity of the field and laboratory analytical procedures for parameters analyzed that are greater than five (5) times the reportable detection limit (RDL). Dillon set a screening-level RPD acceptance criterion of less than 40% for surface water and groundwater, and 60% for soil. As noted above, field duplicates were collected during the assessment, with RPDs calculated for the parent and duplicate samples (where calculable).

5.0 Results

5.1 Soil and Bedrock Stratigraphy

The observed soil and bedrock stratigraphic information (and construction details) from the boreholes/monitoring wells are summarized on the logs presented in Appendix A.

The soils encountered generally consisted of brown silty sand with gravel along with cobbles and boulders. A thick layer of peat was observed at one location (i.e., 25-MW3S/3D). Bedrock consisting of metasandstone was encountered at three locations (i.e., 25-MW1D at 6.0 mbgs, 25-MW2D at 7.4 mbgs and 25-MW4D at 9.7 mbgs). Bedrock consisting of granite was encountered at one location (i.e., 25-MW3D at 6.7 mbgs) in the southwestern corner of the site.

Local surficial geology consists of the Stony Till Plain unit described as stony, sandy matrix, material derived from local bedrock sources (Quaternary period, Wisconsinan stage). Local bedrock geology mapping indicates the Government Point Formation which is primarily comprised of grey metasandstone, green/greyish green to purple metasiltstone and rare black slate underlies the site, as well as the Shelburne Pluton (mapped west of the study area) which is composed of grey monzogranite, with abundant aplite and pegmatite dykes (White, 2012).

5.2 Soil Analytical Results

Soil samples were submitted for petroleum hydrocarbon (BTEX/TPH) with silica gel cleanup, PAHs and total metals analysis. Soil analytical results are presented in Table B-1 of Appendix B, and laboratory certificates of analysis are presented in Appendix C. A total of four samples were submitted and these were collected from depths greater than 3.0 mbgs.

Two samples, 25-MW1D SS5 (3.02-3.63 mbgs) and 25-MW3D SS7 (5.75-6.36 mbgs), exceeded the applicable NS Tier I EQS (commercial, potable, coarse-grained) for iron in soil. The NS Tier 1 EQS are presented within the Nova Scotia Contaminated Sites Protocols, for which iron is identified as a substance potentially considered as background. Therefore, further comparison was made to the Review of Environment Canada's Background Soil Database (Dillon, 2011). The recommended background value for iron in this area of Nova Scotia (i.e., Southwest Uplands) is 31,874 mg/kg and the average value is 25,510 mg/kg. Since the concentrations of iron are below these values, the occurrences of iron are considered to be background.

The other soil samples did not exceed the applicable NS Tier I EQS for Soil or the CEQG Soil Quality for the Protection of Environmental and Human Health (Commercial). It is noted that PHCs and PAHs were not detected in any of the soil samples collected.

5.3 Groundwater Elevations and Hydraulic Head Data

Groundwater was encountered in the monitoring wells on October 7, 2025, at depths ranging from 1.54 to 3.6 mbgs in the shallow wells and 1.46 to 4.01 mbgs in the deep wells. The greatest depths to water during the Fall 2025 event were observed at 25-MW4S/4D. As noted above, severe drought conditions occurred during the summer of 2025, followed by moderate drought conditions during the Fall 2025 event.

On March 30, 2026, groundwater was encountered at depths ranging from 0.68 to 1.08 mbgs in the shallow wells and 0.27 to 1.32 mbgs in the deep wells. The greatest depths to water during the Spring 2026 event were observed at 25-MW3S and 25-MW4D.

Groundwater elevations were calculated and assessed in relation to the shallow (overburden) wells and the deep (bedrock) wells. Fall 2025 groundwater elevations and hydraulic gradients are presented in Table B-2 of Appendix B, and corresponding contours are presented on Figure 4 and Figure 5 (attached) (shallow and deep groundwater, respectively). Spring 2026 groundwater elevations and hydraulic gradients are presented in Table B-3 of Appendix B, and corresponding contours are presented on Figure 6 and Figure 7 (shallow and deep groundwater, respectively).

Based on the groundwater elevations, radial flow conditions surrounding the Landfill contributed to the shallow groundwater flow direction in Fall 2025, as shown on Figure 4 (attached). In Spring 2026, the shallow groundwater flow directions were to the south and southeast, as shown on Figure 6 (attached). The deep groundwater flow direction was interpreted as being west (towards Shelburne Harbour) in Fall 2025, as shown on Figure 5 (attached), and to the south and southeast in Spring 2026, as shown on Figure 7 (attached). Further monitoring will determine whether the 2025 elevations were heavily influenced by the drought. In comparison of one event to the other, the greatest difference in groundwater elevations was observed at the 25-MW4S/4D location (up to 2.8 m difference).

The Spring 2026 wetland elevations, presented in Figure 3 (attached), ranged from 20.65 to 20.72 metres (m) southwest of the landfill (i.e., in the area near 25-MW3S/D), and from 21.31 to 21.34 m southeast of the landfill (i.e., in the area near 25-MW2S/D). Shallow groundwater elevations in 25-MW2S were comparable to nearby (southeast) wetland elevations in Spring 2026, whereas 25-MW3S was approximately 0.3 m higher than the nearby (southwest) wetland elevations in Spring 2026.

Overall, there is potential for shallow groundwater flow directions to be subject to influence of the on-site wetland. Drought conditions observed in Fall 2025 may have also contributed to the disparity between Fall 2025 and Spring 2026 groundwater flow directions.

The groundwater elevations recorded at each shallow and deep couplet were also assessed with respect to vertical gradient. Groundwater elevations for Fall 2025 and Spring 2026 and inferred vertical hydraulic gradients are summarized in Table 5-1 below.

Table 5-1: Summary of Fall 2025/Spring 2026 Groundwater Elevations (m) and Vertical Gradients

Monitoring Well ID	Oct 2025 Elevation (m)	March 2026 Elevation (m)	Difference (m)	Inferred Vertical Hydraulic Gradient	
				Oct 2025	March 2026
25-MW1S	20.35	21.46	1.12	Downward (near neutral)	Upward
25-MW1D	20.33	21.66	1.33		
25-MW2S	20.40	21.43	1.03	Upward (near neutral)	Downward (near neutral)
25-MW2D	20.41	21.42	1.00		
25-MW3S	20.55	21.02	0.47	Downward	Upward (near neutral)
25-MW3D	20.00	21.05	1.06		
25-MW4S	20.09	22.90	2.81	Downward	Downward
25-MW4D	19.95	22.64	2.69		

In Fall 2025, near neutral gradients were observed at 25-MW1S/1D and 25-MW2S/2D (on the eastern side of the site), and downward gradients were observed at 25-MW3S/3D (where a peat layer was observed at surface and granite bedrock was encountered) and at 25-MW4S/4D (on the northern side of the former landfill). In Spring 2026, a near neutral gradient was observed at 25-MW2S/2D and 25-MW3S/3D, an upward gradient was observed at 25-MW1S/1D, and a downward gradient continues to be observed at 25-MW4S/4D.

Hydraulic conductivity (K) testing was completed on March 30, 2026, at four monitoring wells (25-MW1S, 25-MW2D, 25-MW3S, and 25-MW3D). The estimated hydraulic conductivity values (via Hvorslev method) are summarized in Table 5-2 below.

Table 5-2: Hydraulic Conductivity Values

Well ID	Hydraulic Conductivity (m/s)
25-MW1S	2.59×10^{-6}
25-MW2D	9.21×10^{-7}
25-MW3S	7.61×10^{-7}
25-MW3D	2.46×10^{-6}

Hydraulic conductivity values in shallow monitoring wells ranged from 10^{-6} m/s at 25-MW1S to 10^{-7} m/s at 25-MW3S. This correlates with glacial till, silt, loess, and silty sand, as identified from literature values (Freeze & Cherry, 1979). In the deep wells, values ranged from 10^{-6} m/s at 25-MW3D to 10^{-7} m/s at 25-MW2D. This correlates with sandstone and fractured igneous rocks (such as granite), as identified from literature values (Freeze & Cherry, 1979). Overall, this is consistent with observations made during the drilling program, with granite bedrock identified at 25-MW3D only. Borehole logs containing stratigraphy and bedrock observation are presented in Appendix A. Hydraulic conductivity test results are presented in Appendix D.

5.4 Groundwater Analytical Results

Groundwater sampling was completed at the eight on-site monitoring wells in Fall 2025 and Spring 2026. For each event, nine groundwater samples were submitted, including one field duplicate sample, for analysis of general inorganic chemistry, metals (including mercury), VOCs, TKN, COD, phenols, and total phosphorus. Groundwater analytical results are presented in Table B-4, Appendix B, and laboratory certificates of analysis are presented in Appendix C.

For VOCs, samples were either non-detect or below the applicable guidelines (HC GCDWQ and NS Tier I EQS) in Fall 2025. During the Spring 2026 event, VOCs were not detected in groundwater.

Each of the groundwater samples submitted were below the HC GCDWQ recommended range for pH (7-10.5) in Fall 2025, with the exception of 25-MW3S and 25-MW4D. In Spring 2026, low pH was observed in each of the samples submitted with the exception of 25-MW1S, 25-MW2S, and 25-MW3S. Total dissolved solids (TDS) levels were above the GCDWQ (aesthetic objective) at 25-MW2S/D in both events, and at 25-MW3D in Spring 2026. Each of the groundwater samples exceeded the GCDWQ (aesthetic objective) for turbidity and colour. Of note, the presence of turbidity (sediment) in a sample can bias metals concentrations high as metals have a tendency to accumulate on the surface of sediment particles.

Iron concentrations in samples collected from 25-MW1S/D, 25-MW2S/D, and 25-MW3S/D during both events, and 25-MW4D during the Spring 2026 event, exceeded the NS Tier I EQS and GCDWQ (aesthetic objective). Manganese concentrations in samples collected from 25-MW1S/D, 25-MW2S/D, and 25-MW3S/D exceeded the NS Tier I EQS and HC GCDWQ (maximum acceptable concentration and aesthetic objective) during both events, and remaining samples exceeded the GCDWQ (aesthetic objective). Concentrations of cobalt in 25-MW2D during both events exceeded the NS Tier I EQS and coincided with high turbidity (3,600 NTU to >4,000 NTU). The uranium concentration at 25-MW2S in Spring 2026 exceeded the NS Tier I EQS, which coincided with high turbidity (>4,000 NTU).

Mercury was not detected in the groundwater samples during either event.

As noted above, each of the groundwater samples submitted in the Fall 2025 and Spring 2026 events had elevated levels of turbidity. The presence of turbidity in a sample can bias metals concentrations high due to their tendency to adhere to, or be part of the chemical make-up of, sediment or particulate. Future monitoring will determine if this represents a persistent change in chemistry.

The Nova Scotia Department of Natural Resources have released groundwater risk maps for Nova Scotia for various metals. In relation to parameters that exceeded the GCDWQ, levels of iron in groundwater from bedrock aquifers in the Shelburne area appear to be in the range of 0.3 to 0.6 mg/L (Kennedy and Finlayson-Bourque, 2011). For manganese, the interactive risk mapping shows medium to high groundwater risk for surficial aquifers and high groundwater risk for bedrock aquifers in the area of the landfill (Kennedy, 2021). While these studies do indicate elevated levels of iron and manganese occur in the study area, the concentrations at the Landfill were higher (with the exception of upgradient 25-MW4S/4D, which was consistent with background, as discussed below).

5.4.1 Groundwater Quality Discussion

A summary of indicator parameter concentrations in groundwater is shown in Table 5-3 below.

Groundwater chemistry varies between the upgradient shallow well (25-MW4S) and the downgradient shallow wells (25-MW1S, 25-MW2S, 25-MW3S). In shallow groundwater, concentrations of chloride, hardness, TDS, sodium, sulphate, and manganese were observed to be highest at downgradient shallow well 25-MW2S during both sampling events. Iron concentrations were highest at 25-MW1S during both sampling events and the October 2025 manganese concentration was similar to 25-MW2S. Concentrations of chloride, TDS and sodium at 25-MW1S and 25-MW3S were generally comparable. Overall, indicator parameter concentrations in shallow groundwater were generally lower in Spring 2026 compared to Fall 2025 levels, with the exception of 25-MW2S.

Concentrations of indicator parameters in deep groundwater were generally lower in upgradient well 25-MW4D compared to downgradient deep wells, with the exception of sulphate. Sulphate was lowest at 25-MW1D in both sampling events. The highest levels of indicator parameters in deep groundwater were observed at 25-MW2D, with the exception of iron, which was highest at 25-MW3D in Spring 2026 (and equivalent during the Fall 2025 event).

Overall, indicator parameter concentrations were lower at upgradient wells 25-MW4S/D (where a downward vertical gradient observed), and generally highest at downgradient wells 25-MW2S/D (where a near neutral gradient observed). In relation to sulphate (which is also used as an indicator for landfill leachate), there is significant variability between the upgradient and downgradient wells, with the highest concentrations at each location generally observed in the deep wells (with the exception of 25-MW1S/1D). The highest concentrations overall were observed at 25-MW2S/2D (440 mg/L and 426 mg/L, respectively). Unlike chloride, sulphate is not a conservative tracer and therefore is more difficult

to interpret without a better understanding of both redox conditions and organic loading at the Landfill. Future groundwater monitoring will support this understanding.

Table 5-3: Summary of Indicator Parameter Concentrations in Groundwater

Well ID	Chloride		Hardness		TDS		Sodium		Sulphate		Iron		Manganese	
	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026
Shallow Monitoring Wells														
25-MW1S	21.3	17.0	86	59.1	216	171	29.6	17.8	5.5	1.55	21.8	23.8	0.902	0.668
25-MW2S	230	28.1	231	659	850	1,170	180	61.4	82.2	440	12.6	18.3	0.892	2.79
25-MW3S	16.2	12.5	192	174	278	264	17.6	15.5	12	14.5	9.86	8.03	0.21	0.156
25-MW4S	6.22	5.23 (5.17)	5.06	4.41 (4.36)	35	52 (217)	3.86	3.42 (3.42)	0.93	0.75 (0.76)	<0.1	0.031 (<0.01)	0.0864	0.0434 (0.0484)
Deep Monitoring Wells														
25-MW1D	8.95	7.30	21	22.7	83	162	8.46	10.1	4.38	3.15	0.868	0.304	0.552	0.491
25-MW2D	142 (139)	124	505 (498)	511	1,050 (1,100)	1,150	142 (140)	149	426 (420)	401	21.7 (25.2)	11.1	6.36 (6.33)	6.09
25-MW3D	58.3	54.9	88.3	87.3	255	940	22.4	22.6	82.5	72.8	25	22.5	1.01	1.02
25-MW4D	8.04	4.82	15.3	11.1	73	92	7.89	6.86	10.8	4.07	0.44	<0.01	0.117	0.033

Notes:
All concentrations are presented in mg/L
(Value) denotes concentration corresponds to field duplicate sample

Other Parameters

A summary of other parameter concentrations in groundwater is shown in Table 5-4.

At each couplet, total ammonia levels (as nitrogen) were higher in the shallow wells, with the exception of 25-MW4S/4D which were generally comparable in both sampling events. Total ammonia in the down gradient shallow wells was highest in Fall 2025 at 25-MW2S and in Spring 2026 at 25-MW2S and 25-MW3S. Total ammonia levels in shallow groundwater were notably lower in Spring 2026 compared to Fall 2025. In deep groundwater, total ammonia concentrations were generally comparable at 25-MW1D and 25-MW4D, and lower than downgradient wells 25-MW2D and 25-MW3D. For the deep wells, total ammonia levels were highest at 25-MW3D.

TKN concentrations in shallow groundwater were lowest at the upgradient well 25-MW4S, and highest at 25-MW3S in Fall 2025 and at 25-MW1S in Spring 2026. In deep groundwater, TKN levels were generally comparable in Fall 2025 for upgradient well 25-MW4D and down gradient 25-MW1D and variable in Spring 2026. Overall, TKN concentrations were higher in shallow groundwater, with the exception of 25-MW4S, which had comparable concentrations to deep monitoring wells 25-MW1D and 25-MW4D.

COD levels were highly variable in shallow and deep groundwater. Lowest concentrations were generally observed at the upgradient wells 25-MW4S/D. For the shallow wells, COD was highest at 25-MW3S in Fall 2025 and at 25-MW1S in Spring 2026. For the deep wells, COD was highest at 25-MW2D in Fall 2025 and at 25-MW3D in Spring 2026. Overall, the highest levels were observed in 25-MW1S and 25-MW3S (at 298 mg/L and 322 mg/L, respectively, during the Fall 2025). For comparison, COD generally ranged from 12 to 78 mg/L in the downgradient deep wells, with the exception of 25-MW3D in Spring 2026 (at 262 mg/L).

Unlike other parameters assessed in shallow groundwater, total phosphorus levels were highest at the upgradient well 25-MW4S in Fall 2025. Total phosphorus concentration in downgradient shallow wells was variable. For the deep wells, total phosphorus was highest in 25-MW2D in Fall 2025 and at 25-MW3D in Spring 2026. Phenols ranged from 0.0014 mg/L (24-MW4D) to 0.0081 mg/L (25-MW2D) in Fall 2025 and were not detected in groundwater samples from Spring 2026.

Overall, for the most part, the highest levels of parameters in groundwater were associated with downgradient wells 25-MW2S/2D (on the eastern side of the site, where a near neutral gradient observed). Where this data represents the second set of groundwater results for the Landfill, further monitoring will be required to assess groundwater quality over time (noting that trending cannot be assessed with limited data sets).

Table 5-4: Summary of Other Parameters in Groundwater

Well ID	Ammonia (as Nitrogen)		TKN		COD		Total Phosphorus		Phenols	
	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026	Oct 2025	March 2026
Shallow Monitoring Wells										
25-MW1S	1.91	0.829	8.58	2.92	298	135	3.23	2.9	0.0054	<0.001
25-MW2S	2.42	0.754	3.47	1.71	98	87	3.93	12.9	0.0024	<0.001
25-MW3S	1.23	0.834	9.5	1.88	322	63	1.66	0.206	0.0044	<0.001
25-MW4S	0.0567	0.0169 (0.0142)	0.12	0.326 (0.278)	24	26 (43)	5.26	5.75 (5.18)	0.0028	<0.001 (<0.001)
Deep Monitoring Wells										
25-MW1D	0.0653	0.0488	0.14	0.183	12	20	1.68	1.65	0.0019	<0.001
25-MW2D	0.293 (0.236)	0.174	0.793 (1.04)	1.24	60 (78)	60	11.3 (7.57)	3.34	0.0081 (0.0073)	<0.001
25-MW3D	0.397	0.467	0.775	2.53	33	262	5.23	28.8	0.0026	<0.001
25-MW4D	0.0623	0.0303	0.121	0.595	<10	22	0.392	3.74	0.0014	<0.001

Notes:

All concentrations are presented in mg/L

(Value) denotes concentration corresponds to field duplicate sample

5.5 Surface Water Analytical Results

In Spring 2026, four surface water samples were submitted, including one field duplicate sample, for analysis of general inorganic chemistry, total metals (including mercury), VOCs, TKN, COD, phenols, total phosphorus, and BOD. Results are presented in Table B-5, Appendix B. Laboratory certificates of analysis are presented in Appendix C.

For VOCs, samples were non-detect and therefore below the applicable guidelines (CCME CEQGs and NS Tier I EQS).

Each of the surface water samples submitted were below the CCME CEQG and NS Tier I EQS recommended ranges for pH (i.e., 6.5-9) and exceeded both the NS Tier I EQS and CCME CEQG (long-term) for aluminum. To note, turbidity levels were low (ranging from 0.3 to 0.5 NTU).

5.5.1 Surface Water Quality Discussion

A summary of indicator parameter concentrations in surface water is shown in Table 5-5 below.

Table 5-5: Summary of Indicator Parameters in Surface Water

Station ID	Chloride	Hardness	TDS	Sodium	Sulphate	Iron	Manganese
SW1	4.62	2.22	42	3.82	1.25	0.261	0.003
SW2	6.10	3.26	40	4.79	1.86	0.277	0.0056
SW3	6.39 (6.44)	3.71 (3.72)	50 (52)	4.76 (4.75)	2.14 (2.11)	0.272 (0.253)	0.0055 (0.0053)

Notes:
Concentrations above correspond to the surface water sampling completed in March 2026.
(Value) denotes concentration corresponds to field duplicate sample

As shown in Table 5-5, surface water chemistry is generally consistent across the monitoring stations, with comparable levels generally observed between surface water stations (SW2, SW3), located west of the Landfill. The chloride level at SW1 (4.62 mg/L), located east of the Landfill, was marginally lower than those located to the east and downgradient. Hardness, sodium, and manganese levels showed comparable observations to chloride. Indicator parameter concentrations were generally highest at SW3. Sodium and iron concentrations were similar at SW2 and SW3. Total dissolved solids were lowest at SW2 (40 mg/L) and highest at SW3 (50 mg/L). In relation to sulphate (which is also used as an indicator for landfill leachate), there is little variability between the monitoring stations, with the highest concentrations at SW3 (2.14 mg/L). Unlike chloride, sulphate is not a conservative tracer and therefore is more difficult to interpret without a better understanding of both redox conditions and organic loading at the Landfill.

Other Parameters

A summary of "other" parameter concentrations in surface water is shown in Table 5-6 below.

Table 5-6: Summary of Other Parameters in Surface Water

Station ID	Ammonia (as Nitrogen)	TKN	COD	Total Phosphorus	Phenols	BOD
SW1	0.0088	0.419	47	0.0067	<0.001	<2.0
SW2	0.0098	0.365	46	0.0064	<0.001	<2.0
SW3	0.0074 (0.007)	0.376 (0.409)	52 (46)	0.0067 (0.0064)	<0.001 (<0.001)	<2.0 (<2.0)

Notes:
Concentrations above correspond to the surface water sampling completed in March 2026.
(Value) denotes concentration corresponds to field duplicate sample

Total ammonia levels (as nitrogen) were highest at SW2 (0.0098 mg/L) and lowest at SW3 (0.0074 mg/L). TKN was highest at station SW1 (0.419 mg/L). COD concentrations were highest at SW3 (52 mg/L). Total phosphorus levels were similar across all stations. Phenols and BOD were not detected in the samples collected from the surface water stations. It is noted that concentrations of both indicator and "other" parameters have little variability across the three surface water monitoring stations. Where this data represents the first set of surface water results for the Landfill, further monitoring will be required to assess surface water quality over time (noting that trending cannot be assessed with limited data sets).

5.6 Residential Groundwater Sampling Results

Samples were collected from eight residents that voluntarily participated in Spring 2026 (five dug wells and three drilled wells). Concentrations of inorganic and metals parameters in residential samples collected were generally below the HC GCDWQ, with some exceptions outlined below. Exceedances of the HC GCDWQ are summarized according to criteria category: Maximum Allowable Concentration (MAC), Aesthetic Objective (AO), or Operational Guidance (OG) as described in Table 5-7 below.

Table 5-7: CDWQ Guideline Categories

CDWQ Guideline Category	Description
Maximum Allowable Concentration (MAC)	Health-based (for example, arsenic).
Aesthetic Objective (AO)	Based on aesthetic considerations; control corrosion and reduce leaching from distribution system and plumbing components (for example, pH).
Operational Guidance (OG)	Based on operational considerations for water treatment plants (for example, turbidity)

CDWQ Guideline Exceedances

- The AO for pH was outside the recommended range (i.e., low) in each of the eight samples collected;
- The OG for turbidity was exceeded in two drilled well samples (DW-5000 and DW-6006)[2];
- AO values of colour and iron were exceeded in the same two samples (DW-5000 and DW-6006);
- The MAC and AO for manganese were exceeded in two drilled well samples (DW-5000 and DW-6006), and the AO value (only) in one dug well sample (DW-8000); and
- The MAC for arsenic was exceeded in one drilled well sample (DW-6006).

5.6.1 Residential Groundwater Quality Discussion

CDWQ guideline exceedances associated with the residential samples collected in Spring 2026 are summarized in Table 5-8.

Table 5-8: Summary of CDWQ Guideline Exceedances (Residential Wells)

Parameter	Affected Residents	Concentration (mg/L)	CDWQ Guideline	Category	Comments
Turbidity	2	15.7 to 30	1	OG	OG in regard to water treatment plants; to ensure effectiveness of disinfection and good operation of the water distribution system.
Manganese	3	0.0785 to 0.384	0.12 (MAC)	MAC and AO	AO in place to minimize discoloured water, consumer

[2] The presence of turbidity (sediment) in a sample can bias metals concentrations high as metals have a tendency to accumulate on the surface of sediment particles.

Parameter	Affected Residents	Concentration (mg/L)	CDWQ Guideline	Category	Comments
			0.02 (AO)		complaints, and staining of laundry. Naturally occurring, minerals are commonly found in soil and rock.
pH (low)	8	5.62 to 6.62	7 to 10.5	AO	AO in place to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing components.
Colour	2	95.3 to 260	15	AO	AO in place to ensure effective disinfection and treatment.
Iron	2	1.56 to 4.12	0.1	AO	AO in place for total iron to minimize discoloured water, improve consumer confidence in drinking water quality (removal of iron also improves the removal of manganese). Naturally occurring.
Arsenic	1	0.0157	0.01	MAC	Based on treatment achievability; elevated levels associated with certain groundwaters. Naturally occurring (i.e., within metamorphic and plutonic groundwater regions of Nova Scotia).[3]

The parameter exceedances observed in the residential well samples are commonly observed in Nova Scotia groundwaters, including low pH and metals (iron, manganese and arsenic).

In comparison to groundwater samples collected from monitoring wells at the site, although some similar parameter exceedances were observed (such as low pH, iron and manganese), the metals

[3] Source: https://novascotia.ca/natr/meb/data/pubs/17ofr03/ofr_me_2017-003.pdf

concentrations were much lower in the residential samples. At the landfill, iron concentrations ranged up to 25 mg/L and manganese up to 6.4 mg/L. No arsenic exceedances were observed at the landfill.

In relation to indicator parameters, such as chloride, hardness and sulphate, concentrations in the residential samples ranged up to 139 mg/L chloride, 70 mg/L hardness and 20 mg/L sulphate. Whereas, at the landfill concentrations ranged up to 230 mg/L chloride, 659 mg/L hardness and 440 mg/L sulphate in shallow well 25-MW2S, and up to 142 mg/L chloride, 511 mg/L hardness and 426 mg/L sulphate in deep well 25-MW2D (25-MW2S/D are located in the southeastern portion of the landfill). For the up-gradient monitoring wells (i.e., 25-MW4S/D), chloride levels ranged from 5 to 8 mg/L, hardness from 4 to 15 mg/L, and sulphate from 0.75 to 11 mg/L.

Overall, although some of the landfill monitoring wells appear to be impacted (such as, 25-MW2S/D), there does not appear to be any off-site impacts to groundwater or surface water.

5.7 Quality Assurance/Quality Control Results

A program to ensure quality assurance and control (QA/QC) was implemented throughout the Drilling and Environmental Monitoring program. The QA/QC program consisted of a number of elements:

- Collection of samples using protocols consistent with Dillon Standard Environmental Field Procedures and/or industry standards;
- Use of dedicated sampling equipment and/or adherence to established equipment cleaning protocols, where applicable;
- Use of laboratory-supplied containers;
- Collection of field duplicates; and
- Implementation of laboratory QA/QC procedures, including analysis of reference standards, laboratory blanks and replicates.

Validation criteria were established that required the analytical data to have an acceptable and documented level of precision, accuracy, representativeness, comparability and completeness (the PARCC criteria). The precision of the data for the samples collected was evaluated by calculating the Relative Percent Difference (RPD) between the original samples and its duplicate when the samples had concentrations greater than five times the laboratory Reportable Detection Limit (RDL). A summary of the PARCC criteria comparison and calculated RPD values are presented below.

Laboratory QA/QC was performed on the following samples:

- Groundwater samples 25-MW2D and its field duplicate DUP A (October 2025) and 25-MW4S and its field duplicate DUP A (March 2026); and
- Surface water sample SW3 and its field duplicate DUP B (March 2026).

In order to assess the precision and accuracy of the laboratory results, the RPD was calculated for each parameter, where acceptable limits for field duplicate RPD in groundwater and surface water is 40%, and in soil is 60%. RPD values were not calculated for parameters that had concentrations that were less than five times the RDL. Calculated RPD values are presented in Tables B-7 and Table B-8 (Appendix B) for groundwater and surface water, respectively. A summary of RPD results, where calculated, is presented below:

- RPDs for groundwater were below 40% for each parameter where they were calculated, with the exception of colour in Dup A and the parent sample collected from 25-MW4S in Spring 2026, calculated to 109%. It is noted that there is no health-based guideline for colour. The data for this parameter is considered valid; and
- RPDs for surface water were below 40% for each parameter where they were calculated.

ALS's laboratory certificates of analysis (provided in Appendix C) indicate that a reasonable degree of accuracy was achieved in the water analyses (based on results of method blanks, laboratory control samples, field and laboratory duplicates, and matrix spike surrogate recoveries). For soils, the lab commented that the recovery for tungsten was slightly above the upper control limit in one lab sample. For groundwater, the lab commented that the recovery for methyl isobutyl ketone (MIBK) was slightly below the lower control limit in one lab sample, and the relative RPD for TKN was slightly above the limit of 20% (at 20.9%) and therefore did not meet the data quality objective for a lab duplicate sample. The field duplicate sample results for groundwater were consistent with its parent sample, exhibiting concentrations below the laboratory detection limits for the VOC analyses.

Overall, these minor variations are not anticipated to impact data quality.

Based on field procedures, laboratory methods, sampling program design, and field observations, the data is considered valid, and the analytical results are concluded to be representative of the site conditions in general.

6.0 Conclusions and Recommendations

The following conclusions were drawn:

- Soil samples collected from the site were not impacted. The occurrences of iron above the NS Tier 1 EQS are considered to be background;
- Landfill monitoring wells displayed exceedances of HC GCDWQ or NS Tier 1 EQS for turbidity, TDS, iron, manganese, cobalt, and/or uranium, as well as low pH. Of note, cobalt and uranium occurred at one location (i.e., 25-MW2S or 2D) and coincided with high turbidity;
- Surface waters displayed exceedances of NS Tier I EQS and CCME CEQG (long-term) for aluminum and pH below the recommended range (i.e., slightly acidic). Surface water turbidity levels were low;
- Residential groundwater results showed primarily exceedances of aesthetic objectives or naturally occurring metals (such as, iron, manganese and arsenic);
- Although some of the landfill monitoring wells appear to be impacted (such as, 25-MW2S/D), there does not appear to be any off-site impacts to groundwater or surface water; and
- It is noted that a wetland borders the immediate assumed downgradient perimeter of the Landfill.

The following recommendations are made:

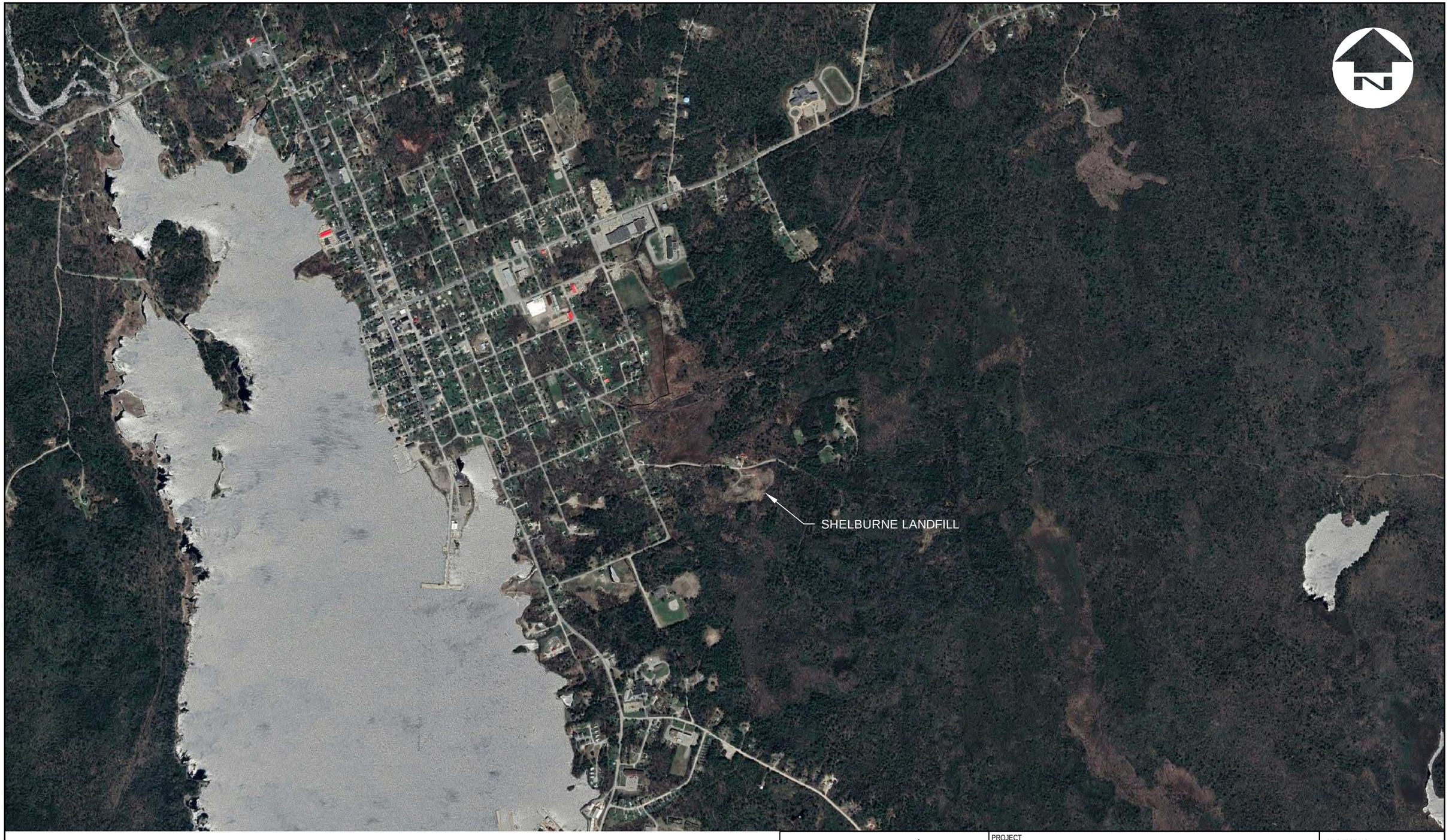
- A formal groundwater and surface water monitoring program should be established for the closed Landfill site;
- Based on the Fall 2025/Spring 2026 results, routine (semi-annual) monitoring of groundwater (i.e., monitoring wells) should be completed in order to evaluate groundwater conditions at the Landfill over time and allow for trend assessment (noting that trends cannot be ascertained with limited data sets); and
- Based on the Spring 2026 results, routine (semi-annual) monitoring of surface water should be completed at the established stations (SW1, SW2, and SW3) in order to evaluate surface water conditions over time and for comparison to the Landfill.

7.0 Disclaimer

This report was prepared exclusively for the purposes, project and site location(s) outlined in the report. The report is based on information provided to, or obtained by Dillon Consulting Limited ("Dillon") as indicated in the report, and applies solely to site conditions existing at the time of the site investigation(s). Although a reasonable investigation was conducted by Dillon, Dillon's investigation was by no means exhaustive and cannot be construed as a certification of the absence of any contaminants from the site(s). Rather, Dillon's report represents a reasonable review of available information within an agreed work scope, schedule and budget. It is therefore possible that currently unrecognized contamination or potentially hazardous materials may exist at the site(s), and that the levels of contamination or hazardous materials may vary across the site(s). Further review and updating of the report may be required as local and site conditions, and the regulatory and planning frameworks, change over time.

This report was prepared by Dillon for the sole benefit of our Client. The material in it reflects Dillon's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Figures



300 0 300
SCALE 1:15,000 METRES

DILLON CONSULTING

DATE JUNE 2026

PROJECT
SHELBURNE LANDFILL INVESTIGATION

PROJECT NO.
22-5099

TITLE
SITE LOCATION

FIGURE NO.
1

FileName:c:\pw working directory\projects 2022\dillon_50ltr\d0125320\225099-05-03_fig1.dwg

Morvan Road
[30.116m wide public road]

TP23-17
TP23-16
TP23-7
TP23-6
TP23-21
TP23-19
25-MW1D
25-MW1S
25-MW4D
25-MW4S
TP23-13
TP23-8
TP23-9
TP23-4
TP23-5
TP23-3
TP23-20
TP23-1
TP23-2
TP23-12
Former Landfill Site
(decommissioned in 2016)
TP23-22
TP23-18
25-MW2S
25-MW2D
TP23-15
TP23-14
TP23-10
25-MW3S
25-MW3D
TP23-11
AREA FOR COVER

10.668m wide R-O-W
in favour of P.I.D. #852560327
Doc. #911380

P.I.D. #80149594
Lands of
Town of Shelburne
Doc. #92114058

Lot 3A
[see plan noted in 4(B.)]
Area = 56,800 sq.m.±
P.I.D. #80149586
Lands of
Town of Shelburne
Doc. #91597642

S.M.(fd.) #323

20 0 20
SCALE 1:1,000 METRES

LEGEND

- APPROXIMATE TEST PIT LOCATION (DILLON, 2023)
- MONITOR WELL LOCATION (DILLON, 2025)
- FIELD DELINEATED WETLAND
- APPROXIMATE CAP AREA
- APPROXIMATE INFERRED EXTENT OF BURIED WASTE
- APPROXIMATE AREA OF IDENTIFIED ANOMALY

Note:
The approximate inferred extent of buried waste and approximate area of potential buried waste are estimated based on electromagnetic survey findings (CSR GeoSurveys Limited, 2023).

DILLON CONSULTING

DATE JUNE 2026

PROJECT
SHELBURNE LANDFILL
MONITORING WELL INSTALLATION

PROJECT NO.
22-5099

TITLE
MONITORING WELL LOCATIONS

FIGURE NO.
2

FileName:c:\pw working directory\projects 2022\dillon_50ft\d0125320225099-05-03_fig2.dwg

PID 80149693
TURF DEVELOPMENT LTD.

PID 80149578
C. HARTLEY

SW3

SW2

MORVAN RD

PID 80149644
B. & L. ACKER

PID 82566134
NS DEPT. OF
NATURAL
RESOURCES

TWO RIVERS
INTERSECT

SW1

PID 82566142
NS DEPT. OF
NATURAL
RESOURCES

PID 80149552
D. GOULDEN

PID 80149586
TOWN OF SHELBURNE

CLEMENTS STREET

RODNEY STREET

PID 80149578
C. HARTLEY

21.34
21.31
21.32
21.32

20.68
20.65
20.67
20.72
20.71

PID 80149594
TOWN OF SHELBURNE

PID 82560327
KHANGURA LAND
DEVELOPMENT INC.

50 0 50
SCALE 1:2,500 METRES

LEGEND:

- GIS PROPERTY LINES
- FIELD DELINEATED WETLAND
- APPROXIMATE CAP AREA
- RIGHT-OF-WAY
- WATER
- SURFACE WATER SAMPLE
- WATER LEVEL
- APPROXIMATE INFERRED EXTENT OF BURIED WASTE
- APPROXIMATE AREA OF IDENTIFIED ANOMALY

Note:
The approximate inferred extent of buried waste and approximate area of potential buried waste are estimated based on electromagnetic survey findings (CSR GeoSurveys Limited, 2023).

DILLON CONSULTING

DATE JUNE 2026

PROJECT
SHELBURNE LANDFILL
MONITORING WELL INSTALLATION

PROJECT NO.
22-5099

TITLE
SURFACE WATER LOCATION PLAN

FIGURE NO.
3

FileName=::\pw working directory\projects 2022\dillon_50ltr\d0125320\225099-05-03_fig3.dwg

Morvan Road
[20.116m wide public road]

TP23-17
TP23-16
TP23-7
TP23-6
TP23-8
TP23-9
TP23-4
TP23-5
TP23-3
TP23-1
TP23-2
TP23-12
TP23-13
TP23-14
TP23-15
TP23-10
TP23-11
TP23-18
TP23-19
TP23-20
TP23-21
TP23-22

25-MW1D
25-MW1S (20.345)
25-MW2S (20.398)
25-MW2D
25-MW3S (20.546)
25-MW3D
25-MW4D
25-MW4S (20.094)

Former Landfill Site
(decommissioned in 2016)

10.668m wide R-O-W
in favour of P.I.D. #82560327
Doc. #92113980

P.I.D. #80149594
Lands of
Town of Shelburne
Doc. #92114058

Lot 3A
[see plan noted in 4(b).]
Area = 56,800 sq.m.±
P.I.D. #80149586
Lands of
Town of Shelburne
Doc. #91597642

AREA FOR COVER

S.M.(fd.) #323

20 0 20
SCALE 1:1,000 METRES

LEGEND

- APPROXIMATE TEST PIT LOCATION (DILLON, 2023)
- MONITOR WELL LOCATION (DILLON, 2025)
- APPROXIMATE CAP AREA
- FIELD DELINEATED WETLAND
- SHALLOW GROUNDWATER CONTOUR (m)
- SHALLOW GROUNDWATER FLOW DIRECTION
- (20.546) SHALLOW GROUNDWATER ELEVATION (m)

DILLON CONSULTING

DATE JUNE 2026

PROJECT: SHELBURNE LANDFILL MONITORING WELL INSTALLATION

PROJECT NO.: 22-5099

TITLE: SHALLOW GROUNDWATER CONTOURS FALL 2025

FIGURE NO.: 4

FileName:c:\pw working directory\projects 2022\dillon_50ft\d0125320\225099-05-03_fig4.dwg

Morvan Road
[20.116m wide public road]

(19.95)
25-MW4D
25-MW4S

(20.33)
25-MW1D
25-MW1S

(19.999) 25-MW3D
25-MW3S

25-MW2S
25-MW2D
(20.413)

TP23-1
TP23-2
TP23-3
TP23-4
TP23-5
TP23-6
TP23-7
TP23-8
TP23-9
TP23-10
TP23-11
TP23-12
TP23-13
TP23-14
TP23-15
TP23-16
TP23-17
TP23-18
TP23-19
TP23-20
TP23-21
TP23-22

20.1
20.2
20.3
20.4

Former Landfill Site
(decommissioned in 2016)

10.668m wide R-O-W
in favour of P.I.D. #82560327
Doc. #92113980

P.I.D. #80149594
Lands of
Town of Shelburne
Doc. #92114058

Lot 3A
[see plan noted in 4(B.)]
Area = 56,800 sq.m.±
P.I.D. #80149586
Lands of
Town of Shelburne
Doc. #91597642

AREA FOR COVER

S.M.(fd.) #323

20 0 20
SCALE 1:1,000 METRES

LEGEND

- APPROXIMATE TEST PIT LOCATION (DILLON, 2023)
- MONITOR WELL LOCATION (DILLON, 2025)
- APPROXIMATE CAP AREA
- FIELD DELINEATED WETLAND
- DEEP GROUNDWATER CONTOUR (m)
- DEEP GROUNDWATER FLOW DIRECTION
- (21.95) DEEP GROUNDWATER ELEVATION (m)

DILLON CONSULTING

DATE JUNE 2026

PROJECT
SHELBURNE LANDFILL
MONITORING WELL INSTALLATION

PROJECT NO.
22-5099

TITLE
DEEP GROUNDWATER CONTOURS
FALL 2025

FIGURE NO.
5

FileName:c:\pw working directory\projects 2022\dillon_50ft\d0125320225099-05-03_fig5.dwg

Morvan Road

[20.116m wide public road]

TP23-17
TP23-16
TP23-7
TP23-6
TP23-13
TP23-12
TP23-3
TP23-4
TP23-8
TP23-9
TP23-5
TP23-19
TP23-21
TP23-20
TP23-1
TP23-2
TP23-22
TP23-18
TP23-15
TP23-14
TP23-10
TP23-11

25-MW1D
25-MW1S (21.46)
25-MW4D
25-MW4S (22.90)
25-MW2S (21.43)
25-MW2D
(21.02) 25-MW3S
25-MW3D

22.5
22
21.5

10.668m wide R-O-W in favour of P.I.D. #82560327 Doc. #92113980

Former Landfill Site (decommissioned in 2016)

P.I.D. #80149594
Lands of
Town of Shelburne
Doc. #92114058

Lot 3A
[see plan noted in 4(b)]
Area = 56,800 sq.m.±
P.I.D. #80149586
Lands of
Town of Shelburne
Doc. #91597642

AREA FOR COVER

20 0 20
SCALE 1:1,000 METRES

LEGEND

- APPROXIMATE TEST PIT LOCATION (DILLON, 2023)
- MONITOR WELL LOCATION (DILLON, 2025)
- APPROXIMATE CAP AREA
- FIELD DELINEATED WETLAND
- SHALLOW GROUNDWATER CONTOUR (m)
- SHALLOW GROUNDWATER FLOW DIRECTION
- (20.46) SHALLOW GROUNDWATER ELEVATION (m)

DILLON CONSULTING

DATE JUNE 2026

PROJECT
SHELBURNE LANDFILL
MONITORING WELL INSTALLATION

PROJECT NO.
22-5099

TITLE
SHALLOW GROUNDWATER CONTOURS
SPRING 2026

FIGURE NO.
6

FileName:c:\pw working directory\projects 2022\dillon_50ft\d0125320\225099-05-03_fig6.dwg

Morvan Road

[20.116m wide public road]

(22.64) 25-MW4D

25-MW5

22.5

22

21.5

TP23-13

TP23-12

TP23-1

TP23-2

TP23-3

TP23-4

TP23-5

TP23-6

TP23-7

TP23-8

TP23-9

TP23-10

TP23-11

TP23-14

TP23-15

TP23-16

TP23-17

TP23-18

TP23-19

TP23-20

TP23-21

TP23-22

(21.66) 25-MW1D

25-MW1S

25-MW2S

25-MW2D (21.42)

25-MW3S

(21.05) 25-MW3D

Former Landfill Site (decommissioned in 2016)

10.668m wide R-O-W in favour of P.I.D. #82560327 Doc. #92113980

P.I.D. #80149594 Lands of Town of Shelburne Doc. #92114058

Lot 3A [see plan noted in 4(B.)] Area = 56,800 sq.m.± P.I.D. #80149586 Lands of Town of Shelburne Doc. #91597642

AREA FOR COVER

S.M.(fd.) #323

20 0 20

SCALE 1:1,000 METRES

LEGEND

- APPROXIMATE TEST PIT LOCATION (DILLON, 2023)
- MONITOR WELL LOCATION (DILLON, 2025)
- APPROXIMATE CAP AREA
- FIELD DELINEATED WETLAND
- DEEP GROUNDWATER CONTOUR (m)
- DEEP GROUNDWATER FLOW DIRECTION
- (21.66) DEEP GROUNDWATER ELEVATION (m)

DILLON CONSULTING

DATE JUNE 2026

PROJECT: SHELBURNE LANDFILL MONITORING WELL INSTALLATION

PROJECT NO. 22-5099

TITLE: DEEP GROUNDWATER CONTOURS SPRING 2026

FIGURE NO. 7

FileName:c:\pw working directory\projects 2022\dillon_50ft\d0125320225099-05-03_fig7.dwg

Appendix A

Borehole Logs

DILLON CONSULTING

Location ID: 25-MW1S

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: HQ Coring
Date Started: Jul 05 2025 Date Completed: Jul 05 2025
Borehole Depth (m): 4.85

Depth (m)	Elevation / Depth (m)	Material Description	Graphic Log	Drilling Method	Well Diagram (m)	Water
1.0	20.6	Soil - SANDY ORGANIC SILT: low plasticity, brown, wet.		HQ Coring	0.00-0.58, Filter Pack 0.58-1.19, Bentonite 0.00-1.80, 50mm PVC Solid	0.99 m At Drilling
2.0	1.5 19.7	Soil - SILTY SAND WITH GRAVEL: medium sand, brown grey, wet.				
3.0	2.4	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.			1.19-4.85, Filter Pack 1.80-4.85, 50mm PVC Slotted	
4.0		**25-MW1S Terminated at 4.85 m.**				

Coordinate System: (UTM): 20T
Northing (m): 4847492.80 Easting (m): 314574.10
Elevation (m asl): 22.14

DILLON CONSULTING

Location ID: 25-MW1D

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: HQ Coring/Split Spoon
Date Started: Jul 04 2025 Date Completed: Jul 04 2025
Borehole Depth (m): 11.60

General comments: All depths corrected to reflect natural ground surface.

Original measurements were from top of drill pad (0.64 m).

Depth (m)	Elevation / Depth (m)	Material Description	Graphic Log	Drilling Method	Samples	Testing: % Recovery	Testing: Blows / 15cm	Testing: Combustible Vapour/ PID (ppm)	Testing: Recovery (mm)	RQD %	TCR %	Well Diagram (m)	Water
0		Soil - SANDY ORGANIC SILT: low plasticity, brown, wet.		HQ Coring								0.00-0.88, Filter Pack	
1.0	20.4			Split Spoon	0.88-1.49 m, 25-MW1D SS1	42	4 6 8 14	20	254			0.88-1.49, Bentonite	1.01 m At Drilling
	1.5	Soil - SILTY SAND WITH GRAVEL: medium sand, brown grey, wet.		Split Spoon	1.49-2.10 m, 25-MW1D SS2	83	13 13 14 10	180	508				
2.0	19.5			HQ Coring									
	2.4	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.		Split Spoon	2.41-3.02 m, 25-MW1D SS4	29	17 12 8 7		178				
3.0				Split Spoon	3.02-3.63 m, 25-MW1D SS5	50	20 6 9 7	130	305				
				HQ Coring									
4.0				Split Spoon		17	23 27 14 17		102			0.00-8.55, 50mm PVC Solid	
				Split Spoon	4.54-5.15 m, 25-MW1D SS7	25	20 18 14 8	110	152			1.49-7.34, Concrete Cement Grout	
5.0	16.5			HQ Coring									
	5.5	Soil - WELL-GRADED SANDY GRAVEL: medium grained, grey, wet.		Split Spoon		24	13 29 50/127 mm		102				
6.0	15.9			Split Spoon		100	50/25 mm		25				
	6.0	Rock - METASANDSTONE, MSST, weathered, very low strength, grey brown, crystalline, Fine to Medium grained , clay seams.		HQ Coring						46	100		
7.0	14.7												
	7.2	Rock - METASANDSTONE, MSST, weathered, low strength, crystalline, Fine grained Grey.								76	100	7.34-7.95, Bentonite	
8.0	13.3												
	8.7	grey, Low to medium strength, clay seams.								81	100		
9.0												7.95-11.60, Filter Pack	
10.0	11.8											8.55-11.60, 50mm PVC Slotted	
	10.1	Medium to high strength.								79	100		
11.0		**25-MW1D Terminated at 11.60 m.**											

Coordinate System: (UTM): 20T
Northing (m): 4847494.77 Easting (m): 314580.64
Elevation (m asl): 21.93

DILLON CONSULTING

Location ID: 25-MW2S

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: HQ Coring
Date Started: Jul 04 2025 Date Completed: Jul 04 2025
Borehole Depth (m): 4.91

Depth (m)	Elevation / Depth (m)	Material Description	Graphic Log	Drilling Method	Well Diagram (m)	Water
1.0	20.4 1.6	Soil - SANDY ORGANIC SILT WITH GRAVEL: low plasticity, brown, wet.		HQ Coring	0.00-0.34, Filter Pack 0.34-1.25, Bentonite 0.00-1.86, 50mm PVC Solid	1.19 m At Drilling
2.0	19.5 2.5	Soil - SILTY SAND WITH GRAVEL: grey, wet.				
3.0	18.9 3.1	Soil - WELL-GRADED SANDY GRAVEL: medium grained, grey, wet.			1.25-4.91, Filter Pack 1.86-4.91, 50mm PVC Slotted	
4.0	18.0 4.0	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.				
	17.4 4.6	Soil - GRAVELLY SAND: fine to medium sand, grey, wet.				
		Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet. **25-MW2S Terminated at 4.91 m.**				

Coordinate System: (UTM): 20T
Northing (m): 4847409.74 Easting (m): 314516.16
Elevation (m asl): 22

DILLON CONSULTING

Location ID: 25-MW2D

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: Split Spoon/HQ Coring
Date Started: Jul 03 2025 Date Completed: Jul 04 2025
Borehole Depth (m): 11.67

General comments: All depths corrected to reflect natural ground surface.

Original measurements were from top of drill pad (0.57 m)

Depth (m)	Elevation / Depth (m)	Material Description	Graphic Log	Drilling Method	Samples	Testing: PID (ppm)	Testing: Recovery (mm)	Testing: Blows/15 cm	RQD %	TCR %	Well Diagram (m)	Water
0	20.4	Soil - SANDY ORGANIC SILT WITH GRAVEL: low plasticity, brown, wet.		HQ Coring							0.00-0.95 Filter Pack	
1.0				Split	25-MW2D SS1		203	5-6-6-10			0.95-1.87, Bentonite	0.95 m At Drilling
	1.6	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.		Split	25-MW2D SS2	55	508	12-17-13-14				
2.0	19.5			HQ Coring								
	2.5	Soil - WELL-GRADED SANDY GRAVEL: medium grained, grey, wet.		Split			102	30-33-30-14				
3.0	18.9			Split								
	3.1	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.		Split	25-MW2D SS4	35	254	10-9-10-10				
	18.0			Split								
4.0	4.0	Soil - GRAVELLY SAND: fine to medium sand, grey, wet.		Split			76	29-21-19-27			0.00-8.63, 50mm PVC Solid	
	17.4			Split								
	4.6	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.		Split	25-MW2D SS6	35	229	21-22-10-13			1.84-7.41, Bentonite Grout	
5.0	16.5			HQ Coring								
	5.5	Soil - WELL-GRADED SANDY GRAVEL: medium grained, grey, wet.		Split			76	31-21-12-9				
6.0	15.9			Split								
	6.1	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet.		Split			25	9-7-14-15				
				Split								
7.0	14.6			Split		15	229	34-23-50				
	7.4	Rock - METASANDSTONE, MSST, weathered, very low to low strength, Fine grained With clay seams.		HQ Coring					77	100	7.41-8.02, Bentonite	
8.0												
9.0									66	100		
10.0											8.02-11.67, Filter Pack	
											8.63-11.67, 50mm PVC Slotted	
11.0									81	100		
		25-MW2D Terminated at 11.67 m.										

Coordinate System: (UTM): 20T
Northing (m): 4847409.74 Easting (m): 314516.16
Elevation (m asl): 22

DILLON CONSULTING

Location ID: 25-MW3S

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: HQ Coring
Date Started: Jul 03 2025 Date Completed: Jul 03 2025
Borehole Depth (m): 4.61

Depth (m)	Elevation / Depth (m)	Material Description	Graphic Log	Drilling Method	Well Diagram (m)	Water
1.0		Soil - PEAT, brown black, wet.		HQ Coring	0.00-0.34, Filter Pack 0.34-0.95, Bentonite 0.00-1.56, 50mm PVC Solid	1.18 m At Drilling
2.0	19.3 2.8	Soil - SANDY ORGANIC SILT: low plasticity, brown, wet.			0.95-4.61, Filter Pack 1.56-4.61, 50mm PVC Slotted	
3.0	18.4 3.7	Soil - SILTY SAND: fine sand, grey, wet.				
4.0		**25-MW3S Terminated at 4.61 m.**				

Coordinate System: (UTM): 20T
Northing (m): 4847391.10 Easting (m): 314357.22
Elevation (m asl): 22.09

DILLON CONSULTING

Location ID: 25-MW3D

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logans Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: HQ Coring/Split Spoon
Date Started: 02/07/2025 Date Completed: 02/07/2025
Borehole Depth (m): 11.21

General comments: All depths corrected to reflect natural ground surface. Original measurements were from top of drill pad (0.88 m)

Depth (m)	Elevation / Depth (m)	Material Description	Drilling Method	Samples	Testing: % Recovery	Testing: Blows / 15cm	Testing: Combustible Vapour/ PID (ppm)	Testing: Recovery (mm)	RQD %	TCR %	Well Diagram (m)	Water
0.0	21.5 0.0	Soil - PEAT, brown black, wet.	HQ Coring									
1.0			Split Spoon		0	1 0 0 0		0			0.00-2.13, Filter Pack	0.78 m At Drilling
2.0			Split Spoon	1.38-1.99 m, 25-MW3D SS2	33	1 0 0 0		203				
	18.7		HQ Coring									
			Split Spoon		0	1 0 0 0		0			2.13-3.05, Bentonite	
3.0	2.8	Soil - SANDY ORGANIC SILT: low plasticity, brown, soft, wet.	Split Spoon	2.78-3.39 m, 25-MW3D SS4	33	1 0 0 0		203				
	17.8		HQ Coring									
4.0	3.7	Soil - SILTY SAND: fine sand, grey, wet.	Split Spoon	3.69-4.30 m, 25-MW3D SS5	50	2 7 9 6	10	305			0.00-8.16, 50mm PVC Solid	
			Split Spoon	4.30-4.73 m, 25-MW3D SS6	100	6 3 50/127 mm	180	432				
5.0			HQ Coring								3.05-6.94, Concrete Cement Grout	
	15.7											
6.0	5.7	Soil - SILTY SAND WITH GRAVEL: fine sand, grey, wet, cobbles and boulders.	Split Spoon	5.75-6.36 m, 25-MW3D SS7	50	10 7 12 20	240	305				
	14.7		HQ Coring		75	50/102 mm		76				
7.0	6.7	Rock - GRANITE, GRA, weathered, low strength, grey, Fine to Medium grained.	Split Spoon		100	50/25 mm		25	21	100	6.94-7.55, Bentonite	
8.0												
9.0			HQ Coring						83	100	7.55-11.21, Filter Pack	
10.0									92	100	8.16-11.21, 50mm PVC Slotted	
11.0		**25-MW3D Terminated at 11.21 m.**										

Coordinate System: (UTM): 20T
Northing (m): 4847386.47 Easting (m): 314353.45
Elevation (m asl): 21.46

DILLON CONSULTING

Location ID: 25-MW4S

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: HQ Coring
Date Started: Jul 06 2025 Date Completed: Jul 06 2025
Borehole Depth (m): 7.03

Depth (m)	Elevation / Depth (m)	Material Description
	23.6 / 0.1	Vegetation.
		Soil - SANDY SILT WITH GRAVEL: low plasticity, brown grey, dry.
1.0		
	22.2 / 1.5	Soil - GRAVELLY SAND: grey, dry, cobbles and boulders.
2.0	21.7 / 2.0	Cobbles and boulders.
3.0		
	20.2 / 3.5	Soil - SILTY SAND: grey, wet.
4.0	19.6 / 4.1	Cobbles and boulders.
5.0		
6.0		
7.0		**25-MW4S Terminated at 7.04 m.**

Graphic Log

Drilling Method: HQ Coring

Well Diagram (m):
- 0.00-2.46, Filter Pack
- 0.00-3.99, 50mm PVC Solid
- 2.46-3.38, Bentonite
- 3.38-7.03, Filter Pack
- 3.99-7.03, 50mm PVC Slotted

Water: 3.19 m At Drilling

Coordinate System: (UTM): 20T
Northing (m): 4847479.30 Easting (m): 314374.51
Elevation (m asl): 23.7

DILLON CONSULTING

Location ID: 25-MW4D

Client: Town of Shelburne
Project No: 22-5099
Drilling Co: Logan Drilling Group
Observer: Nick Dodge
Borehole Diameter (mm): 152

Project: Shelburne Landfill
Location: 31 Morvan Rd, Shelburne, NS B0T 1W0, Canada
Drilling Method: Split Spoon/HQ Coring
Date Started: Jul 06 2025 Date Completed: Jul 06 2025
Borehole Depth (m): 13.31

Depth (m)	Elevation / Depth (m)	Material Description	Graphic Log	Drilling Method	Samples	Testing: % Recovery	Testing: Blows / 15cm	Testing: Combustible Vapour/ PID (ppm)	Testing: Recovery (mm)	RQD %	TCR %	Well Diagram (m)	Water
0	23.8	Vegetation.											
	0.1	Soil - SANDY SILT WITH GRAVEL: low plasticity, brown grey, dry.		Split Spoon	0.00-0.61 m, 25-MW4D SS1	67	6 17 21 27	110	406			0.00-0.61, Filter Pack	
1.0					0.61-1.22 m, 25-MW4D SS2	63	31 15 16 37	100	381			0.61-1.22, Bentonite	
	22.4			HQ Coring									
	1.5	Soil - GRAVELLY SAND: grey, dry, cobbles and boulders.				100	50/127 mm		127				
2.0	22.0												
	2.0	Cobbles and boulders				0	50/25 mm		0				2.33 m At Drilling
3.0	20.5												
	3.5	Soil - SILTY SAND: grey, wet.		Split Spoon	3.50-4.09 m, 25-MW4D SS5	43	19 27 46	85	254				
4.0	19.9						50/127 mm						
	4.1	Cobbles and boulders.		HQ Coring									
5.0												0.00-10.26, 50mm PVC Solid	
												1.22-9.04, Bentonite Grout	
6.0													
7.0													
8.0													
9.0													
	14.3											9.04-9.65, Bentonite	
	9.7	Rock - METASANDSTONE, MSST, weathered, low strength, grey, fine to medium grained with clay seams.								87	100		
10.0	13.3												
	10.6	Rock - METASANDSTONE, MSST, weathered, low strength, grey, Fine grained.								91	100		
11.0												9.65-13.31, Filter Pack	
												10.26-13.29, 50mm PVC Slotted	
12.0										95	100		
13.0		**25-MW4D Terminated at 13.31 m.**											

Coordinate System: (UTM): 20T
Northing (m): 4847480.12 Easting (m): 314368.44
Elevation (m asl): 23.96

Appendix B

Tables

Table B-1: Soil Analytical Results

				Field ID	25-MW1D SS5	25-MW2D SS6	25-MW3D SS7	25-MW4D SS5
				Depth	3.02-3.63 mbgs	4.61-5.52 mbgs	5.75-6.36 mbgs	3.4-4.09 mbgs
				Sample Type	Normal	Normal	Normal	Normal
				Date	04 Jul 2025	03 Jul 2025	02 Jul 2025	05 Jul 2025
	Unit	EQL	CEQG Soil Quality for the Protection of Env. and Human Health (Commercial)	NS Tier I EQS Soil Commercial Potable Coarse				
General Chemistry								
Calcium	mg/kg	50	-	-	1,510	1,320	935	929
Moisture Content	%	0.25	-	-	21.2	18.9	16.8	16.6
Phosphorus	mg/kg	50	-	-	700	418	374	434
Metals								
Aluminium	mg/kg	50	-	15,400	11,800	5,840	14,800	7,210
Antimony	mg/kg	0.1	40	7.5	<0.10	<0.10	<0.10	<0.10
Arsenic	mg/kg	0.1	12	10	0.94	0.81	2.80	0.94
Barium	mg/kg	0.5	2,000	350	87.7	30.9	92.2	57.0
Beryllium	mg/kg	0.1	8	1	0.38	0.19	0.45	0.24
Bismuth	mg/kg	0.2	-	-	<0.20	0.32	<0.20	0.27
Boron	mg/kg	5	-	4,300	<5.0	<5.0	<5.0	<5.0
Cadmium	mg/kg	0.02	22	1	0.034	0.032	<0.020	0.036
Chromium (Total, III+VI)	mg/kg	0.5	87	630	20.5	11.4	41.0	13.8
Cobalt	mg/kg	0.1	300	22	6.16	3.02	10.4	3.83
Copper	mg/kg	0.5	91	250	8.43	18.2	38.2	9.54
Iron	mg/kg	50	-	11,000	16,100	7,610	22,500	9,440
Lead	mg/kg	0.5	82	120	2.89	1.42	2.70	1.55
Magnesium	mg/kg	20	-	-	5,170	2,340	5,780	3,180
Manganese	mg/kg	1	-	360	237	111	263	155
Molybdenum	mg/kg	0.1	40	15	0.16	0.61	3.04	0.30
Nickel	mg/kg	0.5	89	70	14.1	7.07	22.5	9.61
Potassium	mg/kg	100	-	-	5,790	2,260	6,480	3,000
Selenium	mg/kg	0.2	2.9	1	<0.20	<0.20	<0.20	<0.20
Tungsten	mg/kg	0.5	-	-	<0.50	0.54	14.8	3.54
Lithium	mg/kg	2	-	-	38.3	18.0	41.0	24.5
Silver	mg/kg	0.1	40	77	<0.10	<0.10	2.55	0.76
Sodium	mg/kg	50	-	15,000	120	130	232	117
Strontium	mg/kg	0.5	-	9,400	3.73	4.05	3.40	2.74
Sulphur as S	mg/kg	1,000	-	-	<1,000	<1,000	<1,000	<1,000
Titanium	mg/kg	1	-	-	983	385	917	534
Thallium	mg/kg	0.05	1	1	0.326	0.112	0.285	0.132
Tin	mg/kg	2	300	9,400	<2.0	2.4	2.5	<2.0
Uranium	mg/kg	0.05	33	30	3.40	1.27	1.27	1.81
Vanadium	mg/kg	0.2	130	39	20.5	9.98	28.7	14.8
Zinc	mg/kg	2	410	200	56.8	17.8	40.0	21.6
Zirconium	mg/kg	1	-	-	6.5	1.8	3.4	1.9
BTEX								
Benzene	mg/kg	0.005	0.03	0.042	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.05	0.37	0.35	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.015	0.082	0.043	<0.015	<0.015	<0.015	<0.015
Xylene (o)	mg/kg	0.03	-	-	<0.030	<0.030	<0.030	<0.030
Xylene (m & p)	mg/kg	0.03	-	-	<0.030	<0.030	<0.030	<0.030
Xylene Total	mg/kg	0.05	11	0.73	<0.050	<0.050	<0.050	<0.050
Petroleum Hydrocarbons (PHCs)								
VPH (C6-C10 - BTEX)	mg/kg	5	-	-	<5.0	<5.0	<5.0	<5.0
>C10-C16 fraction of mTPH, SGC	%	1	F2 - 320	-	<1	<1	<1	<1
>C16-C21 fraction of mTPH, SGC	%	1	F3 - 3500	-	<1	<1	<1	<1
>C21-C32 fraction of mTPH, SGC	%	1		-	<1	<1	<1	<1
C6-C10 fraction of mTPH, SGC	%	1	F1 - 240	-	<1	<1	<1	<1
EPH >C10-C16, SGC	mg/kg	5	-	-	<5.0	<5.0	<5.0	<5.0
EPH >C16-C21, SGC	mg/kg	5	-	-	<5.0	<5.0	<5.0	<5.0
EPH >C21-C32, SGC	mg/kg	5	-	-	<5.0	<5.0	<5.0	<5.0
EPH >C34-C50, SGC	mg/kg	20	F4 - 10000	-	<20	<20	<20	<20
Hydrocarbon resemblance, SGC	none		-	-	N/A	N/A	N/A	N/A
mTPH (Tier I), SGC	mg/kg	10	-	940 (G) 1800 (F) 10000 (L)	<10	<10	<10	<10
Return to baseline at C32, SGC	-		-	-	Yes	Yes	Yes	Yes
TEH >C10-C32, SGC	mg/kg	10	-	-	<10	<10	<10	<10

Table B-1: Soil Analytical Results

				Field ID	25-MW1D SS5	25-MW2D SS6	25-MW3D SS7	25-MW4D SS5
				Depth	3.02-3.63 mbgs	4.61-5.52 mbgs	5.75-6.36 mbgs	3.4-4.09 mbgs
				Sample Type	Normal	Normal	Normal	Normal
				Date	04 Jul 2025	03 Jul 2025	02 Jul 2025	05 Jul 2025
	Unit	EQL	CEQG Soil Quality for the Protection of Env. and Human Health (Commercial)	NS Tier I EQS Soil Commercial Potable Coarse				
Polycyclic Aromatic Hydrocarbons (PAHs)								
Benzo(b+j+k)fluoranthene_0	mg/kg	0.015	-	-	<0.015	<0.015	<0.015	<0.015
1-Methylnaphthalene	mg/kg	0.01	-	30	<0.010	<0.010	<0.010	<0.010
2-methylnaphthalene	mg/kg	0.01	-	30	<0.010	<0.010	<0.010	<0.010
1 & 2 Methylnaphthalene	mg/kg	0.015	-	-	<0.015	<0.015	<0.015	<0.015
Acenaphthene	mg/kg	0.005	-	8,000	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	-	23	<0.0050	<0.0050	<0.0050	<0.0050
Acridine	mg/kg	0.01	-	-	<0.010	<0.010	<0.010	<0.010
Anthracene	mg/kg	0.004	32	37,000	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	mg/kg	0.01	10	12	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	72	14	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	mg/kg	0.01	-	1.2	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01	-	250	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01	10	1.2	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	-	78	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	10	8.8	<0.0050	<0.0050	<0.0050	<0.0050
Fluorene	mg/kg	0.01	-	4,100	<0.010	<0.010	<0.010	<0.010
Fluoranthene	mg/kg	0.01	180	5,300	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01	10	98	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.013	25	<0.010	<0.010	<0.010	<0.010
Perylene	mg/kg	0.01	-	-	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.046	17	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	100	3,200	<0.010	<0.010	<0.010	<0.010
Quinoline	mg/kg	0.01	-	-	<0.010	<0.010	<0.010	<0.010
Index of Additive Cancer Risk	-	0.15	1	1	<0.150	<0.150	<0.150	<0.150
B(A)P TPE	mg/kg	0.02	-	5.3	<0.020	<0.020	<0.020	<0.020

Environmental Standards
Canadian Council of Ministers of the Environment (CCME) Canadian Environmental Quality Guideline (CEQG) Soil Quality for the Protection of Env. and Human Health (Commercial), December 2014
Nova Scotia Environment, NS Tier I EQS for soil (Commercial Potable Coarse), October 2022

Table B-2: Groundwater Elevations and Vertical Gradients (Fall 2025)

Monitoring Well ID	Survey information (NAD83, CGVD13)				Well Construction								Water Levels					
					Top of Sandpack		Top of Screen		Bottom of Screen (mbgs)		Stick-Up Height (m)	Screen Separation	Depth to Water Level (mbtoc) October 7, 2025	Depth to Water Level (mbgs) October 7, 2025	Groundwater Elevation (masl) October 7, 2025	Effective Monitoring Point Elevation	Hydraulic Gradient	
	Northing	Easting	Top of Casing Elevation (masl)	Ground Surface elevation (m)	Depth (mbgs)	Elevation (m asl)	Depth (mbgs)	Elevation (m asl)	Depth (mbgs)	Elevation (m asl)								
25MW-1S	4846682.13	25435307.22	22.93	22.15	1.19	20.96	1.80	20.35	4.85	17.30	0.79	3.32	2.59	1.80	20.35	18.8	0.002	Downward (near neutral)
25MW-1D	4846684.12	25435313.74	22.93	21.93	7.95	13.98	8.55	13.38	11.60	10.33	1.00		2.60	1.60	20.33	12.2		
25MW-2S	4846601.72	25435246.52	23.00	22.25	1.25	21.00	1.86	20.39	4.91	17.34	0.75	3.35	2.60	1.85	20.40	18.9	-0.002	Upward (near neutral)
25MW-2D	4846598.07	25435250.78	22.74	22.00	8.01	13.99	8.62	13.38	11.67	10.33	0.74		2.32	1.59	20.41	12.2		
25MW-3S	4846576.44	25435092.20	22.91	22.09	0.95	21.14	1.56	20.53	4.61	17.48	0.82	3.57	2.36	1.54	20.55	19.0	0.079	Downward
25MW-3D	4846571.69	25435088.49	22.37	21.46	7.55	13.91	8.16	13.30	11.21	10.25	0.91		2.38	1.46	20.00	12.1		
25MW-4S	4846664.92	25435107.98	24.49	23.70	3.38	20.32	3.99	19.71	7.03	16.67	0.80	2.38	4.40	3.60	20.09	18.4	0.024	Downward
25MW-4D	4846665.73	25435101.88	24.67	23.96	9.67	14.29	10.26	13.70	13.31	10.65	0.71		4.72	4.01	19.95	12.5		

Table B-3: Groundwater Elevations and Vertical Gradients (Spring 2026)

Monitoring Well ID	Survey information (NAD83, CGVD13)				Well Construction								Water Levels					
					Top of Sandpack		Top of Screen		Bottom of Screen (mbgs)		Stick-Up Height (m)	Screen Separation	Depth to Water Level (mbtoc) March 30, 2026	Depth to Water Level (mbgs) March 30, 2026	Groundwater Elevation (masl) March 30, 2026	Effective Monitoring Point Elevation	Hydraulic Gradient	
	Northing	Easting	Top of Casing Elevation (masl)	Ground Surface elevation (m)	Depth (mbgs)	Elevation (m asl)	Depth (mbgs)	Elevation (m asl)	Depth (mbgs)	Elevation (m asl)								
25MW-1S	4846682.13	25435307.22	22.93	22.15	1.19	20.96	1.80	20.35	4.85	17.30	0.79	3.32	1.47	0.68	21.46	19.1	-0.028	Upward
25MW-1D	4846684.12	25435313.74	22.93	21.93	7.95	13.98	8.55	13.38	11.60	10.33	1.00		1.27	0.27	21.66	12.2		
25MW-2S	4846601.72	25435246.52	23.00	22.25	1.25	21.00	1.86	20.39	4.91	17.34	0.75	3.35	1.57	0.82	21.43	19.2	0.002	Downward (near neutral)
25MW-2D	4846598.07	25435250.78	22.74	22.00	8.01	13.99	8.62	13.38	11.67	10.33	0.74		1.32	0.58	21.42	12.2		
25MW-3S	4846576.44	25435092.20	22.91	22.09	0.95	21.14	1.56	20.53	4.61	17.48	0.82	3.57	1.89	1.08	21.02	19.2	-0.005	Upward (near neutral)
25MW-3D	4846571.69	25435088.49	22.37	21.46	7.55	13.91	8.16	13.30	11.21	10.25	0.91		1.32	0.41	21.05	12.1		
25MW-4S	4846664.92	25435107.98	24.49	23.70	3.38	20.32	3.99	19.71	7.03	16.67	0.80	2.38	1.59	0.79	22.90	18.5	0.044	Downward
25MW-4D	4846665.73	25435101.88	24.67	23.96	9.67	14.29	10.26	13.70	13.31	10.65	0.71		2.03	1.32	22.64	12.5		

Table B-4: Groundwater Analytical Results

Location Code						25-MW1S		25-MW1D		25-MW2S		25-MW2D			
Field ID						MW25-1S		MW25-1D		MW25-2S		MW25-2D	Dup A	MW25-2D	
Sample Type						Normal		Normal		Normal		Normal	Field_D	Normal	
Date						07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	07 Oct 2025	07 Oct 2025	30 Mar 2026	
	Unit	EQL	NS Tier I EQS Com/Ind Potable Coarse	Guidelines for Canadian Drinking Water (MAC)	*Guidelines for Canadian Drinking Water (Other Value)*										
Calculated Parameters															
Anions Total (filtered)	meq/L	0.1	-	-	-	3.38	2.51	0.91	1.01	14.2	17.8	17.6	17.4	17.2	
Cations Total (filtered)	meq/L	0.1	-	-	-	4.12	3.00	0.89	0.98	14.0	17.9	17.7	17.6	17.8	
Ionic Balance (filtered)	%	0.01	-	-	-	122	120	97.8	97.0	98.6	101	100	101	103	
Langelier Index (@ 20C)	N/A	0.01	-	-	-	-1.79	-1.02	-2.81	-2.27	-0.609	0.383	-0.503	-0.653	-0.076	
Langelier Index (@ 4C)	N/A	0.01	-	-	-	-2.04	-1.27	-3.06	-2.52	-0.856	0.137	-0.750	-0.898	-0.322	
Saturation @ 4c	-	0.01	-	-	-	8.17	8.44	9.50	9.40	7.54	6.98	7.38	7.40	7.31	
Saturation pH (@ 20C)	N/A	0.01	-	-	-	7.92	8.19	9.25	9.15	7.29	6.74	7.13	7.15	7.07	
NA															
Phosphorus - Total (As P)	mg/L	0.002 - 0.2	-	-	-	-	2.90	-	1.65	-	12.9	-	-	3.34	
General Chemistry															
Calcium (filtered)	mg/L	0.05 - 0.5	-	-	#1	22.3	15.3	4.29	4.57	58.4	175	112	109	118	
Colour, Apparent	CU	20 - 200	-	-	-	7,090	3,790	1,020	2,210	3,570	9,500	9,700	6,660	6,400	
Carbonate	mg/L	0.6	-	-	-	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	
Alkalinity (total)	mg/L	1	-	-	-	133	100	28.0	36.6	298	391	237	236	270	
Bicarbonate	mg/L	1.2	-	-	-	162	122	34.2	44.7	364	477	289	288	329	
Hardness as CaCO3 (Measured) (filtered)	mg/L	0.5	-	-	#1	86.0	59.1	21.0	22.7	231	659	505	498	511	
Ammonia as N	mg/L	0.005 - 0.1	-	-	-	1.91	0.829	0.0653	0.0488	2.42	0.754	0.293	0.236	0.174	
Chemical Oxygen Demand (COD)	mg/L	10	-	-	-	298	135	12	20	98	87	60	78	60	
Dissolved Organic Carbon (filtered)	mg/L	0.5	-	-	-	13.7	5.40	0.57	0.93	18.6	7.84	4.82	4.83	5.23	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.05 - 0.5	-	-	-	8.58	2.92	0.140	0.183	3.47	1.71	0.793	1.04	1.24	
Total Organic Carbon (TOC)	mg/L	2.5 - 25	-	-	-	125	40.9	<2.50	<10.0	30.1	13.6	<10.0	<10.0	29.5	
Ortho Phosphate as P (filtered)	mg/L	0.001 - 0.01	-	-	-	0.0026	<0.0010	0.0774	0.167	0.0014	<0.0010	0.0019	0.0014	<0.0100	
Phosphorus	mg/L	0.05 - 0.5	-	-	-	3.23	-	1.68	-	3.93	-	11.3	7.57	-	
Phosphorus (filtered)	mg/L	0.05 - 0.5	-	-	-	<0.500	0.137	0.298	0.279	<0.500	0.178	<0.500	<0.500	0.151	
Fluoride	mg/L	0.02 - 0.1	-	1.5	-	0.085	0.077	0.185	0.216	0.140	0.108	0.132	0.126	0.128	
Chloride	mg/L	0.5 - 2.5	-	-	*250* #3	21.3	17.0	8.95	7.30	230	28.1	142	139	124	
Hydroxide	mg/L	0.3	-	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	
Nitrate (as N)	mg/L	0.02 - 0.1	-	10	-	<0.020	<0.020	<0.020	<0.020	<0.100	<0.100	<0.100	<0.100	<0.100	
Nitrite (as N)	mg/L	0.01 - 0.05	-	1	-	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	
Nitrite + Nitrate as N	mg/L	0.022 - 0.112	-	-	-	<0.0224	<0.022	<0.0224	<0.022	<0.112	<0.11	<0.112	<0.112	<0.11	
pH (Lab)	pH Units	0.1	-	-	*7-10.5*	*6.13*	7.17	*6.44*	*6.88*	*6.68*	7.12	*6.63*	*6.50*	*6.99*	
Electrical Conductivity (Lab)	µS/cm	1	-	-	-	332	237	92.5	101	1,420	1,490	1,580	1,600	1,600	
Sulphate	mg/L	0.3 - 1.5	-	-	*500* #3	5.50	1.55	4.38	3.15	82.2	440	426	420	401	
Total Dissolved Solids (TDS) - Measured	mg/L	10 - 400	-	-	*500* #3	216	171	83	162	*850*	*1,170*	*1,050*	*1,100*	*1,150*	
Total Suspended Solids	mg/L	3 - 75	-	-	-	4,560	5,580	1,080	1,040	2,060	34,700	1,400	2,020	3,720	
Turbidity	NTU	0.1	-	-	*1.0* #2	*>4,000*	*1,700*	*549*	*697*	*1,460*	*>4,000*	*>4,000*	*3,600*	*>4,000*	
Metals															
Aluminium (filtered)	mg/L	0.001 - 0.01	-	#1	*#1*	0.0448	0.0112	0.0040	0.0167	0.0256	0.0068	<0.0100	<0.0100	0.0033	
Antimony (filtered)	mg/L	0.0001 - 0.001	0.006	0.006	-	<0.00100	<0.00010	<0.00010	<0.00010	<0.00100	<0.00010	<0.00100	<0.00100	<0.00010	
Arsenic (filtered)	mg/L	0.0001 - 0.001	0.01	0.01	-	<0.00100	0.00108	0.00200	0.00190	<0.00100	0.00118	0.00444	0.00577	0.00551	
Barium (filtered)	mg/L	0.0001 - 0.001	1	2	-	0.0819	0.0369	0.00586	0.00596	0.105	0.104	0.0424	0.0411	0.0234	
Beryllium (filtered)	mg/L	2E-05 - 0.0002	0.004	-	-	<0.000200	0.000047	<0.000020	<0.000020	<0.000200	0.000089	<0.000200	<0.000200	0.000032	
Bismuth (filtered)	mg/L	5E-05 - 0.0005	-	-	-	<0.000500	<0.000050	<0.000050	<0.000050	<0.000500	<0.000050	<0.000500	<0.000500	<0.000050	
Boron (filtered)	mg/L	0.01 - 0.1	5	5	-	0.267	0.074	<0.010	<0.010	0.455	0.850	0.322	0.303	0.367	
Cadmium (filtered)	mg/L	5E-06 - 5E-05	0.005	0.007	-	<0.0000500	<0.0000050	<0.0000050	<0.0000050	<0.0000500	<0.0000050	<0.0000500	<0.0000500	<0.0000050	
Chromium (Total, III+VI) (filtered)	mg/L	0.0005 - 0.005	0.05	0.05	-	<0.00500	<0.00050	<0.00050	<0.00050	<0.00500	<0.00050	<0.00500	<0.00500	<0.00050	
Cobalt (filtered)	mg/L	0.0001 - 0.001	0.0038	-	-	<0.00100	0.00060	0.00140	0.00069	<0.00100	0.00021	0.0111	0.00890	0.0147	
Copper (filtered)	mg/L	0.0002 - 0.002	2	2	*1* #3	<0.00200	<0.00020	<0.00020	0.00061	<0.00200	<0.00020	<0.00200	<0.00200	0.00089	
Iron (filtered)	mg/L	0.01 - 0.1	0.3	-	*0.1* #3	*21.8*	*23.8*	*0.868*	*0.304*	*12.6*	*18.3*	*21.7*	*25.2*	*11.1*	
Lead (filtered)	mg/L	5E-05 - 0.0005	0.005	0.005	-	<0.000500	<0.000050	<0.000050	<0.000050	<0.000500	<0.000050	<0.000500	<0.000500	0.000066	
Magnesium (filtered)	mg/L	0.005 - 0.05	-	—	#1	7.37	5.08	2.51	2.75	20.7	54.0	54.8	54.8	52.6	
Manganese (filtered)	mg/L	0.0001 - 0.001	0.12	0.12	*0.02* #3	*0.902*	*0.668*	*0.552*	*0.491*	*0.892*	*2.79*	*6.36*	*6.33*	*6.09*	
Mercury (filtered)	mg/L	0.000005	0.001	0.001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Molybdenum (filtered)	mg/L	5E-05 - 0.0005	0.07	-	-	<0.000500	0.000315	0.000376	0.000497	<0.000500	0.000279	0.00216	0.00268	0.000387	
Nickel (filtered)	mg/L	0.0005 - 0.005	0.1	-	-	<0.00500	0.00280	0.00084	0.00057	<0.00500	0.00385	0.00172	0.0181	0.00593	
Silica (SiO2) (filtered)	mg/L	0.11 - 1.07	-	-	-	27.0	23.1	29.1	33.2	24.2	19.2	28.2	27.8	30.6	
Potassium (filtered)	mg/L	0.05 - 0.5	-	-	-	6.10	4.13	1.83	2.00	33.4	50.5	16.0	16.0	17.2	
Selenium (filtered)	mg/L	5E-05 - 0.0005	0.05	0.05	-	0.00306	0.000104	<0.000050	<0.000050	<0.000500	0.000168	<0.000500	<0.000500	<0.000050	
Cesium (filtered)	mg/L	1E-05 - 0.0001	-	-	-	0.000144	0.000060	<0.000010	0.000016	0.000482	0.000168	0.000107	<0.000100	0.000098	
Rubidium (filtered)	mg/L	0.0002 - 0.002	-	-	-	0.00695	0.00436	0.00063	0.00064	0.0142	0.00938	0.0154	0.0160	0.00635	
Tellurium (filtered)	mg/L	0.0002 - 0.002	-	-	-	<0.00200	<0.00020	<0.00020	<0.00020	<0.00200	<0.00020	<0.00200	<0.00200	<0.00020	
Thorium (filtered)	mg/L	0.0001 - 0.001	-	-	-	<0.00100	<0.00010	<0.00010	<0.00010	<0.00100	<0.00010	<0.00100	<0.00100	<0.00010	
Tungsten (filtered)	mg/L	0.0001 - 0.001	-	-	-	0.00108	0.00112	0.00052	0.00124	0.0155	0.0158	0.00650	0.00799	0.00115	
Lithium (filtered)	mg/L	0.001 - 0.01	-	-	-	0.0142	0.0112	0.0077	0.0094	0.0440	0.0435	0.0504	0.0448	0.0524	
Silver (filtered)	mg/L	1E-05 - 0.0001	-	-	#1	<0.000100	<0.000010	<0.000010	<0.000010	<0.000100	<0.000010	<0.000100	<0.000100	<0.000010	
Silicon (filtered)	mg/L	0.05 - 0.5	-	-	-	12.6	10.8	13.6	15.5	11.3	8.98	13.2	13.0	14.3	
Sodium (filtered)	mg/L	0.05 - 0.5	-	-	*200* #3	29.6	17.8	8.46	10.1	180	61.4	142	140	149	
Strontium (filtered)	mg/L	0.0002 - 0.002	2.4	7	-	0.202	0.133	0.0520	0.0525	0.421	0.914	0.919	0.920	0.936	
Sulphur as S (filtered)	mg/L	0.5 - 5	-	-	-	<5.00	0.70	1.37	1.01	27.2	154	133	130	151	
Titanium (filtered)	mg/L	0.0003 - 0.003	-	-	-	<0.00300	<0.00030	<0.00030	0.00050	<0.00300	<0.00030	<0.00300	<0.00300	<0.00030	
Thallium (filtered)	mg/L	1E-05 - 0.0001	0.002	-	-	<0.000100	<0.000010	<0.000010	<0.000010	<0.000100	<0.000010	<0.000100	<0.000100	<0.000010	
Tin (filtered)	mg/L	0.0001 - 0.001	2.4	-	-	<0.00100	<0.00010	<0.00010	<0.00010	<0.00100	<0.00010	<0.00100	<0.00100	<0.00010	
Uranium (filtered)	mg/L	1E-05 - 0.0001	0.02	0.02	-	0.000163	0.000109	0.000022	0.000016	0.000462	0.0297	0.00179	0.00194	0.00245	
Vanadium (filtered)	mg/L	0.0005 - 0.005	0.0062	-	-	<0.00500	<0.00050	<0.00050	<0.00050	<0.00500	<0.00050	<0.00500	<0.00500	<0.00050	
Zinc (filtered)	mg/L	0.001 - 0.01	5	-	*5* #3	<0.0100	0.0016	0.0013	0.0029	<0.0100	0.0017	0.0111	0.0109	0.0097	
Zirconium (filtered)	mg/L	0.0002 - 0.002	-	-	-	<0.00200	<0.00020	<0.00020	<0.00020	<0.00200	0.00022	<0.00200	<0.00200	<0.00020	
BTEX															
Benzene	mg/L	0.0005	0.005	0.005	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Toluene	mg/L	0.0005	0.024	0.06	*0.024* #3	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Ethylbenzene	mg/L	0.0005	0.0016	0.14	*0.0016* #3	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylene (o)	mg/L	0.0003	-	-	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Xylene (m & p)	mg/L	0.0004	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
Xylene Total	mg/L	0.0005	0.02	0.09	*0.02* #3	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Total BTEX	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	

						Location Code	25-MW1S		25-MW1D		25-MW2S		25-MW2D		
						Field ID	MW25-1S		MW25-1D		MW25-2S		MW25-2D	Dup A	MW25-2D
						Sample Type	Normal		Normal		Normal		Normal	Field_D	Normal
						Date	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	07 Oct 2025	07 Oct 2025	30 Mar 2026
	Unit	EQL	NS Tier I EQS Com/Ind Potable Coarse	Guidelines for Canadian Drinking Water (MAC)	*Guidelines for Canadian Drinking Water (Other Value)*										
Volatile Organic Compounds (VOCs)															
1,2-Dichloroethene	mg/L	0.00071	-	-	-		<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071
Acetone	mg/L	0.02	-	-	-		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Hexane	mg/L	0.0005	-	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl Ethyl Ketone (MEK)	mg/L	0.02	-	-	-		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Isobutyl Ketone (MIK)	mg/L	0.02	-	-	-		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,1,1,2-Tetrachloroethane	mg/L	0.0005	0.026	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.0005	10	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.0005	0.0034	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.0005	0.012	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethane	mg/L	0.0005	3.7	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.0005	0.014	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.0002	0.00034	-	-		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1,2-Dichlorobenzene	mg/L	0.0005	0.2	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.0005	0.005	0.005	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloropropane	mg/L	0.0005	0.0099	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.0005	0.059	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichloropropene	mg/L	0.0005	-	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.0005	0.005	0.005	*0.001* [#3]		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.0005	0.1	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.0005	0.1	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0005	0.033	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Carbon tetrachloride	mg/L	0.0002	0.002	0.002	-		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Chlorobenzene	mg/L	0.0005	0.08	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorodibromomethane	mg/L	0.0005	0.19	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0005	-	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloroform	mg/L	0.0005	0.08	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloromethane	mg/L	0.002	0.038	-	-		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
cis-1,2-Dichloroethene	mg/L	0.0005	0.07	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.0003	0.0067	-	-		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dichlorodifluoromethane	mg/L	0.0005	-	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.001	0.05	0.05	-		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether (MTBE)	mg/L	0.0005	-	-	*0.015* [#3]		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.0005	0.1	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.0005	0.01	0.01	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,2-Dichloroethene	mg/L	0.0005	0.1	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.0003	-	-	-		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Trichloroethene	mg/L	0.0005	0.005	0.005	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0005	-	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trihalomethanes	mg/L	0.001	-	0.1	-		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl chloride	mg/L	0.0002	0.002	0.002	-		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phenolics															
Phenols	mg/L	0.001	-	-	-		0.0054	<0.0010	0.0019	<0.0010	0.0024	<0.0010	0.0081	0.0073	<0.0010
Solvents															
2-hexanone (MBK)	mg/L	0.02	-	-	-		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Carbon disulfide	mg/L	0.001	-	-	-		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Comments
Field_D dentoes field duplicate sample
#1 None required
#2 Varies with filtration method. The slow sand diatomaceous earth filtration value has been applied.
#3 Aesthetic Objective
#4 It is noted that the CDWQ Guideline for aluminum (which was updated in March 2021) includes a health-based guideline of 2.9 mg/L based on a locational running average of a minimum of quarterly samples taken in the distribution system. The operational guidance value of 0.1 mg/L remains in effect, however, both limits relate to the use of aluminum-based coagulants at water treatment plants. Where this guideline is not applicable, it has not been presented.

Environmental Standards
Health Canada, December 2025, Guidelines for Canadian Drinking Water (MAC)
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Other Value)
Nova Scotia Environment, September 2021, NS Tier I EQS Com/Ind Potable Coarse

						Location Code	25-MW3S		25-MW3D		25-MW4S			25-MW4D	
						Field ID	MW25-3S		MW25-3D		MW25-4S		Dup A	MW25-4D	
						Sample Type	Normal		Normal		Normal		Field_D	Normal	
						Date	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	30 Mar 2026	07 Oct 2025	30 Mar 2026
	Unit	EQL	NS Tier I EQS Com/Ind Potable Coarse	Guidelines for Canadian Drinking Water (MAC)	*Guidelines for Canadian Drinking Water (Other Value)*										
Calculated Parameters															
Anions Total (filtered)	meq/L	0.1	-	-	-		5.27	4.82	3.54	3.09	0.30	0.29	0.27	1.00	0.62
Cations Total (filtered)	meq/L	0.1	-	-	-		5.41	4.82	3.91	3.82	0.30	0.26	0.26	0.72	0.56
Ionic Balance (filtered)	%	0.01	-	-	-		103	100	110	124	100	89.7	96.3	72.0	90.3
Langelier Index (@ 20C)	N/A	0.01	-	-	-		0.357	0.417	-2.75	-4.99	-4.34	-4.19	-4.65	-2.11	-2.82
Langelier Index (@ 4C)	N/A	0.01	-	-	-		0.108	0.168	-3.00	-5.25	-4.60	-4.44	-4.90	-2.36	-3.08
Saturation @ 4c	-	0.01	-	-	-		7.52	7.60	9.37	10.15	10.72	10.77	10.92	9.56	9.88
Saturation pH (@ 20C)	N/A	0.01	-	-	-		7.27	7.35	9.12	9.89	10.46	10.52	10.67	9.31	9.62
NA															
Phosphorus - Total (As P)	mg/L	0.002 - 0.2	-	-	-		-	0.206	-	28.8	-	5.75	5.18	-	3.74
General Chemistry															
Calcium (filtered)	mg/L	0.05 - 0.5	-	-	#1		61.0	55.1	21.8	21.8	1.30	1.21	1.19	3.81	2.72
Colour, Apparent	CU	20 - 200	-	-	-		3,290	788	6,440	14,000	9,870	2,590	8,790	336	5,490
Carbonate	mg/L	0.6	-	-	-		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Alkalinity (total)	mg/L	1	-	-	-		228	208	8.9	1.3	5.2	5.1	4.4	27.3	19.0
Bicarbonate	mg/L	1.2	-	-	-		278	254	10.8	1.6	6.3	6.2	5.4	33.3	23.2
Hardness as CaCO3 (Measured) (filtered)	mg/L	0.5	-	-	#1		192	174	88.3	87.3	5.06	4.41	4.36	15.3	11.1
Ammonia as N	mg/L	0.005 - 0.1	-	-	-		1.23	0.834	0.397	0.467	0.0567	0.0169	0.0142	0.0623	0.0303
Chemical Oxygen Demand (COD)	mg/L	10	-	-	-		322	63	33	262	24	26	43	<10	22
Dissolved Organic Carbon (filtered)	mg/L	0.5	-	-	-		5.26	5.25	0.76	1.18	<0.50	0.82	0.66	<0.50	1.39
Total Kjeldahl Nitrogen (TKN)	mg/L	0.05 - 0.5	-	-	-		9.50	1.88	0.775	2.53	0.120	0.326	0.278	0.121	0.595
Total Organic Carbon (TOC)	mg/L	2.5 - 25	-	-	-		45.4	19.8	15.9	41.7	<5.00	<10.0	<10.0	<2.50	<10.0
Ortho Phosphate as P (filtered)	mg/L	0.001 - 0.01	-	-	-		0.0015	0.0014	<0.0010	<0.0050	<0.0010	0.0025	0.0038	0.0036	0.0112
Phosphorus	mg/L	0.05 - 0.5	-	-	-		1.66	-	5.23	-	5.26	-	-	0.392	-
Phosphorus (filtered)	mg/L	0.05 - 0.5	-	-	-		<0.500	<0.050	0.118	0.130	<0.500	<0.050	<0.050	<0.050	<0.050
Fluoride	mg/L	0.02 - 0.1	-	1.5	-		0.201	0.140	0.069	0.063	0.026	<0.020	<0.020	0.161	0.045
Chloride	mg/L	0.5 - 2.5	-	-	*250* #3		16.2	12.5	58.3	54.9	6.22	5.23	5.17	8.04	4.82
Hydroxide	mg/L	0.3	-	-	-		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Nitrate (as N)	mg/L	0.02 - 0.1	-	10	-		<0.020	<0.020	<0.020	<0.020	0.071	0.288	0.257	<0.020	0.293
Nitrite (as N)	mg/L	0.01 - 0.05	-	1	-		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrite + Nitrate as N	mg/L	0.022 - 0.112	-	-	-		<0.0224	<0.022	<0.0224	<0.022	0.0710	0.288	0.257	<0.0224	0.293
pH (Lab)	pH Units	0.1	-	-	*7-10.5*		7.63	7.77	*6.37*	*4.90*	*6.12*	*6.33*	*6.02*	7.20	*6.80*
Electrical Conductivity (Lab)	µS/cm	1	-	-	-		487	427	394	364	33.1	32.0	31.0	106	62.3
Sulphate	mg/L	0.3 - 1.5	-	-	*500* #3		12.0	14.5	82.5	72.8	0.93	0.75	0.76	10.8	4.07
Total Dissolved Solids (TDS) - Measured	mg/L	10 - 400	-	-	*500* #3		278	264	255	*940*	35	52	217	73	92
Total Suspended Solids	mg/L	3 - 75	-	-	-		1,590	509	3,960	51,600	494	12,300	12,800	408	9,480
Turbidity	NTU	0.1	-	-	*1.0* #2		*958*	*159*	*>4,000*	*>4,000*	*>4,000*	*2,130*	*>4,000*	*142*	*>4,000*
Metals															
Aluminium (filtered)	mg/L	0.001 - 0.01	-	#1	*#1*		<0.0100	0.0101	0.0032	0.0064	<0.0100	0.0354	0.0123	0.0012	0.0099
Antimony (filtered)	mg/L	0.0001 - 0.001	0.006	0.006	-		<0.00100	<0.00010	<0.00010	<0.00010	<0.00100	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (filtered)	mg/L	0.0001 - 0.001	0.01	0.01	-		<0.00100	0.00025	0.00478	0.00866	<0.00100	<0.00010	<0.00010	0.00082	0.00043
Barium (filtered)	mg/L	0.0001 - 0.001	1	2	-		0.135	0.120	0.0654	0.0644	0.00189	0.00300	0.00274	0.00507	0.00258
Beryllium (filtered)	mg/L	2E-05 - 0.0002	0.004	-	-		<0.000200	<0.000020	<0.000020	<0.000020	<0.000200	0.000022	0.000024	0.000040	<0.000020
Bismuth (filtered)	mg/L	5E-05 - 0.0005	-	-	-		<0.000500	<0.000050	<0.000050	<0.000050	<0.000500	<0.000050	<0.000050	<0.000050	<0.000050
Boron (filtered)	mg/L	0.01 - 0.1	5	5	-		0.683	0.500	<0.010	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010
Cadmium (filtered)	mg/L	5E-06 - 5E-05	0.005	0.007	-		<0.0000500	<0.0000050	<0.0000050	<0.0000050	<0.0000500	0.0000307	0.0000282	<0.0000050	<0.0000050
Chromium (Total, III+VI) (filtered)	mg/L	0.0005 - 0.005	0.05	0.05	-		<0.00500	<0.00050	<0.00050	<0.00050	<0.00500	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (filtered)	mg/L	0.0001 - 0.001	0.0038	-	-		<0.00100	<0.00010	0.00025	0.00043	<0.00100	0.00063	0.00067	0.00028	0.00035
Copper (filtered)	mg/L	0.0002 - 0.002	2	2	*1* #3		<0.00200	0.00022	<0.00020	<0.00020	0.0600	0.0507	0.0513	0.00034	0.00041
Iron (filtered)	mg/L	0.01 - 0.1	0.3	-	*0.1* #3		*9.86*	*8.03*	*25.0*	*22.5*	<0.100	0.031	<0.010	*0.440*	<0.010
Lead (filtered)	mg/L	5E-05 - 0.0005	0.005	0.005	-		<0.000500	<0.000050	<0.000050	<0.000050	<0.000500	<0.000050	<0.000050	<0.000050	<0.000050
Magnesium (filtered)	mg/L	0.005 - 0.05	-	—	-	#1	9.78	8.91	8.22	7.98	0.441	0.338	0.336	1.41	1.04
Manganese (filtered)	mg/L	0.0001 - 0.001	0.12	0.12	*0.02* #3		*0.210*	*0.156*	*1.01*	*1.02*	*0.0864*	*0.0434*	*0.0484*	*0.117*	*0.0330*
Mercury (filtered)	mg/L	0.000005	0.001	0.001	-		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (filtered)	mg/L	5E-05 - 0.0005	0.07	-	-		0.000751	0.000537	0.000425	0.000425	0.000884	0.000170	0.000173	0.000250	0.000380
Nickel (filtered)	mg/L	0.0005 - 0.005	0.1	-	-		<0.00500	0.00090	0.00186	0.00397	0.0161	0.00750	0.00811	0.00102	0.00203
Silica (SiO2) (filtered)	mg/L	0.11 - 1.07	-	-	-		5.18	3.76	32.5	34.0	6.24	4.36	4.17	17.4	13.5
Potassium (filtered)	mg/L	0.05 - 0.5	-	-	-		13.6	11.9	8.08	8.08	0.913	0.683	0.641	2.00	1.38
Selenium (filtered)	mg/L	5E-05 - 0.0005	0.05	0.05	-		<0.000500	<0.000050	<0.000050	<0.000050	<0.000500	<0.000050	<0.000050	<0.000050	<0.000050
Cesium (filtered)	mg/L	1E-05 - 0.0001	-	-	-		<0.000100	0.000030	0.000436	0.000456	<0.000100	0.000064	0.000057	0.000242	0.000020
Rubidium (filtered)	mg/L	0.0002 - 0.002	-	-	-		0.0184	0.0136	0.0120	0.0115	0.00338	0.00223	0.00228	0.00382	0.00069
Tellurium (filtered)	mg/L	0.0002 - 0.002	-	-	-		<0.00200	<0.00020	<0.00020	<0.00020	<0.00200	<0.00020	<0.00020	<0.00020	<0.00020
Thorium (filtered)	mg/L	0.0001 - 0.001	-	-	-		<0.00100	<0.00010	<0.00010	<0.00010	<0.00100	<0.00010	<0.00010	<0.00010	<0.00010
Tungsten (filtered)	mg/L	0.0001 - 0.001	-	-	-		0.0142	0.00618	0.00202	0.00138	0.452	0.0926	0.0892	0.00132	0.0173
Lithium (filtered)	mg/L	0.001 - 0.01	-	-	-		0.0102	0.0130	0.0256	0.0259	<0.0100	<0.0010	<0.0010	0.0093	0.0051
Silver (filtered)	mg/L	1E-05 - 0.0001	-	—	-	#1	<0.000100	<0.000010	<0.000010	<0.000010	0.00315	0.00218	0.00201	<0.000010	<0.000010
Silicon (filtered)	mg/L	0.05 - 0.5	-	-	-		2.42	1.76	15.2	15.9	2.92	2.04	1.95	8.13	6.29
Sodium (filtered)	mg/L	0.05 - 0.5	-	-	*200* #3		17.6	15.5	22.4	22.6	3.86	3.42	3.42	7.89	6.86
Strontium (filtered)	mg/L	0.0002 - 0.002	2.4	7	-		0.284	0.242	0.235	0.226	0.0174	0.0158	0.0158	0.0350	0.0224
Sulphur as S (filtered)	mg/L	0.5 - 5	-	-	-		<5.00	4.82	26.9	24.6	<5.00	<0.50	<0.50	3.49	1.23
Titanium (filtered)	mg/L	0.0003 - 0.003	-	-	-		<0.00300	<0.00030	<0.00030	<0.00030	<0.00300	0.00113	0.00030	<0.00030	<0.00030
Thallium (filtered)	mg/L	1E-05 - 0.0001	0.002	-	-		<0.000100	<0.000010	<0.000010	<0.000010	<0.000100	<0.000010	<0.000010	<0.000010	<0.000010
Tin (filtered)	mg/L	0.0001 - 0.001	2.4	-	-		<0.00100	<0.00010	<0.00010	<0.00010	<0.00100	<0.00010	<0.00010	<0.00010	0.00024
Uranium (filtered)	mg/L	1E-05 - 0.0001	0.02	0.02	-		<0.000100	0.000071	0.000042	0.000028	<0.000100	0.000053	0.000052	0.000024	0.000032
Vanadium (filtered)	mg/L	0.0005 - 0.005	0.0062	-	-		<0.00500	<0.00050	<0.00050	<0.00050	<0.00500	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (filtered)	mg/L	0.001 - 0.01	5	-	*5* #3		<0.0100	0.0019	<0.0010	0.0021	<0.0100	0.0057	0.0056	<0.0010	0.0011
Zirconium (filtered)	mg/L	0.0002 - 0.002	-	-	-		<0.00200	<0.00020	<0.00020	<0.00020	<0.00200	<0.00020	<0.00020	<0.00020	<0.00020
BTEX															
Benzene	mg/L	0.0005	0.005	0.005	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	0.024	0.06	*0.024* #3		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.0005	0.0016	0.14	*0.0016* #3		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Xylene (o)	mg/L	0.0003	-	-	-		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Xylene (m & p)	mg/L	0.0004	-	-	-		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene Total	mg/L	0.0005	0.02	0.09	*0.02* #3		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total BTEX	mg/L	0.001	-	-	-		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

					Location Code	25-MW3S		25-MW3D		25-MW4S			25-MW4D	
					Field ID	MW25-3S		MW25-3D		MW25-4S		Dup A	MW25-4D	
					Sample Type	Normal		Normal		Normal		Field_D	Normal	
					Date	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	07 Oct 2025	30 Mar 2026	30 Mar 2026	07 Oct 2025	30 Mar 2026
	Unit	EQL	NS Tier I EQS Com/Ind Potable Coarse	Guidelines for Canadian Drinking Water (MAC)	*Guidelines for Canadian Drinking Water (Other Value)*									
Volatile Organic Compounds (VOCs)														
1,2-Dichloroethene	mg/L	0.00071	-	-	-	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071	<0.00071
Acetone	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Hexane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl Ethyl Ketone (MEK)	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Isobutyl Ketone (MIK)	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,1,1,2-Tetrachloroethane	mg/L	0.0005	0.026	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.0005	10	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.0005	0.0034	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.0005	0.012	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethane	mg/L	0.0005	3.7	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.0005	0.014	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.0002	0.00034	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1,2-Dichlorobenzene	mg/L	0.0005	0.2	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.0005	0.005	0.005	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloropropane	mg/L	0.0005	0.0099	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.0005	0.059	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichloropropene	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.0005	0.005	0.005	*0.001* [#3]	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.0005	0.1	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.0005	0.1	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0005	0.033	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Carbon tetrachloride	mg/L	0.0002	0.002	0.002	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Chlorobenzene	mg/L	0.0005	0.08	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorodibromomethane	mg/L	0.0005	0.19	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chloroform	mg/L	0.0005	0.08	-	-	<0.00050	<0.00050	<0.00050	<0.00050	0.00088	<0.00050	<0.00050	0.00072	<0.00050
Chloromethane	mg/L	0.002	0.038	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
cis-1,2-Dichloroethene	mg/L	0.0005	0.07	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.0003	0.0067	-	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dichlorodifluoromethane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.001	0.05	0.05	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether (MTBE)	mg/L	0.0005	-	-	*0.015* [#3]	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.0005	0.1	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.0005	0.01	0.01	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,2-Dichloroethene	mg/L	0.0005	0.1	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.0003	-	-	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Trichloroethene	mg/L	0.0005	0.005	0.005	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Trihalomethanes	mg/L	0.001	-	0.1	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl chloride	mg/L	0.0002	0.002	0.002	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phenolics														
Phenols	mg/L	0.001	-	-	-	0.0044	<0.0010	0.0026	<0.0010	0.0028	<0.0010	<0.0010	0.0014	<0.0010
Solvents														
2-hexanone (MBK)	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Carbon disulfide	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Comments
Field_D dentoes field duplicate sample
#1 None required
#2 Varies with filtration method. The slow sand diatomaceous earth filtration value has been applied.
#3 Aesthetic Objective
#4 It is noted that the CDWQ Guideline for aluminum (which was updated in March 2021) includes a health-based guideline of 2.9 mg/L based on a locational running average of a minimum of quarterly samples taken in the distribution system. The operational guidance value of 0.1 mg/L remains in effect, however, both limits relate to the use of aluminum-based coagulants at water treatment plants. Where this guideline is not applicable, it has not been presented.

Environmental Standards
Health Canada, December 2025, Guidelines for Canadian Drinking Water (MAC)
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Other Value)
Nova Scotia Environment, September 2021, NS Tier I EQS Com/Ind Potable Coarse

Table B-5: Surface Water Analytical Results

					Location Code	SW1	SW2	SW3	
					Field ID	SW1	SW2	SW3	Dup B
					Sample Type	Normal	Normal	Normal	Field_D
					Date	30 Mar 2026	30 Mar 2026	30 Mar 2026	30 Mar 2026
	Unit	EQL	NS Tier I EQS Freshwater Surface Water	CEQG Water Quality for the Protection of Aquatic Life (FW - Short Term)	*CEQG Water Quality for the Protection of Aquatic Life (FW - Long Term)*				
Calculated Parameters									
Anions Total	meq/L	0.1	-	-	-	0.16	0.21	0.22	0.23
Cations Total	meq/L	0.1	-	-	-	0.34	0.41	0.40	0.41
Ionic Balance	%	0.01	-	-	-	212	195	182	178
Langelier Index (@ 20C)	N/A	0.01	-	-	-	-7.11	-6.87	-6.77	-6.76
Langelier Index (@ 4C)	N/A	0.01	-	-	-	-7.37	-7.13	-7.02	-7.02
Saturation @ 4c	-	0.01	-	-	-	11.47	11.25	11.22	11.14
Saturation pH (@ 20C)	N/A	0.01	-	-	-	11.21	10.99	10.97	10.88
NA									
Phosphorus - Total (as P)	mg/L	0.002	-	-	-	0.0067	0.0064	0.0067	0.0064
General Chemistry									
Calcium	mg/L	0.1	-	-	-	0.299	0.512	0.668	0.676
Colour, Apparent	CU	4	-	-	-	302	298	309	303
Carbonate	mg/L	0.6	-	-	-	<0.6	<0.6	<0.6	<0.6
Alkalinity (total)	mg/L	1	-	-	-	<1.0	<1.0	<1.0	<1.0
Bicarbonate	mg/L	1.2	-	-	-	<1.2	<1.2	<1.2	<1.2
Hardness as CaCO3 (Measured)	mg/L	0.5	-	-	-	2.22	3.26	3.71	3.72
Ammonia as N	mg/L	0.005	153-231 [#1]	-	*153-231* [#1]	0.0088	0.0098	0.0074	0.0070
Biological Oxygen Demand (BOD)	mg/L	2	-	-	-	<2.0	<2.0	<2.0	<2.0
Chemical Oxygen Demand (COD)	mg/L	10	-	-	-	47	46	52	46
Total Kjeldahl Nitrogen (TKN)	mg/L	0.05	-	-	-	0.419	0.365	0.376	0.409
Total Organic Carbon (TOC)	mg/L	0.5	-	-	-	18.4	18.2	21.6	20.3
Ortho Phosphate as P (filtered)	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus	mg/L	0.05	-	-	[#1]	<0.050	<0.050	<0.050	<0.050
Fluoride	mg/L	0.02	0.12	-	*0.12*	<0.020	<0.020	<0.020	<0.020
Chloride	mg/L	0.5	120	640	*120*	4.62	6.10	6.39	6.44
Hydroxide	mg/L	0.3	-	-	-	<0.3	<0.3	<0.3	<0.3
Nitrate (as N)	mg/L	0.02	2.935	-	*2.935*	<0.020	<0.020	<0.020	<0.020
Nitrite (as N)	mg/L	0.01	0.06	-	*0.06*	<0.010	<0.010	<0.010	<0.010
Nitrite + Nitrate as N	mg/L	0.022	-	-	-	<0.022	<0.022	<0.022	<0.022
Electrical Conductivity (Lab)	µS/cm	1	-	-	-	42.0	46.7	49.2	48.8
Sulphate	mg/L	0.3	128	-	-	1.25	1.86	2.14	2.11
Total Dissolved Solids (TDS) - Measured	mg/L	10	-	-	-	42	40	50	52
Total Suspended Solids	mg/L	3	-	-	*25* [#2]	<3.0	<3.0	<3.0	<3.0
Turbidity	NTU	0.1	-	-	[#3]	0.30	0.43	0.48	0.38
pH (Lab)	pH Units	0.1	6.5-9	-	*6.5-9*	*4.10*	*4.12*	*4.20*	*4.12*
pH (Field)	pH Units	-	6.5-9	-	*6.5-9*	*4.33*	*3.97*	*4.04*	-
Temp (field)	degrees C		-	-	-	4.6	4.9	4.6	-

Table B-5: Surface Water Analytical Results

					Location Code	SW1	SW2	SW3	
					Field ID	SW1	SW2	SW3	Dup B
					Sample Type	Normal	Normal	Normal	Field_D
					Date	30 Mar 2026	30 Mar 2026	30 Mar 2026	30 Mar 2026
	Unit	EQL	NS Tier I EQS Freshwater Surface Water	CEQG Water Quality for the Protection of Aquatic Life (FW - Short Term)	*CEQG Water Quality for the Protection of Aquatic Life (FW - Long Term)*				
Calculated Parameters									
Metals									
Aluminium	mg/L	0.003	0.005	-	*0.005 | 0.1*	*0.363*	*0.407*	*0.371*	*0.368*
Antimony	mg/L	0.0001	0.009	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	mg/L	0.0001	0.005	-	*0.005*	0.00018	0.00021	0.00022	0.00022
Barium	mg/L	0.0001	1	-	-	0.00164	0.00228	0.00228	0.00225
Beryllium	mg/L	0.00002	0.00015	-	-	0.000029	0.000030	0.000035	0.000030
Bismuth	mg/L	0.00005	-	-	-	<0.000050	<0.000050	<0.000050	<0.000050
Boron	mg/L	0.01	1.5	29	*1.5*	<0.010	<0.010	<0.010	<0.010
Cadmium	mg/L	0.000005	0.00009 [#4]	0.00011	*0.00004* [#5]	0.0000083	0.0000110	0.0000112	0.0000110
Chromium (Total, III+VI)	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	mg/L	0.0001	0.001	-	-	0.00013	0.00015	0.00014	0.00014
Copper	mg/L	0.0005	0.002	-	*0.002* [#6]	<0.00050	0.00058	0.00054	0.00052
Iron	mg/L	0.01	0.3	-	*0.3*	0.261	0.277	0.272	0.253
Lead	mg/L	0.00005	0.001	-	*0.001* [#7]	0.000938	0.000981	0.000973	0.000958
Magnesium	mg/L	0.005	-	-	-	0.357	0.482	0.495	0.493
Manganese	mg/L	0.0001	0.43	-	-	0.00300	0.00557	0.00548	0.00531
Mercury	mg/L	0.000005	0.000026	-	*0.000026*	0.0000065	0.0000060	0.0000075	0.0000082
Molybdenum	mg/L	0.00005	0.073	-	*0.073*	0.000082	0.000073	0.000068	0.000073
Nickel	mg/L	0.0005	0.025	-	*0.025* [#8]	<0.00050	<0.00050	<0.00050	<0.00050
Silica (SiO2)	mg/L	0.21	-	-	-	3.61	4.04	4.04	4.00
Potassium	mg/L	0.05	-	-	-	0.161	0.242	0.270	0.265
Selenium	mg/L	0.00005	0.001	-	*0.001*	0.000110	0.000109	0.000107	0.000123
Cesium	mg/L	0.00001	-	-	-	0.000040	0.000040	0.000041	0.000037
Rubidium	mg/L	0.0002	-	-	-	0.00057	0.00078	0.00080	0.00085
Tellurium	mg/L	0.0002	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Thorium	mg/L	0.0001	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Tungsten	mg/L	0.0001	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Lithium	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
Silver	mg/L	0.00001	0.00025	-	*0.00025*	<0.000010	<0.000010	<0.000010	<0.000010
Silicon	mg/L	0.1	-	-	-	1.69	1.89	1.89	1.87
Sodium	mg/L	0.05	-	-	-	3.82	4.79	4.76	4.75
Strontium	mg/L	0.0002	21	-	-	0.00384	0.00586	0.00657	0.00655
Sulphur as S	mg/L	0.5	-	-	-	<0.50	0.74	0.84	0.79
Titanium	mg/L	0.0003	-	-	-	0.00346	0.00432	0.00418	0.00389
Thallium	mg/L	0.00001	0.0008	-	*0.0008*	<0.000010	<0.000010	<0.000010	<0.000010
Tin	mg/L	0.0001	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	mg/L	0.00001	0.015	0.033	*0.015*	0.000023	0.000048	0.000046	0.000047
Vanadium	mg/L	0.0005	0.12	-	-	0.00108	0.00116	0.00103	0.00101
Zinc	mg/L	0.003	0.007	[#10]	[#9]	<0.0030	<0.0030	<0.0030	<0.0030
Zirconium	mg/L	0.0002	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020
BTEX									
Benzene	mg/L	0.0005	2.1	-	*0.37*	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	0.77	-	*0.002*	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.0005	0.32	-	*0.09*	<0.00050	<0.00050	<0.00050	<0.00050
Xylene (o)	mg/L	0.0003	-	-	-	<0.00030	<0.00030	<0.00030	<0.00030
Xylene (m & p)	mg/L	0.0004	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040
Xylene Total	mg/L	0.0005	0.33	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Total BTEX	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010

Table B-5: Surface Water Analytical Results

					Location Code	SW1	SW2	SW3	
					Field ID	SW1	SW2	SW3	Dup B
					Sample Type	Normal	Normal	Normal	Field_D
					Date	30 Mar 2026	30 Mar 2026	30 Mar 2026	30 Mar 2026
	Unit	EQL	NS Tier I EQS Freshwater Surface Water	CEQG Water Quality for the Protection of Aquatic Life (FW - Short Term)	*CEQG Water Quality for the Protection of Aquatic Life (FW - Long Term)*				
Calculated Parameters									
Volatile Organic Compounds (VOCs)									
1,2-Dichloroethene	mg/L	0.00071	-	-	-	<0.00071	<0.00071	<0.00071	<0.00071
Acetone	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02
Hexane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Methyl Ethyl Ketone (MEK)	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02
Methyl Isobutyl Ketone (MIK)	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02
1,1,1,2-Tetrachloroethane	mg/L	0.0005	0.02	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.0005	0.01	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.0005	0.07	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.0005	0.8	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethane	mg/L	0.0005	0.2	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.0005	0.04	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.0002	0.005	-	-	<0.00020	<0.00020	<0.00020	<0.00020
1,2-Dichlorobenzene	mg/L	0.0005	0.0007	-	*0.0007*	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.0005	0.1	-	*0.1*	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichloropropane	mg/L	0.0005	0.0007	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.0005	0.15	-	*0.15*	<0.00050	<0.00050	<0.00050	<0.00050
1,3-Dichloropropene	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.0005	0.026	-	*0.026*	<0.00050	<0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.0005	0.2	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.0005	0.06	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0005	0.0009	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Carbon tetrachloride	mg/L	0.0002	0.0133	-	*0.0133*	<0.00020	<0.00020	<0.00020	<0.00020
Chlorobenzene	mg/L	0.0005	0.0013	-	*0.0013*	<0.00050	<0.00050	<0.00050	<0.00050
Chlorodibromomethane	mg/L	0.0005	0.04	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0005	1.1	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Chloroform	mg/L	0.0005	0.0018	-	*0.0018*	<0.00050	<0.00050	<0.00050	<0.00050
Chloromethane	mg/L	0.002	0.7	-	-	<0.0020	<0.0020	<0.0020	<0.0020
cis-1,2-Dichloroethene	mg/L	0.0005	0.2	-	-	<0.00050	<0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.0003	0.007	-	-	<0.00030	<0.00030	<0.00030	<0.00030
Dichlorodifluoromethane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.001	0.0981	-	*0.0981*	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-Butyl Ether (MTBE)	mg/L	0.0005	10	-	*10*	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.0005	0.072	-	*0.072*	<0.00050	<0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.0005	0.11	-	*0.11*	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,2-Dichloroethene	mg/L	0.0005	0.2	-	-	<0.00050	<0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.0003	-	-	-	<0.00030	<0.00030	<0.00030	<0.00030
Trichloroethene	mg/L	0.0005	0.021	-	*0.021*	<0.00050	<0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Trihalomethanes	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl chloride	mg/L	0.0002	0.6	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Phenolics									
Phenols	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
Solvents									
2-hexanone (MBK)	mg/L	0.02	-	-	-	<0.02	<0.02	<0.02	<0.02
Carbon disulfide	mg/L	0.001	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010

Comments
#1 Guidance Framework
#2 Maximum increase of 25 mg/L from background levels. Further Narrative applies.
#3 Maximum increase of 8 NTUs from background levels for a short-term exposure
#4 Hardness Dependant - If the hardness is unknown, the CWQG is 0.00009 mg/L
#5 Added October 2025, MPH
#6 If the hardness is unknown, the CWQG is 0.002 mg/L
#7 Hardness Dependant, If the hardness is unknown, the CWQG is 0.001 mg/L
#8 Hardness Dependant, If the hardness is unknown, the CWQG is 0.025 mg/L
#9 CWQG = exp(0.947[ln(hardness mg·L-1)] - 0.815[pH] + 0.398[ln(DOC mg·L-1)] + 4.625)
#10 Benchmark = exp(0.833[ln(hardness mg·L-1)] + 0.240[ln(DOC mg·L-1)] + 0.526)

Environmental Standards
CCME, Dec 2014, CEQG Water Quality for the Protection of Aquatic Life (FW - Long Term)
CCME, Dec 2014, CEQG Water Quality for the Protection of Aquatic Life (FW - Short Term)
Nova Scotia Environment, September 2021, NS Tier I EQS Freshwater Surface Water

Table B-6: Residential Groundwater Analytical Results

	Unit	EQL	Guidelines for Canadian Drinking Water (MAC)	Guidelines for Canadian Drinking Water (AO)	Guidelines for Canadian Drinking Water (OG and Other Values)	DW-3003	DW-4006	DW-4009	DW-5000	DW-5006	DW-6006	DW-8000	DW-8001
Field ID													
Date						28 Apr 2026	28 Apr 2026	28 Apr 2026	28 Apr 2026	28 Apr 2026	30 Mar 2026	28 Apr 2026	28 Apr 2026
Calculated Parameters													
Anions Total	meq/L	0.1	-	-		0.96	0.71	4.10	0.71	0.53	1.07	3.32	1.04
Cations Total	meq/L	0.1	-	-		0.94	0.67	4.07	0.74	0.52	1.25	3.19	1.03
Ionic Balance	%	0.01	-	-		97.9	94.4	99.3	104	98.1	117	96.1	99.0
Langelier Index (@ 20C)	N/A	0.01	-	-		-3.20	-3.19	-4.47	-3.89	-4.34	-3.18	-1.68	-3.69
Langelier Index (@ 4C)	N/A	0.01	-	-		-3.45	-3.44	-4.72	-4.15	-4.59	-3.43	-1.93	-3.94
Saturation @ 4c	-	0.01	-	-		9.95	9.97	10.34	10.26	10.21	9.72	8.55	9.94
Saturation pH (@ 20C)	N/A	0.01	-	-		9.70	9.72	10.09	10.00	9.96	9.47	8.30	9.69
General Chemistry													
Calcium	mg/L	0.1	-	-	300	5.35	2.72	7.52	3.86	3.58	4.45	24.2	4.42
Colour, Apparent	CU	2	-	15		<2.0	<2.0	<2.0	95.3	8.7	260	<2.0	4.1
Carbonate	mg/L	0.6	-	-		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Alkalinity (total)	mg/L	1	-	-		8.0	14.8	2.6	5.4	6.1	16.9	51.9	9.8
Bicarbonate	mg/L	1.2	-	-		9.8	18.1	3.2	6.6	7.4	20.6	63.3	12.0
Hardness as CaCO3 (Measured)	mg/L	0.5	-	Not Required		16.5	16.8	25.1	16.1	13.7	22.7	69.7	15.1
Ammonia as N	mg/L	0.005	-	-		<0.0050	0.0210	0.0067	0.0264	<0.0050	0.0531	0.0113	0.0067
Total Organic Carbon (TOC)	mg/L	0.5	-	-		0.77	<0.50	<0.50	<0.50	1.93	1.10	1.11	1.12
Ortho Phosphate as P (filtered)	mg/L	0.001	-	-		<0.0010	0.0331	<0.0010	<0.0010	0.0010	<0.0010	0.0014	<0.0010
Phosphorus	mg/L	0.05	-	-		<0.050	<0.050	<0.050	0.072	<0.050	0.301	<0.050	<0.050
Fluoride	mg/L	0.02	1.5	-		<0.020	0.063	0.022	0.103	<0.020	0.131	0.021	<0.020
Chloride	mg/L	0.5	-	250	470	26.4	6.29	139	6.41	9.25	19.4	67.5	26.1
Hydroxide	mg/L	0.3	-	-		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Nitrate (as N)	mg/L	0.02	10	-		0.029	0.206	0.137	<0.020	0.685	<0.020	3.59	0.687
Nitrite (as N)	mg/L	0.01	1	-		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrite + Nitrate as N	mg/L	0.022	-	-		0.0290	0.206	0.137	<0.022	0.685	<0.022	3.59	0.687
pH (Lab)	pH Units	0.1	-	-	7-10.5	6.50	6.53	5.62	6.11	5.62	6.29	6.62	6.00
Electrical Conductivity (Lab)	µS/cm	1	-	-		116	79.1	493	86.5	64.4	124	354	124
Sulphate	mg/L	0.3	-	500		2.33	10.4	5.70	20.2	4.48	8.68	5.85	2.83
Total Dissolved Solids (TDS) - Measured	mg/L	13 - 20	-	500		77	64	262	73	45	101	222	78
Turbidity	NTU	0.1	-	-	1	<0.10	0.13	<0.10	15.7	<0.10	34.0	0.20	0.24
Metals													
Aluminium	mg/L	0.003	#1	#1		0.0742	0.0070	0.108	0.0048	0.108	0.0035	0.0136	0.0265
Antimony	mg/L	0.0001	0.006	-		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	mg/L	0.0001	0.01	-		<0.00010	0.00021	<0.00010	0.00049	0.00012	0.0157	0.00010	0.00013
Barium	mg/L	0.0001	2	-		0.0111	0.00317	0.0818	0.00891	0.0105	0.00607	0.0318	0.0176
Beryllium	mg/L	0.00002	-	-		0.000027	<0.000020	0.000084	0.000237	0.000063	<0.000020	0.000021	<0.000020
Bismuth	mg/L	0.00005	-	-		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron	mg/L	0.01	5	-		<0.010	0.014	<0.010	<0.010	<0.010	0.014	<0.010	0.010
Cadmium	mg/L	0.000005	0.007	-		0.0000266	<0.0000050	0.0000844	<0.0000050	0.0000413	<0.0000050	0.000379	0.0000309
Chromium (Total, III+VI)	mg/L	0.0005	0.05	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	mg/L	0.0001	-	-		<0.00010	0.00014	0.00015	0.00095	0.00045	0.00110	0.00030	0.00019
Copper	mg/L	0.0005	2	1		0.00081	0.0115	0.0197	0.0256	0.0226	0.0141	0.348	0.414
Iron	mg/L	0.01	-	0.1		0.036	0.024	<0.010	1.56	<0.010	4.12	0.033	0.063
Lead	mg/L	0.00005	0.005	-		0.000360	0.000425	0.000308	0.000507	0.000544	0.000181	0.000313	0.000991
Magnesium	mg/L	0.005	-	-		0.764	2.42	1.54	1.56	1.15	2.81	2.25	0.994
Manganese	mg/L	0.0001	0.12	0.02		0.00373	0.00855	0.0155	0.169	0.00828	0.384	0.0785	0.00777
Molybdenum	mg/L	0.00005	-	-		<0.000050	0.000062	<0.000050	0.000051	<0.000050	0.000360	0.000059	<0.000050
Nickel	mg/L	0.0005	-	-		<0.00050	0.00135	<0.00050	0.00361	0.00102	0.00069	0.00265	0.00084
Silica (SiO2)	mg/L	0.21	-	-		4.02	15.2	5.58	20.2	6.29	24.6	9.52	5.20
Potassium	mg/L	0.05	-	-		1.18	1.16	1.90	1.42	1.46	1.67	4.47	2.15
Selenium	mg/L	0.00005	0.05	-		<0.000050	0.000077	<0.000050	<0.000050	0.000143	<0.000050	0.000088	0.000077
Cesium	mg/L	0.00001	-	-		0.000056	0.000031	0.000073	0.000154	0.000051	0.000076	0.000114	0.000027
Rubidium	mg/L	0.0002	-	-		0.00328	0.00056	0.00571	0.00331	0.00408	0.00296	0.0108	0.00445
Tellurium	mg/L	0.0002	-	-		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thorium	mg/L	0.0001	-	-		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tungsten	mg/L	0.0001	-	-		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Lithium	mg/L	0.001	-	-		<0.0010	0.0044	<0.0010	0.0084	<0.0010	0.0146	0.0016	<0.0010
Silver	mg/L	0.00001	-	-		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Silicon	mg/L	0.1	-	-		1.88	7.12	2.61	9.46	2.94	11.5	4.45	2.43
Sodium	mg/L	0.05	-	200		13.0	7.01	80.5	7.26	4.54	13.5	38.3	14.7
Strontium	mg/L	0.0002	7	-		0.0309	0.0307	0.0682	0.0517	0.0270	0.0522	0.0979	0.0332
Sulphur as S	mg/L	0.5	-	-		0.74	3.41	2.01	6.58	1.48	2.91	2.07	0.90
Titanium	mg/L	0.0003	-	-		0.00267	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Thallium	mg/L	0.00001	-	-		0.000012	<0.000010	0.000019	<0.000010	0.000016	<0.000010	0.000032	0.000013
Tin	mg/L	0.0001	-	-		0.00108	<0.00010	<0.00010	0.00025	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	mg/L	0.00001	0.02	-		0.000024	<0.000010	0.000019	<0.000010	0.000123	<0.000010	0.00135	0.000038
Vanadium	mg/L	0.0005	-	-		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc	mg/L	0.003	-	5		<0.0030	0.0262	0.0394	0.0158	0.0108	0.0187	0.0695	0.283
Zirconium	mg/L	0.0002	-	-		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Environmental Standards
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Maximum Acceptable Concentrations)
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Aesthetic Objectives)
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Operational Guidelines)
#1 It is noted that the CDWQ Guideline for aluminum (which was updated in March 2021) includes a health-based guideline of 2.9 mg/L based on a locational running average of a minimum of quarterly samples taken in the distribution system. The operational guidance value of 0.1 mg/L remains in effect, however, both limits relate to the use of aluminum-based coagulants at water treatment plants. Where this guideline is not applicable, it has not been presented.

Table B-7: Relative Percent Differences in Groundwater

		Field ID	MW25-2D	Dup A	RPD (%)	MW25-4S	Dup A	RPD (%)
		Date	07 Oct 2025	07 Oct 2025		30 Mar 2026	30 Mar 2026	
		Lab Report Number	HA2504330	HA2504330		HA2601051	HA2601051	
		Matrix Type	Groundwater	Groundwater		Groundwater	Groundwater	
	Unit	EQL						
Calculated Parameters								
Anions Total (filtered)	meq/L	0.1	17.6	17.4	NC	0.29	0.27	NC
Cations Total (filtered)	meq/L	0.1	17.7	17.6	NC	0.26	0.26	NC
Ionic Balance (filtered)	%	0.01	100	101	NC	89.7	96.3	NC
Langelier Index (@ 20C)	N/A	0.01	-0.503	-0.653	NC	-4.19	-4.65	NC
Langelier Index (@ 4C)	N/A	0.01	-0.750	-0.898	NC	-4.44	-4.90	NC
Saturation @ 4c	-	0.01	7.38	7.40	NC	10.77	10.92	NC
Saturation pH (@ 20C)	N/A	0.01	7.13	7.15	NC	10.52	10.67	NC
General Chemistry								
Calcium (filtered)	mg/L	0.5	112	109	3	1.21	1.19	NC
Colour, Apparent	CU	100 - 200	9,700	6,660	37	2,590	8,790	109
Carbonate	mg/L	0.6	<0.6	<0.6	NC	<0.6	<0.6	NC
Alkalinity (total)	mg/L	1	237	236	0	5.1	4.4	NC
Bicarbonate	mg/L	1.2	289	288	0	6.2	5.4	NC
Hardness as CaCO3 (Measured) (filtered)	mg/L	0.5	505	498	1	4.41	4.36	1
Ammonia as N	mg/L	0.005	0.293	0.236	22	0.0169	0.0142	NC
Chemical Oxygen Demand (COD)	mg/L	10	60	78	26	26	43	NC
Dissolved Organic Carbon (filtered)	mg/L	0.5	4.82	4.83	0	0.82	0.66	NC
Total Kjeldahl Nitrogen (TKN)	mg/L	0.05 - 0.5	0.793	1.04	27	0.326	0.278	16
Total Organic Carbon (TOC)	mg/L	10	<10.0	<10.0	0	<10.0	<10.0	NC
Ortho Phosphate as P (filtered)	mg/L	0.001	0.0019	0.0014	NC	0.0025	0.0038	NC
Phosphorus	mg/L	0.04	11.3	7.57	40	5.75	5.18	10
Phosphorus (filtered)	mg/L	0.04	<0.500	<0.500	NC	<0.050	<0.050	NC
Fluoride	mg/L	0.1	0.132	0.126	NC	<0.020	<0.020	NC
Chloride	mg/L	2.5	142	139	2	5.23	5.17	NC
Hydroxide	mg/L	0.3	<0.3	<0.3	NC	<0.3	<0.3	NC
Nitrate (as N)	mg/L	0.1	<0.100	<0.100	NC	0.288	0.257	NC
Nitrite (as N)	mg/L	0.05	<0.050	<0.050	NC	<0.010	<0.010	NC
Nitrite + Nitrate as N	mg/L	0.112	<0.112	<0.112	NC	0.288	0.257	NC
pH (Lab)	pH Units	0.1	6.63	6.50	2	6.33	6.02	5
Electrical Conductivity (Lab)	µS/cm	1	1,580	1,600	1	32.0	31.0	3
Sulphate	mg/L	1.5	426	420	1	0.75	0.76	NC
Total Dissolved Solids (TDS) - Measured	mg/L	20	1,050	1,100	5	52	217	NC
Total Suspended Solids	mg/L	7.5	1,400	2,020	36	12,300	12,800	4
Turbidity	NTU	0.1	>4,000	3,600	11	2,130	>4,000	NC
Metals								
Aluminium (filtered)	mg/L	0.01	<0.0100	<0.0100	NC	0.0354	0.0123	NC
Antimony (filtered)	mg/L	0.001	<0.00100	<0.00100	NC	<0.00010	<0.00010	NC
Arsenic (filtered)	mg/L	0.001	0.00444	0.00577	NC	<0.00010	<0.00010	NC
Barium (filtered)	mg/L	0.001	0.0424	0.0411	3	0.00300	0.00274	NC
Beryllium (filtered)	mg/L	0.0002	<0.000200	<0.000200	NC	0.000022	0.000024	NC
Bismuth (filtered)	mg/L	0.0005	<0.000500	<0.000500	NC	<0.000050	<0.000050	NC
Boron (filtered)	mg/L	0.1	0.322	0.303	NC	<0.010	<0.010	NC
Cadmium (filtered)	mg/L	0.00005	<0.0000500	<0.0000500	NC	0.0000307	0.0000282	NC
Chromium (Total, III+VI) (filtered)	mg/L	0.005	<0.00500	<0.00500	NC	<0.00050	<0.00050	NC
Cobalt (filtered)	mg/L	0.001	0.0111	0.00890	22	0.00063	0.00067	NC
Copper (filtered)	mg/L	0.002	<0.00200	<0.00200	NC	0.0507	0.0513	1
Iron (filtered)	mg/L	0.1	21.7	25.2	15	0.031	<0.010	NC
Lead (filtered)	mg/L	0.0005	<0.000500	<0.000500	NC	<0.000050	<0.000050	NC
Magnesium (filtered)	mg/L	0.05	54.8	54.8	0	0.338	0.336	1
Manganese (filtered)	mg/L	0.001	6.36	6.33	0	0.0434	0.0484	11
Mercury (filtered)	mg/L	0.000005	<0.0000050	<0.0000050	NC	<0.0000050	<0.0000050	NC
Molybdenum (filtered)	mg/L	0.0005	0.00216	0.00268	NC	0.000170	0.000173	NC
Nickel (filtered)	mg/L	0.005	0.0172	0.0181	NC	0.00750	0.00811	NC
Silica (SiO2) (filtered)	mg/L	1.07	28.2	27.8	1	4.36	4.17	NC
Potassium (filtered)	mg/L	0.5	16.0	16.0	0	0.683	0.641	NC
Selenium (filtered)	mg/L	0.0005	<0.000500	<0.000500	NC	<0.000050	<0.000050	NC
Cesium (filtered)	mg/L	0.0001	0.000107	<0.000100	NC	0.000064	0.000057	NC
Rubidium (filtered)	mg/L	0.002	0.0154	0.0160	4	0.00223	0.00228	NC
Tellurium (filtered)	mg/L	0.002	<0.00200	<0.00200	NC	<0.00020	<0.00020	NC
Thorium (filtered)	mg/L	0.001	<0.00100	<0.00100	NC	<0.00010	<0.00010	NC
Tungsten (filtered)	mg/L	0.001	0.00650	0.00799	21	0.0926	0.0892	4
Lithium (filtered)	mg/L	0.01	0.0504	0.0448	NC	<0.0010	<0.0010	NC
Silver (filtered)	mg/L	0.0001	<0.000100	<0.000100	NC	0.00218	0.00201	NC
Silicon (filtered)	mg/L	0.5	13.2	13.0	2	2.04	1.95	NC
Sodium (filtered)	mg/L	0.5	142	140	1	3.42	3.42	0
Strontium (filtered)	mg/L	0.002	0.919	0.920	0	0.0158	0.0158	0
Sulphur as S (filtered)	mg/L	5	133	130	2	<0.50	<0.50	NC
Titanium (filtered)	mg/L	0.003	<0.00300	<0.00300	NC	0.00113	0.00030	NC
Thallium (filtered)	mg/L	0.0001	<0.000100	<0.000100	NC	<0.000010	<0.000010	NC
Tin (filtered)	mg/L	0.001	<0.00100	<0.00100	NC	<0.00010	<0.00010	NC
Uranium (filtered)	mg/L	0.0001	0.00179	0.00194	NC	0.000053	0.000052	NC
Vanadium (filtered)	mg/L	0.005	<0.00500	<0.00500	NC	<0.00050	<0.00050	NC
Zinc (filtered)	mg/L	0.01	0.0111	0.0109	NC	0.0057	0.0056	NC
Zirconium (filtered)	mg/L	0.002	<0.00200	<0.00200	NC	<0.00020	<0.00020	NC
BTEX								
Benzene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Toluene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Ethylbenzene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Xylene (o)	mg/L	0.0003	<0.00030	<0.00030	NC	<0.00030	<0.00030	NC
Xylene (m & p)	mg/L	0.0004	<0.00040	<0.00040	NC	<0.00040	<0.00040	NC
Xylene Total	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Total BTEX	mg/L	0.001	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC

Table B-7: Relative Percent Differences in Groundwater

	Field ID	MW25-2D	Dup A	RPD (%)	MW25-4S	Dup A	RPD (%)
	Date	07 Oct 2025	07 Oct 2025		30 Mar 2026	30 Mar 2026	
	Lab Report Number	HA2504330	HA2504330		HA2601051	HA2601051	
	Matrix Type	Groundwater	Groundwater		Groundwater	Groundwater	
	Unit	EQL					
Volatile Organic Compounds (VOCs)							
1,2-Dichloroethene	mg/L	0.00071	<0.00071	<0.00071	NC	<0.00071	<0.00071	NC
Acetone	mg/L	0.02	<0.02	<0.02	NC	<0.02	<0.02	NC
Hexane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Methyl Ethyl Ketone (MEK)	mg/L	0.02	<0.02	<0.02	NC	<0.02	<0.02	NC
Methyl Isobutyl Ketone (MIK)	mg/L	0.02	<0.02	<0.02	NC	<0.02	<0.02	NC
1,1,1,2-Tetrachloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,1-Trichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,2,2-Tetrachloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1,2-Trichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-Dichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,1-Dichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-Dibromoethane	mg/L	0.0002	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
1,2-Dichlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-Dichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,2-Dichloropropane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3-Dichlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,3-Dichloropropene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
1,4-Dichlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromodichloromethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromoform	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Bromomethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Carbon tetrachloride	mg/L	0.0002	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
Chlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chlorodibromomethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloroethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloroform	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Chloromethane	mg/L	0.002	<0.0020	<0.0020	NC	<0.0020	<0.0020	NC
cis-1,2-Dichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
cis-1,3-Dichloropropene	mg/L	0.0003	<0.00030	<0.00030	NC	<0.00030	<0.00030	NC
Dichlorodifluoromethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Dichloromethane	mg/L	0.001	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Methyl tert-Butyl Ether (MTBE)	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Styrene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Tetrachloroethene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
trans-1,2-Dichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
trans-1,3-Dichloropropene	mg/L	0.0003	<0.00030	<0.00030	NC	<0.00030	<0.00030	NC
Trichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trichlorofluoromethane	mg/L	0.0005	<0.00050	<0.00050	NC	<0.00050	<0.00050	NC
Trihalomethanes	mg/L	0.001	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC
Vinyl chloride	mg/L	0.0002	<0.00020	<0.00020	NC	<0.00020	<0.00020	NC
Phenolics								
Phenols	mg/L	0.001	0.0081	0.0073	NC	<0.0010	<0.0010	NC
Solvents								
2-hexanone (MBK)	mg/L	0.02	<0.02	<0.02	NC	<0.02	<0.02	NC
Carbon disulfide	mg/L	0.001	<0.0010	<0.0010	NC	<0.0010	<0.0010	NC

Comments
#1 None required
#2 Can vary with filtration method. The most conservative value has been applied (membrane filtration).
#3 AO

Environmental Standards
Health Canada, December 2025, Guidelines for Canadian Drinking Water (MAC)
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Other Value)
Nova Scotia Environment, September 2021, NS Tier I EQS Com/Ind Potable Coarse

*RPDs have only been considered where a concentration is greater than 5 times the EQL.

Table B-8: Relative Percent Differences in Surface Water

		Field ID	SW3	Dup B	RPD (%)
		Date	30 Mar 2026	30 Mar 2026	
		Lab Report Number	HA2601062	HA2601062	
		Matrix Type	Surface Water	Surface Water	
	Unit	EQL			
Calculated Parameters					
Anions Total	meq/L	0.1	0.22	0.23	NC
Cations Total	meq/L	0.1	0.40	0.41	NC
Ionic Balance	%	0.01	182	178	NC
Langelier Index (@ 20C)	N/A	0.01	-6.77	-6.76	NC
Langelier Index (@ 4C)	N/A	0.01	-7.02	-7.02	NC
Saturation @ 4c	-	0.01	11.22	11.14	NC
Saturation pH (@ 20C)	N/A	0.01	10.97	10.88	NC
NA					
Phosphorus - Total (As P)	mg/L	0.002	0.0067	0.0064	5
General Chemistry					
Calcium	mg/L	0.1	0.668	0.676	1
Colour, Apparent	CU	4	309	303	2
Carbonate	mg/L	0.6	<0.6	<0.6	NC
Alkalinity (total)	mg/L	1	<1.0	<1.0	NC
Bicarbonate	mg/L	1.2	<1.2	<1.2	NC
Hardness as CaCO3 (Measured)	mg/L	0.5	3.71	3.72	0
Ammonia as N	mg/L	0.005	0.0074	0.0070	NC
Biological Oxygen Demand (BOD)	mg/L	2	<2.0	<2.0	NC
Chemical Oxygen Demand (COD)	mg/L	10	52	46	NC
Total Kjeldahl Nitrogen (TKN)	mg/L	0.05	0.376	0.409	8
Total Organic Carbon (TOC)	mg/L	0.5	21.6	20.3	6
Ortho Phosphate as P (filtered)	mg/L	0.001	<0.0010	<0.0010	NC
Phosphorus	mg/L	0.05	<0.050	<0.050	NC
Fluoride	mg/L	0.02	<0.020	<0.020	NC
Chloride	mg/L	0.5	6.39	6.44	1
Hydroxide	mg/L	0.3	<0.3	<0.3	NC
Nitrate (as N)	mg/L	0.02	<0.020	<0.020	NC
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	NC
Nitrite + Nitrate as N	mg/L	0.022	<0.022	<0.022	NC
pH (Lab)	pH Units	0.1	4.20	4.12	2
Electrical Conductivity (Lab)	µS/cm	1	49.2	48.8	1
Sulphate	mg/L	0.3	2.14	2.11	1
Total Dissolved Solids (TDS) - Measured	mg/L	10	50	52	4
Total Suspended Solids	mg/L	3	<3.0	<3.0	NC
Turbidity	NTU	0.1	0.48	0.38	NC
Metals					
Aluminium	mg/L	0.003	*0.371*	*0.368*	1
Antimony	mg/L	0.0001	<0.00010	<0.00010	NC
Arsenic	mg/L	0.0001	0.00022	0.00022	NC
Barium	mg/L	0.0001	0.00228	0.00225	1
Beryllium	mg/L	0.00002	0.000035	0.000030	NC
Bismuth	mg/L	0.00005	<0.000050	<0.000050	NC
Boron	mg/L	0.01	<0.010	<0.010	NC
Cadmium	mg/L	0.000005	0.0000112	0.0000110	2
Chromium (Total, III+VI)	mg/L	0.0005	<0.00050	<0.00050	NC
Cobalt	mg/L	0.0001	0.00014	0.00014	NC
Copper	mg/L	0.0005	0.00054	0.00052	4
Iron	mg/L	0.01	*0.272*	*0.253*	7
Lead	mg/L	0.00005	0.000973	0.000958	2
Magnesium	mg/L	0.005	0.495	0.493	0
Manganese	mg/L	0.0001	0.00548	0.00531	3
Mercury	mg/L	0.000005	0.0000075	0.0000082	NC
Molybdenum	mg/L	0.00005	0.000068	0.000073	NC
Nickel	mg/L	0.0005	<0.00050	<0.00050	NC
Silica (SiO2)	mg/L	0.21	4.04	4.00	1
Potassium	mg/L	0.05	0.270	0.265	2
Selenium	mg/L	0.00005	0.000107	0.000123	NC
Cesium	mg/L	0.00001	0.000041	0.000037	NC
Rubidium	mg/L	0.0002	0.00080	0.00085	NC
Tellurium	mg/L	0.0002	<0.00020	<0.00020	NC
Thorium	mg/L	0.0001	<0.00010	<0.00010	NC
Tungsten	mg/L	0.0001	<0.00010	<0.00010	NC
Lithium	mg/L	0.001	<0.0010	<0.0010	NC
Silver	mg/L	0.00001	<0.000010	<0.000010	NC
Silicon	mg/L	0.1	1.89	1.87	1
Sodium	mg/L	0.05	4.76	4.75	0
Strontium	mg/L	0.0002	0.00657	0.00655	NC
Sulphur as S	mg/L	0.5	0.84	0.79	NC
Titanium	mg/L	0.0003	0.00418	0.00389	7
Thallium	mg/L	0.00001	<0.000010	<0.000010	NC
Tin	mg/L	0.0001	<0.00010	<0.00010	NC
Uranium	mg/L	0.00001	0.000046	0.000047	NC
Vanadium	mg/L	0.0005	0.00103	0.00101	NC
Zinc	mg/L	0.003	<0.0030	<0.0030	NC
Zirconium	mg/L	0.0002	<0.00020	<0.00020	NC

Table B-8: Relative Percent Differences in Surface Water

		Field ID	SW3	Dup B	RPD (%)
		Date	30 Mar 2026	30 Mar 2026	
		Lab Report Number	HA2601062	HA2601062	
		Matrix Type	Surface Water	Surface Water	
	Unit	EQL			
BTEX					
Benzene	mg/L	0.0005	<0.00050	<0.00050	NC
Toluene	mg/L	0.0005	<0.00050	<0.00050	NC
Ethylbenzene	mg/L	0.0005	<0.00050	<0.00050	NC
Xylene (o)	mg/L	0.0003	<0.00030	<0.00030	NC
Xylene (m & p)	mg/L	0.0004	<0.00040	<0.00040	NC
Xylene Total	mg/L	0.0005	<0.00050	<0.00050	NC
Total BTEX	mg/L	0.001	<0.0010	<0.0010	NC
Volatile Organic Compounds (VOCs)					
1,2-Dichloroethene	mg/L	0.00071	<0.00071	<0.00071	NC
Acetone	mg/L	0.02	<0.02	<0.02	NC
Hexane	mg/L	0.0005	<0.00050	<0.00050	NC
Methyl Ethyl Ketone (MEK)	mg/L	0.02	<0.02	<0.02	NC
Methyl Isobutyl Ketone (MIK)	mg/L	0.02	<0.02	<0.02	NC
1,1,1,2-Tetrachloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
1,1,1-Trichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
1,1,2,2-Tetrachloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
1,1,2-Trichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
1,1-Dichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
1,1-Dichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC
1,2-Dibromoethane	mg/L	0.0002	<0.00020	<0.00020	NC
1,2-Dichlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC
1,2-Dichloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
1,2-Dichloropropane	mg/L	0.0005	<0.00050	<0.00050	NC
1,3-Dichlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC
1,3-Dichloropropene	mg/L	0.0005	<0.00050	<0.00050	NC
1,4-Dichlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC
Bromodichloromethane	mg/L	0.0005	<0.00050	<0.00050	NC
Bromoform	mg/L	0.0005	<0.00050	<0.00050	NC
Bromomethane	mg/L	0.0005	<0.00050	<0.00050	NC
Carbon tetrachloride	mg/L	0.0002	<0.00020	<0.00020	NC
Chlorobenzene	mg/L	0.0005	<0.00050	<0.00050	NC
Chlorodibromomethane	mg/L	0.0005	<0.00050	<0.00050	NC
Chloroethane	mg/L	0.0005	<0.00050	<0.00050	NC
Chloroform	mg/L	0.0005	<0.00050	<0.00050	NC
Chloromethane	mg/L	0.002	<0.0020	<0.0020	NC
cis-1,2-Dichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC
cis-1,3-Dichloropropene	mg/L	0.0003	<0.00030	<0.00030	NC
Dichlorodifluoromethane	mg/L	0.0005	<0.00050	<0.00050	NC
Dichloromethane	mg/L	0.001	<0.0010	<0.0010	NC
Methyl tert-Butyl Ether (MTBE)	mg/L	0.0005	<0.00050	<0.00050	NC
Styrene	mg/L	0.0005	<0.00050	<0.00050	NC
Tetrachloroethene	mg/L	0.0005	<0.00050	<0.00050	NC
trans-1,2-Dichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC
trans-1,3-Dichloropropene	mg/L	0.0003	<0.00030	<0.00030	NC
Trichloroethene	mg/L	0.0005	<0.00050	<0.00050	NC
Trichlorofluoromethane	mg/L	0.0005	<0.00050	<0.00050	NC
Trihalomethanes	mg/L	0.001	<0.0010	<0.0010	NC
Vinyl chloride	mg/L	0.0002	<0.00020	<0.00020	NC
Phenolics					
Phenols	mg/L	0.001	<0.0010	<0.0010	NC
Solvents					
2-hexanone (MBK)	mg/L	0.02	<0.02	<0.02	NC
Carbon disulfide	mg/L	0.001	<0.0010	<0.0010	NC

Comments
#1 None required
#2 Can vary with filtration method. The most conservative value has been applied (membrane filtration).
#3 AO

Environmental Standards
Health Canada, December 2025, Guidelines for Canadian Drinking Water (MAC)
Health Canada, December 2025, Guidelines for Canadian Drinking Water (Other Value)
Nova Scotia Environment, September 2021, NS Tier I EQS Com/Ind Potable Coarse

*RPDs have only been considered where a concentration is greater than 5 times the EQL.

Appendix C

Certificates of Analysis

CERTIFICATE OF ANALYSIS

Work Order	:	**HA2502243**		
Client	:	**Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	:	Penny Allen	Account Manager	: Andrew Martin
Address	:	137 Chain Lake Drive Suite 100 Halifax Nova Scotia Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	:	902.450.5015 ext. 5001	E-mail	: andrew.martin@alsglobal.com
Project	:	22-5099	Telephone	: +1 902 707 4888
PO	:	----	Date Samples Received	: 07-Jul-2025 14:45
C-O-C number	:	----	Date Analysis Commenced	: 09-Jul-2025
Sampler	:	client	Issue Date	: 15-Jul-2025 15:00
Site	:	----		
Quote number	:	Atlantic Canada 2024/2025 SOA		
No. of samples received	:	20		
No. of samples analysed	:	20		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon		Organics, Waterloo, Ontario
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Greg Pokocky		Metals, Waterloo, Ontario
Greg Pokocky		Inorganics, Waterloo, Ontario
Josphin Masihi		Centralized Prep, Waterloo, Ontario
Srihari Prathap		Administration, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
none	none
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Sample Comments

Sample	*Client Id*	*Comment*
HA2502243-001	25-MW3D SS7	N/A: Resemblance Not Applicable (mTPH < LOR)
HA2502243-002	25-MW2D SS6	N/A: Resemblance Not Applicable (mTPH < LOR)
HA2502243-003	25-MW1D SS5	N/A: Resemblance Not Applicable (mTPH < LOR)
HA2502243-004	25-MW4D SS5	N/A: Resemblance Not Applicable (mTPH < LOR)

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

Analytical Results

Sub-Matrix: Soil
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW3D SS7 ----	25-MW2D SS6 ----	25-MW1D SS5 ----	25-MW4D SS5 ----	25-MW3D SS2 ----
					Client sampling date / time	02-Jul-2025 17:00	03-Jul-2025 16:00	04-Jul-2025 17:05	05-Jul-2025 17:15	02-Jul-2025 15:45
						HA2502243-001	HA2502243-002	HA2502243-003	HA2502243-004	HA2502243-006
						Result	Result	Result	Result	Result
Sample Data										
Dummy analyte	----	HOLD/WT	-	-		----	----	----	----	NR
Physical Tests										
Moisture	----	E144/WT	0.25	%		16.8	18.9	21.2	16.6	----
Metals										
Aluminum	7429-90-5	E440/WT	50	mg/kg		14800	5840	11800	7210	----
Antimony	7440-36-0	E440/WT	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	----
Arsenic	7440-38-2	E440/WT	0.10	mg/kg		2.80	0.81	0.94	0.94	----
Barium	7440-39-3	E440/WT	0.50	mg/kg		92.2	30.9	87.7	57.0	----
Beryllium	7440-41-7	E440/WT	0.10	mg/kg		0.45	0.19	0.38	0.24	----
Bismuth	7440-69-9	E440/WT	0.20	mg/kg		<0.20	0.32	<0.20	0.27	----
Boron	7440-42-8	E440/WT	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	----
Cadmium	7440-43-9	E440/WT	0.020	mg/kg		<0.020	0.032	0.034	0.036	----
Calcium	7440-70-2	E440/WT	50	mg/kg		935	1320	1510	929	----
Chromium	7440-47-3	E440/WT	0.50	mg/kg		41.0	11.4	20.5	13.8	----
Cobalt	7440-48-4	E440/WT	0.10	mg/kg		10.4	3.02	6.16	3.83	----
Copper	7440-50-8	E440/WT	0.50	mg/kg		38.2	18.2	8.43	9.54	----
Iron	7439-89-6	E440/WT	50	mg/kg		22500	7610	16100	9440	----
Lead	7439-92-1	E440/WT	0.50	mg/kg		2.70	1.42	2.89	1.55	----
Lithium	7439-93-2	E440/WT	2.0	mg/kg		41.0	18.0	38.3	24.5	----
Magnesium	7439-95-4	E440/WT	20	mg/kg		5780	2340	5170	3180	----
Manganese	7439-96-5	E440/WT	1.0	mg/kg		263	111	237	155	----

Analytical Results

Sub-Matrix: Soil
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW3D SS7 ----	25-MW2D SS6 ----	25-MW1D SS5 ----	25-MW4D SS5 ----	25-MW3D SS2 ----
					Client sampling date / time	02-Jul-2025 17:00	03-Jul-2025 16:00	04-Jul-2025 17:05	05-Jul-2025 17:15	02-Jul-2025 15:45
						HA2502243-001	HA2502243-002	HA2502243-003	HA2502243-004	HA2502243-006
						Result	Result	Result	Result	Result
Metals										
Molybdenum	7439-98-7	E440/WT	0.10	mg/kg		3.04	0.61	0.16	0.30	----
Nickel	7440-02-0	E440/WT	0.50	mg/kg		22.5	7.07	14.1	9.61	----
Phosphorus	7723-14-0	E440/WT	50	mg/kg		374	418	700	434	----
Potassium	7440-09-7	E440/WT	100	mg/kg		6480	2260	5790	3000	----
Selenium	7782-49-2	E440/WT	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	----
Silver	7440-22-4	E440/WT	0.10	mg/kg		2.55	<0.10	<0.10	0.76	----
Sodium	7440-23-5	E440/WT	50	mg/kg		232	130	120	117	----
Strontium	7440-24-6	E440/WT	0.50	mg/kg		3.40	4.05	3.73	2.74	----
Sulfur	7704-34-9	E440/WT	1000	mg/kg		<1000	<1000	<1000	<1000	----
Thallium	7440-28-0	E440/WT	0.050	mg/kg		0.285	0.112	0.326	0.132	----
Tin	7440-31-5	E440/WT	2.0	mg/kg		2.5	2.4	<2.0	<2.0	----
Titanium	7440-32-6	E440/WT	1.0	mg/kg		917	385	983	534	----
Tungsten	7440-33-7	E440/WT	0.50	mg/kg		14.8	0.54	<0.50	3.54	----
Uranium	7440-61-1	E440/WT	0.050	mg/kg		1.27	1.27	3.40	1.81	----
Vanadium	7440-62-2	E440/WT	0.20	mg/kg		28.7	9.98	20.5	14.8	----
Zinc	7440-66-6	E440/WT	2.0	mg/kg		40.0	17.8	56.8	21.6	----
Zirconium	7440-67-7	E440/WT	1.0	mg/kg		3.4	1.8	6.5	1.9	----
Hydrocarbon Distribution of RBCA mTPH (Tier I) Fractions										
C6-C10 fraction of mTPH, SGC	n/a	EC581D.XSG/WT	1	%		<1	<1	<1	<1	----
>C10-C16 fraction of mTPH, SGC	n/a	EC581D.XSG/WT	1	%		<1	<1	<1	<1	----
>C16-C21 fraction of mTPH, SGC	n/a	EC581D.XSG/WT	1	%		<1	<1	<1	<1	----

Analytical Results

Sub-Matrix: Soil
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW3D SS7 ----	25-MW2D SS6 ----	25-MW1D SS5 ----	25-MW4D SS5 ----	25-MW3D SS2 ----
					Client sampling date / time	02-Jul-2025 17:00	03-Jul-2025 16:00	04-Jul-2025 17:05	05-Jul-2025 17:15	02-Jul-2025 15:45
						HA2502243-001	HA2502243-002	HA2502243-003	HA2502243-004	HA2502243-006
						Result	Result	Result	Result	Result
Hydrocarbon Distribution of RBCA mTPH (Tier I) Fractions										
>C21-C32 fraction of mTPH, SGC	n/a	EC581D.XSG/WT	1	%		<1	<1	<1	<1	----
Hydrocarbons										
Benzene	71-43-2	E611A/WT	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	----
Toluene	108-88-3	E611A/WT	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	----
Ethylbenzene	100-41-4	E611A/WT	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	----
Xylenes, total	1330-20-7	E611A/WT	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	----
Xylene, o-	95-47-6	E611A/WT	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	----
Xylene, m+p-	179601-23-1	E611A/WT	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	----
VPH C6-C10	n/a	E581.VPH/WT	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	----
VPH C6-C10 (less BTEX)	n/a	EC580C/WT	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	----
EPH >C10-C16, SGC	n/a	E601G.SG/WT	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	----
EPH >C16-C21, SGC	n/a	E601G.SG/WT	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	----
EPH >C21-C32, SGC	n/a	E601G.SG/WT	5.0	mg/kg		<5.0	<5.0	<5.0	<5.0	----
EPH >C34-C50, SGC	n/a	E601G.SG/WT	20	mg/kg		<20	<20	<20	<20	----
hydrocarbon resemblance, SGC	n/a	E601G.SG/WT	-	none		N/A	N/A	N/A	N/A	----
mTPH (Tier I), SGC	n/a	EC581D.XSG/WT	10	mg/kg		<10	<10	<10	<10	----
return to baseline at C32, SGC	n/a	E601G.SG/WT	-	-		Yes	Yes	Yes	Yes	----
TEH >C10-C32, SGC	n/a	E601G.SG/WT	10	mg/kg		<10	<10	<10	<10	----
Hydrocarbons Surrogates										
dotriacontane, n- (EPH)	n/a	E601G.SG/WT	1.0	%		99.1	99.3	95.5	93.1	----
isobutylbenzene (EPH)	538-93-2	E601G.SG/WT	1.0	%		93.9	90.1	93.7	87.4	----

Analytical Results

Sub-Matrix: Soil
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW3D SS7 ----	25-MW2D SS6 ----	25-MW1D SS5 ----	25-MW4D SS5 ----	25-MW3D SS2 ----
					Client sampling date / time	02-Jul-2025 17:00	03-Jul-2025 16:00	04-Jul-2025 17:05	05-Jul-2025 17:15	02-Jul-2025 15:45
						HA2502243-001	HA2502243-002	HA2502243-003	HA2502243-004	HA2502243-006
						Result	Result	Result	Result	Result
Hydrocarbons Surrogates										
isobutylbenzene (VPH)	538-93-2	E581.VPH/WT	1.0	%		91.2	85.8	89.7	84.5	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/WT	0.10	%		93.7	99.7	93.7	91.4	----
Difluorobenzene, 1,4-	540-36-3	E611A/WT	0.10	%		89.0	97.2	90.7	89.2	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	----
Acenaphthylene	208-96-8	E641A-L/WT	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	----
Acridine	260-94-6	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Anthracene	120-12-7	E641A-L/WT	0.0040	mg/kg		<0.0040	<0.0040	<0.0040	<0.0040	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Chrysene	218-01-9	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Fluorene	86-73-7	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----

Analytical Results

Sub-Matrix: Soil
(Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW3D SS7 ----	25-MW2D SS6 ----	25-MW1D SS5 ----	25-MW4D SS5 ----	25-MW3D SS2 ----
					Client sampling date / time	02-Jul-2025 17:00	03-Jul-2025 16:00	04-Jul-2025 17:05	05-Jul-2025 17:15	02-Jul-2025 15:45
						HA2502243-001	HA2502243-002	HA2502243-003	HA2502243-004	HA2502243-006
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Naphthalene	91-20-3	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Perylene	198-55-0	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Pyrene	129-00-0	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
Quinoline	91-22-5	E641A-L/WT	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.020	mg/kg		<0.020	<0.020	<0.020	<0.020	----
IACR (CCME)	----	E641A-L/WT	0.150	-		<0.150	<0.150	<0.150	<0.150	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A-L/WT	0.1	%		81.8	80.6	85.7	90.1	----
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		93.5	93.8	98.7	103	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		91.4	97.8	96.4	101	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		90.8	87.7	96.5	99.6	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW3D SS4 ----	25-MW3D SS5 ----	25-MW3D SS6 ----	25-MW2D SS1 ----	25-MW2D SS2 ----
					Client sampling date / time	02-Jul-2025 16:05	02-Jul-2025 16:20	02-Jul-2025 16:30	03-Jul-2025 14:55	03-Jul-2025 15:10
						HA2502243-007	HA2502243-008	HA2502243-009	HA2502243-010	HA2502243-011
						Result	Result	Result	Result	Result
Sample Data										
Dummy analyte	----	HOLD/WT	-	-		NR	NR	NR	NR	NR

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW2D SS4 ----	25-MW2D SS9 ----	25-MW1D SS1 ----	25-MW1D SS2 ----	25-MW1D SS4 ----
					Client sampling date / time	03-Jul-2025 15:30	03-Jul-2025 16:55	04-Jul-2025 16:40	04-Jul-2025 16:45	04-Jul-2025 17:00
						HA2502243-012	HA2502243-013	HA2502243-014	HA2502243-015	HA2502243-016
						Result	Result	Result	Result	Result
Sample Data										
Dummy analyte	----	HOLD/WT	-	-		NR	NR	NR	NR	NR

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	25-MW1D SS7 ----	25-MW4D SS1 ----	DUP A ----	25-MW4D SS2 ----	----
					Client sampling date / time	04-Jul-2025 17:25	05-Jul-2025 15:50	05-Jul-2025 15:50	05-Jul-2025 16:00	----
						HA2502243-017	HA2502243-018	HA2502243-019	HA2502243-020	----
						Result	Result	Result	Result	----
Sample Data										
Dummy analyte	----	HOLD/WT	-	-		NR	NR	NR	NR	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	PW5 ----	----	----	----	----
					Client sampling date / time	02-Jul-2025 15:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2502243-005	----	----	----	----
						Result	----	----	----	----
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		12.6	----	----	----	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	----	----	----	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		10.3	----	----	----	----
Colour, apparent	----	E330/WT	2.0	CU		<2.0	----	----	----	----
Conductivity	----	E100/WT	1.0	µS/cm		132	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WT	0.50	mg/L		9.18	----	----	----	----
Langelier index (@ 20°C)	----	EC105A/WT	0.010	-		-2.76	----	----	----	----
Langelier index (@ 4°C)	----	EC105A/WT	0.010	-		-3.02	----	----	----	----
pH	----	E108/WT	0.10	pH units		7.08	----	----	----	----
pH, saturation (@ 20°C)	----	EC105A/WT	0.010	pH units		9.84	----	----	----	----
pH, saturation (@ 4°C)	----	EC105A/WT	0.010	pH units		10.10	----	----	----	----
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L		75 DLDS	----	----	----	----
Turbidity	----	E121/WT	0.10	NTU		0.20	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.336	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		27.9	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		<0.020	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.074	----	----	----	----
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		0.0740	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	PW5 ----	----	----	----	----
					Client sampling date / time	02-Jul-2025 15:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2502243-005	----	----	----	----
						Result	----	----	----	----
Anions and Nutrients										
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L		0.441	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		4.60	----	----	----	----
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L		2.89	----	----	----	----
Ion Balance										
Anion sum	----	EC101A/WT	0.10	meq/L		1.09	----	----	----	----
Cation sum (total)	----	EC101A/WT	0.10	meq/L		1.13	----	----	----	----
Ion balance (cations/anions)	----	EC101A/WT	0.01	%		104	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L		0.0347	----	----	----	----
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L		0.00044	----	----	----	----
Barium, total	7440-39-3	E420/WT	0.00010	mg/L		0.00355	----	----	----	----
Beryllium, total	7440-41-7	E420/WT	0.000020	mg/L		<0.000020	----	----	----	----
Bismuth, total	7440-69-9	E420/WT	0.000050	mg/L		<0.000050	----	----	----	----
Boron, total	7440-42-8	E420/WT	0.010	mg/L		<0.010	----	----	----	----
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L		0.0000129	----	----	----	----
Calcium, total	7440-70-2	E420/WT	0.100	mg/L		2.96	----	----	----	----
Cesium, total	7440-46-2	E420/WT	0.000010	mg/L		0.000052	----	----	----	----
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	PW5 ----	----	----	----	----
					Client sampling date / time	02-Jul-2025 15:00	----	----	----	----
					HA2502243-005	----	----	----	----	----
					Result	----	----	----	----	----
Total Metals										
Copper, total	7440-50-8	E420/WT	0.00050	mg/L		0.00143	----	----	----	----
Iron, total	7439-89-6	E420/WT	0.010	mg/L		0.095	----	----	----	----
Lead, total	7439-92-1	E420/WT	0.000050	mg/L		0.000107	----	----	----	----
Lithium, total	7439-93-2	E420/WT	0.0010	mg/L		<0.0010	----	----	----	----
Magnesium, total	7439-95-4	E420/WT	0.0050	mg/L		0.434	----	----	----	----
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L		0.00548	----	----	----	----
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L		<0.000050	----	----	----	----
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/WT	0.050	mg/L		0.529	----	----	----	----
Potassium, total	7440-09-7	E420/WT	0.050	mg/L		0.286	----	----	----	----
Rubidium, total	7440-17-7	E420/WT	0.00020	mg/L		0.00094	----	----	----	----
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L		<0.000050	----	----	----	----
Silicon (as SiO2), total	7631-86-9	EC420.SiO2/WT	0.25	mg/L		3.04	----	----	----	----
Silicon, total	7440-21-3	E420/WT	0.10	mg/L		1.42	----	----	----	----
Silver, total	7440-22-4	E420/WT	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/WT	0.050	mg/L		20.8	----	----	----	----
Strontium, total	7440-24-6	E420/WT	0.00020	mg/L		0.00829	----	----	----	----
Sulfur, total	7704-34-9	E420/WT	0.50	mg/L		1.28	----	----	----	----
Tellurium, total	13494-80-9	E420/WT	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/WT	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, total	7440-29-1	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	PW5 ----	----	----	----	----
					Client sampling date / time	02-Jul-2025 15:00	----	----	----	----
						HA2502243-005	----	----	----	----
						Result	----	----	----	----
Total Metals										
Tin, total	7440-31-5	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/WT	0.00010	mg/L		0.00068	----	----	----	----
Uranium, total	7440-61-1	E420/WT	0.000010	mg/L		<0.000010	----	----	----	----
Vanadium, total	7440-62-2	E420/WT	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L		0.0792	----	----	----	----
Zirconium, total	7440-67-7	E420/WT	0.00020	mg/L		<0.00020	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **HA2502243**	Page	: 1 of 17
Client	: **Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	: Penny Allen	Account Manager	: Andrew Martin
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth, Nova Scotia Canada B3B 1L2
Telephone	: 902.450.5015 ext. 5001	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 07-Jul-2025 14:45
PO	: ----	Issue Date	: 15-Jul-2025 15:00
C-O-C number	: ----		
Sampler	: client		
Site	: ----		
Quote number	: Atlantic Canada 2024/2025 SOA		
No. of samples received	: 20		
No. of samples analysed	: 20		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- Reference Material (RM) Sample outliers occur - please see the following pages for full details.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Reference Material (RM) Sample								
Metals	QC-MRG2-2097172 003	----	Tungsten	7440-33-7	E440	131 % MES	70.0-130%	Recovery greater than upper control limit

Result Qualifiers

Qualifier	*Description*
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)										
Glass soil jar/Teflon lined cap										
25-MW4D SS5	E601G.SG	05-Jul-2025	10-Jul-2025	14 days	4 days	✓	14-Jul-2025	40 days	4 days	✓
Hydrocarbons : EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)										
Glass soil jar/Teflon lined cap										
25-MW1D SS5	E601G.SG	04-Jul-2025	10-Jul-2025	14 days	5 days	✓	14-Jul-2025	40 days	4 days	✓
Hydrocarbons : EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)										
Glass soil jar/Teflon lined cap										
25-MW2D SS6	E601G.SG	03-Jul-2025	10-Jul-2025	14 days	6 days	✓	14-Jul-2025	40 days	4 days	✓
Hydrocarbons : EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)										
Glass soil jar/Teflon lined cap										
25-MW3D SS7	E601G.SG	02-Jul-2025	10-Jul-2025	14 days	7 days	✓	14-Jul-2025	40 days	4 days	✓
Hydrocarbons : VPH by Headspace GC-FID (Tier I RBCA)										
Glass soil methanol vial										
25-MW4D SS5	E581.VPH	05-Jul-2025	09-Jul-2025	40 days	3 days	✓	09-Jul-2025	40 days	3 days	✓
Hydrocarbons : VPH by Headspace GC-FID (Tier I RBCA)										
Glass soil methanol vial										
25-MW1D SS5	E581.VPH	04-Jul-2025	09-Jul-2025	40 days	4 days	✓	09-Jul-2025	40 days	4 days	✓
Hydrocarbons : VPH by Headspace GC-FID (Tier I RBCA)										
Glass soil methanol vial										
25-MW2D SS6	E581.VPH	03-Jul-2025	09-Jul-2025	40 days	5 days	✓	09-Jul-2025	40 days	5 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : VPH by Headspace GC-FID (Tier I RBCA)										
Glass soil methanol vial										
25-MW3D SS7	E581.VPH	02-Jul-2025	09-Jul-2025	40 days	6 days	✓	09-Jul-2025	40 days	6 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
25-MW4D SS5	E440	05-Jul-2025	10-Jul-2025	180 days	5 days	✓	10-Jul-2025	180 days	5 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
25-MW1D SS5	E440	04-Jul-2025	10-Jul-2025	180 days	6 days	✓	10-Jul-2025	180 days	6 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
25-MW2D SS6	E440	03-Jul-2025	10-Jul-2025	180 days	7 days	✓	10-Jul-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
25-MW3D SS7	E440	02-Jul-2025	10-Jul-2025	180 days	8 days	✓	10-Jul-2025	180 days	8 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
25-MW1D SS5	E144	04-Jul-2025	----	----	----		09-Jul-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
25-MW2D SS6	E144	03-Jul-2025	----	----	----		09-Jul-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
25-MW3D SS7	E144	02-Jul-2025	----	----	----		09-Jul-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
25-MW4D SS5	E144	05-Jul-2025	----	----	----		09-Jul-2025	----	----	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
25-MW4D SS5	E641A-L	05-Jul-2025	11-Jul-2025	14 days	6 days	✓	14-Jul-2025	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
25-MW1D SS5	E641A-L	04-Jul-2025	11-Jul-2025	14 days	7 days	✓	14-Jul-2025	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
25-MW2D SS6	E641A-L	03-Jul-2025	11-Jul-2025	14 days	8 days	✓	14-Jul-2025	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap										
25-MW3D SS7	E641A-L	02-Jul-2025	11-Jul-2025	14 days	9 days	✓	14-Jul-2025	40 days	3 days	✓
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW1D SS1	HOLD	04-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW1D SS2	HOLD	04-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW1D SS4	HOLD	04-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW1D SS7	HOLD	04-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW2D SS1	HOLD	03-Jul-2025	----	----	----		09-Jul-2025	----	----	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW2D SS2	HOLD	03-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW2D SS4	HOLD	03-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW2D SS9	HOLD	03-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW3D SS2	HOLD	02-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW3D SS4	HOLD	02-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW3D SS5	HOLD	02-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW3D SS6	HOLD	02-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW4D SS1	HOLD	05-Jul-2025	----	----	----		09-Jul-2025	----	----	
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
25-MW4D SS2	HOLD	05-Jul-2025	----	----	----		09-Jul-2025	----	----	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Sample Data : Sample Hold Fee for Soil/Solid										
Glass soil jar/Teflon lined cap										
DUP A	HOLD	05-Jul-2025	----	----	----		09-Jul-2025	----	----	
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
25-MW4D SS5	E611A	05-Jul-2025	09-Jul-2025	40 days	3 days	✓	09-Jul-2025	40 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
25-MW1D SS5	E611A	04-Jul-2025	09-Jul-2025	40 days	4 days	✓	09-Jul-2025	40 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
25-MW2D SS6	E611A	03-Jul-2025	09-Jul-2025	40 days	5 days	✓	09-Jul-2025	40 days	5 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
25-MW3D SS7	E611A	02-Jul-2025	09-Jul-2025	40 days	6 days	✓	09-Jul-2025	40 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
PW5	E298	02-Jul-2025	09-Jul-2025	28 days	7 days	✓	10-Jul-2025	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
PW5	E235.Cl	02-Jul-2025	09-Jul-2025	28 days	7 days	✓	10-Jul-2025	28 days	7 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
PW5	E378-U	02-Jul-2025	09-Jul-2025	3 days	6 days	× EHTR	11-Jul-2025	3 days	6 days	× EHTR

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE PW5	E235.F	02-Jul-2025	09-Jul-2025	28 days	7 days	✓	10-Jul-2025	28 days	7 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE PW5	E235.NO3	02-Jul-2025	09-Jul-2025	3 days	6 days	× EHTR	10-Jul-2025	3 days	6 days	× EHTR
Anions and Nutrients : Nitrite in Water by IC										
HDPE PW5	E235.NO2	02-Jul-2025	09-Jul-2025	3 days	6 days	× EHTR	10-Jul-2025	3 days	6 days	× EHTR
Anions and Nutrients : Sulfate in Water by IC										
HDPE PW5	E235.SO4	02-Jul-2025	09-Jul-2025	28 days	7 days	✓	10-Jul-2025	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) PW5	E355-L	02-Jul-2025	09-Jul-2025	28 days	7 days	✓	11-Jul-2025	28 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE PW5	E290	02-Jul-2025	09-Jul-2025	14 days	7 days	✓	09-Jul-2025	14 days	7 days	✓
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE PW5	E330	02-Jul-2025	----	----	----		10-Jul-2025	48 hrs	189 hrs	× EHTR
Physical Tests : Conductivity in Water										
HDPE PW5	E100	02-Jul-2025	09-Jul-2025	28 days	7 days	✓	09-Jul-2025	28 days	7 days	✓
Physical Tests : pH by Meter										
HDPE PW5	E108	02-Jul-2025	09-Jul-2025	0.25 hrs	168 hrs	× EHTR-FM	09-Jul-2025	0.25 hrs	168 hrs	× EHTR-FM

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Physical Tests : TDS by Gravimetry										
HDPE										
PW5	E162	02-Jul-2025	----	----	----		09-Jul-2025	7 days	7 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
PW5	E121	02-Jul-2025	----	----	----		09-Jul-2025	3 days	7 days	× EHTR
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
PW5	E420	02-Jul-2025	09-Jul-2025	180 days	7 days	✓	09-Jul-2025	180 days	7 days	✓

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.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Moisture Content by Gravimetry	E144	2096505	1	19	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	2097173	1	5	20.0	5.0	✓
VPH by Headspace GC-FID (Tier I RBCA)	E581.VPH	2096101	1	7	14.2	5.0	✓
EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)	E601G.SG	2097159	1	4	25.0	5.0	✓
BTEX by Headspace GC-MS	E611A	2096102	1	7	14.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	2096320	1	4	25.0	5.0	✓
Laboratory Control Samples (LCS)							
Moisture Content by Gravimetry	E144	2096505	1	19	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	2097173	2	5	40.0	10.0	✓
VPH by Headspace GC-FID (Tier I RBCA)	E581.VPH	2096101	1	7	14.2	5.0	✓
EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)	E601G.SG	2097159	1	4	25.0	5.0	✓
BTEX by Headspace GC-MS	E611A	2096102	1	7	14.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	2096320	1	4	25.0	5.0	✓
Method Blanks (MB)							
Moisture Content by Gravimetry	E144	2096505	1	19	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	2097173	1	5	20.0	5.0	✓
VPH by Headspace GC-FID (Tier I RBCA)	E581.VPH	2096101	1	7	14.2	5.0	✓
EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)	E601G.SG	2097159	1	4	25.0	5.0	✓
BTEX by Headspace GC-MS	E611A	2096102	1	7	14.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	2096320	1	4	25.0	5.0	✓
Matrix Spikes (MS)							
VPH by Headspace GC-FID (Tier I RBCA)	E581.VPH	2096101	1	7	14.2	5.0	✓
EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)	E601G.SG	2097159	1	4	25.0	5.0	✓
BTEX by Headspace GC-MS	E611A	2096102	1	7	14.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	2096320	1	4	25.0	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2096288	1	20	5.0	5.0	✓
pH by Meter	E108	2096291	1	15	6.6	5.0	✓
Turbidity by Nephelometry	E121	2096909	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	2096996	1	17	5.8	5.0	✓
Chloride in Water by IC	E235.Cl	2096286	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2096283	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP) - Continued							
Nitrite in Water by IC	E235.NO2	2096285	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2096284	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2096287	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2096289	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2096365	1	19	5.2	5.0	✓
Colour (Apparent) by Spectrometer	E330	2099166	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2096366	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2096292	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2096033	1	17	5.8	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2096288	1	20	5.0	5.0	✓
pH by Meter	E108	2096291	1	15	6.6	5.0	✓
Turbidity by Nephelometry	E121	2096909	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	2096996	1	17	5.8	5.0	✓
Chloride in Water by IC	E235.Cl	2096286	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2096283	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2096285	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2096284	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2096287	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2096289	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2096365	1	19	5.2	5.0	✓
Colour (Apparent) by Spectrometer	E330	2099166	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2096366	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2096292	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2096033	1	17	5.8	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2096288	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2096909	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	2096996	1	17	5.8	5.0	✓
Chloride in Water by IC	E235.Cl	2096286	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2096283	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2096285	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2096284	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2096287	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2096289	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2096365	1	19	5.2	5.0	✓
Colour (Apparent) by Spectrometer	E330	2099166	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2096366	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2096292	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Method Blanks (MB) - Continued							
Total Metals in Water by CRC ICPMS	E420	2096033	1	17	5.8	5.0	✓
Matrix Spikes (MS)							
Chloride in Water by IC	E235.Cl	2096286	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2096283	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2096285	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2096284	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2096287	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2096365	1	19	5.2	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2096366	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2096292	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2096033	1	17	5.8	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440 ALS Environmental - Waterloo	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS.
VPH by Headspace GC-FID (Tier I RBCA)	E581.VPH ALS Environmental - Waterloo	Soil/Solid	Atlantic RBCA Version 3.1	VPH (Volatile Petroleum Hydrocarbons) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
EPH in Soil/Solid By GC-FID (RBCA Tier I - In-situ Silica Gel Clean-up)	E601G.SG ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for RBCA Tier I hydrocarbon fractions (C10-C16, C16-C21, C21-C32). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BTEX by Headspace GC-MS	E611A ALS Environmental - Waterloo	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
VPH C6-C10 (less BTEX) [RBCA]	EC580C ALS Environmental - Waterloo	Soil/Solid	Atlantic RBCA Version 3.1	VPH C6-C10 (less BTEX) is calculated as follows: VPH (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Modified TPH (RBCA Tier I - Silica Gel Cleanup)	EC581D.XSG ALS Environmental - Waterloo	Soil/Solid	Atlantic RBCA Version 3.1	Modified TPH (RBCA), Tier I is the sum of PIRI Fraction (C6 - C10, SGC - BTEX) + (>C10 - C16, SGC) +(>C16 – C21, SGC) + (>C21 - C32, SGC).
Sample Hold Fee for Soil/Solid	HOLD ALS Environmental - Waterloo	Soil/Solid		Fee for storing sample to meet sample integrity requirements and holding times.
Conductivity in Water	E100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Waterloo	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TDS by Gravimetry	E162 ALS Environmental - Waterloo	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Chloride in Water by IC	E235.Cl ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Colour (Apparent) by Spectrometer	E330 ALS Environmental - Waterloo	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove carbonate-based Inorganic Carbon (IC). Analysis is by high temperature combustion with infrared detection of CO_2. Forms of carbon associated with inorganic or organic molecules (e.g. SCN and CN) are included in NPOC if they are not removed by purging under acidic conditions. Notably, NPOC excludes most volatile organic compounds and free cyanide. For samples where the majority of Total Carbon is inorganic, this method provides greater accuracy and reliability versus the TOC by subtraction method (TC minus TIC).
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Waterloo	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Waterloo	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Waterloo	Water	APHA 2340B	“Hardness (as $CaCO_3$), from total Ca/Mg” is calculated from the sum of total Calcium and Magnesium concentrations, expressed as $CaCO_3$ equivalents. “Total Hardness” refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because hardness is a property of water due to dissolved divalent cations. In non-turbid waters, Hardness from total Ca/Mg is normally comparable to Dissolved Hardness, but may be biased high if particulate forms of Ca or Mg are present.
Ion Balance using Total Metals	EC101A ALS Environmental - Waterloo	Water	APHA 1030E	Cation Sum (using total metals), Anion Sum, and Ion Balance are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Minor ions are included where data is present. Ion Balance cannot be calculated accurately for waters with very low electrical conductivity (EC).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Saturation Index using Laboratory pH (Ca-T)	EC105A ALS Environmental - Waterloo	Water	APHA 2330B	Langelier Index provides an indication of scale formation potential at a given pH and temperature, and is calculated as per APHA 2330B Saturation Index. Positive values indicate oversaturation with respect to CaCO3. Negative values indicate undersaturation of CaCO3. This calculation uses laboratory pH measurements and provides estimates of Langelier Index at temperatures of 4, 15, 20, 25, 66, and 77°C. Ryznar Stability Index is an alternative index used for scale formation and corrosion potential.
Nitrate and Nitrite (as N) (Calculation)	EC235.N+N ALS Environmental - Waterloo	Water	EPA 300.0	Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).
Total Silicon as Silica (Calculation)	EC420.SiO2 ALS Environmental - Waterloo	Water	N/A	Total Silicon (as SiO2) is a calculated parameter. Total Silicon (as SiO2 mg/L) = 2.139 x Total Silicon (mg/L).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Metals and Mercury	EP440 ALS Environmental - Waterloo	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.
VOCs Methanol Extraction for Headspace Analysis	EP581 ALS Environmental - Waterloo	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
PHCs Hexane-Acetone Tumbler Extraction (RBCA)	EP601F ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) are extracted with 1:1 hexane:acetone using a rotary extractor.
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Waterloo	Water		Preparation for Total Organic Carbon by Combustion

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QUALITY CONTROL REPORT

Work Order	: **HA2502243**	Page	: 1 of 22
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	: Penny Allen	Account Manager	: Andrew Martin
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth, Nova Scotia Canada B3B 1L2
Telephone	: 902.450.5015 ext. 5001	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 07-Jul-2025 14:45
PO	: ----	Date Analysis Commenced	: 09-Jul-2025
C-O-C number	: ----	Issue Date	: 15-Jul-2025 15:00
Sampler	: client		
Site	: ----		
Quote number	: Atlantic Canada 2024/2025 SOA		
No. of samples received	: 20		
No. of samples analysed	: 20		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
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Josphin Masihi	Supervisor I	Waterloo Centralized Prep, Waterloo, Ontario
Srihari Prathap	Account Manager Assistant	Waterloo Administration, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2096505)											
WT2517247-001	Anonymous	Moisture	----	E144	0.25	%	13.3	14.4	8.24%	20%	----
Metals (QC Lot: 2097173)											
HA2502197-001	Anonymous	Aluminum	7429-90-5	E440	1000	mg/kg	48200	44400	8.25%	40%	----
		Antimony	7440-36-0	E440	2.00	mg/kg	8.50	8.22	0.28	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	2.00	mg/kg	111	104	6.30%	30%	----
		Barium	7440-39-3	E440	10.0	mg/kg	75.9	68.2	10.7%	40%	----
		Beryllium	7440-41-7	E440	2.00	mg/kg	<2.00	<2.00	0	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	4.00	mg/kg	9.22	9.04	0.19	Diff <2x LOR	----
		Boron	7440-42-8	E440	100	mg/kg	634	626	8.4	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.400	mg/kg	47.1	45.9	2.57%	30%	----
		Calcium	7440-70-2	E440	1000	mg/kg	8960	8750	2.35%	30%	----
		Chromium	7440-47-3	E440	10.0	mg/kg	1070	999	6.93%	30%	----
		Cobalt	7440-48-4	E440	2.00	mg/kg	496	459	7.70%	30%	----
		Copper	7440-50-8	E440	10.0	mg/kg	1070	1000	6.51%	30%	----
		Iron	7439-89-6	E440	1000	mg/kg	192000	182000	5.32%	30%	----
		Lead	7439-92-1	E440	10.0	mg/kg	62.9	61.3	2.61%	40%	----
		Lithium	7439-93-2	E440	40.0	mg/kg	<40.0	<40.0	0	Diff <2x LOR	----
		Magnesium	7439-95-4	E440	400	mg/kg	13700	12700	7.51%	30%	----
		Manganese	7439-96-5	E440	20.0	mg/kg	3230	3020	6.64%	30%	----
		Molybdenum	7439-98-7	E440	2.00	mg/kg	816	782	4.31%	40%	----
		Nickel	7440-02-0	E440	10.0	mg/kg	12800	12000	6.67%	30%	----
		Phosphorus	7723-14-0	E440	1000	mg/kg	6650	5880	768	Diff <2x LOR	----
		Potassium	7440-09-7	E440	2000	mg/kg	<2000	<2000	0	Diff <2x LOR	----
		Selenium	7782-49-2	E440	4.00	mg/kg	16.2	14.8	1.38	Diff <2x LOR	----
		Silver	7440-22-4	E440	2.00	mg/kg	<2.00	<2.00	0	Diff <2x LOR	----
		Sodium	7440-23-5	E440	1000	mg/kg	35400	37000	4.62%	40%	----
		Strontium	7440-24-6	E440	10.0	mg/kg	236	227	4.10%	40%	----
		Sulfur	7704-34-9	E440	20000	mg/kg	42500	42000	600	Diff <2x LOR	----
		Thallium	7440-28-0	E440	1.00	mg/kg	2.68	2.77	0.088	Diff <2x LOR	----
		Tin	7440-31-5	E440	40.0	mg/kg	80.5	75.7	4.9	Diff <2x LOR	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Metals (QC Lot: 2097173) - continued											
HA2502197-001	Anonymous	Titanium	7440-32-6	E440	20.0	mg/kg	557	532	4.53%	40%	----
		Tungsten	7440-33-7	E440	10.0	mg/kg	18.3	17.8	0.57	Diff <2x LOR	----
		Uranium	7440-61-1	E440	1.00	mg/kg	1.24	1.26	0.017	Diff <2x LOR	----
		Vanadium	7440-62-2	E440	4.00	mg/kg	19500	17900	8.51%	30%	----
		Zinc	7440-66-6	E440	40.0	mg/kg	66300	61600	7.30%	30%	----
		Zirconium	7440-67-7	E440	20.0	mg/kg	<20.0	<20.0	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2096102)											
HA2502243-003	25-MW1D SS5	Benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		Toluene	108-88-3	E611A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2096101)											
HA2502243-003	25-MW1D SS5	VPH C6-C10	n/a	E581.VPH	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2097159)											
HA2502243-001	25-MW3D SS7	EPH >C10-C16, SGC	n/a	E601G.SG	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
		EPH >C16-C21, SGC	n/a	E601G.SG	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
		EPH >C21-C32, SGC	n/a	E601G.SG	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
		EPH >C34-C50, SGC	n/a	E601G.SG	20	mg/kg	<20	<20	0	Diff <2x LOR	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 2096320)											
HA2502243-001	25-MW3D SS7	Acenaphthene	83-32-9	E641A-L	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A-L	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Acridine	260-94-6	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A-L	0.0040	mg/kg	<0.0040	<0.0040	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Benzo(a)pyrene	50-32-8	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Benzo(b+j)fluoranthene	n/a	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Benzo(g,h,i)perylene	191-24-2	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Benzo(k)fluoranthene	207-08-9	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Dibenz(a,h)anthracene	53-70-3	E641A-L	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Fluorene	86-73-7	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Polycyclic Aromatic Hydrocarbons (QC Lot: 2096320) - continued											
HA2502243-001	25-MW3D SS7	Methylnaphthalene, 1-	90-12-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Naphthalene	91-20-3	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Perylene	198-55-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Phenanthrene	85-01-8	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Pyrene	129-00-0	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Quinoline	91-22-5	E641A-L	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2096288)											
HA2502238-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	689	693	0.579%	10%	----
Physical Tests (QC Lot: 2096289)											
HA2502238-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	475	458	3.75%	20%	----
Physical Tests (QC Lot: 2096291)											
HA2502238-001	Anonymous	pH	----	E108	0.10	pH units	7.46	7.47	0.134%	4%	----
Physical Tests (QC Lot: 2096909)											
HA2502238-013	Anonymous	Turbidity	----	E121	0.10	NTU	90.4	89.6	0.889%	15%	----
Physical Tests (QC Lot: 2096996)											
HA2502238-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	423	424	0.236%	20%	----
Physical Tests (QC Lot: 2099166)											
HA2502196-001	Anonymous	Colour, apparent	----	E330	2.0	CU	11.9	12.5	0.6	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2096283)											
HA2502193-002	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.087	0.086	0.0003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2096284)											
HA2502193-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.026	0.026	0.0003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2096285)											
HA2502193-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2096286)											
HA2502193-002	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	10.7	10.7	0.0480%	20%	----
Anions and Nutrients (QC Lot: 2096287)											
HA2502193-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	18.6	18.5	0.415%	20%	----
Anions and Nutrients (QC Lot: 2096292)											
HA2502193-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	0.0013	0.0014	0.0001	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2096365)											
HA2502193-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0532	0.0543	2.05%	20%	----
Organic / Inorganic Carbon (QC Lot: 2096366)											
HA2502193-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	5.00	mg/L	26.5	23.4	3.11	Diff <2x LOR	----
Total Metals (QC Lot: 2096033)											
HA2502194-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.236	0.236	0.0631%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00018	0.00018	0.000001	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.534	0.526	1.67%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00224	0.00223	0.590%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000099	0.0000081	0.0000018	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.100	mg/L	1.19	1.18	0.896%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000054	0.000053	0.000001	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00013	0.00013	0.000002	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	1.41	1.39	1.46%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000944	0.000928	1.76%	20%	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.516	0.507	1.76%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0126	0.0124	1.46%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000062	0.000055	0.000007	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00070	0.00055	0.00016	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.448	0.438	0.010	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00173	0.00160	0.00013	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000115	0.000136	0.000021	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	0.45	0.45	0.001	Diff <2x LOR	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	4.09	4.02	1.76%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.00985	0.00977	0.796%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 2096033) - continued											
HA2502194-001	Anonymous	Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00425	0.00404	4.97%	20%	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000012	0.000012	0	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00055	0.00053	0.00002	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2096505)						
Moisture	----	E144	0.25	%	<0.25	----
Metals (QCLot: 2097173)						
Aluminum	7429-90-5	E440	50	mg/kg	<50	----
Antimony	7440-36-0	E440	0.1	mg/kg	<0.10	----
Arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	----
Barium	7440-39-3	E440	0.5	mg/kg	<0.50	----
Beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	----
Bismuth	7440-69-9	E440	0.2	mg/kg	<0.20	----
Boron	7440-42-8	E440	5	mg/kg	<5.0	----
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	----
Calcium	7440-70-2	E440	50	mg/kg	<50	----
Chromium	7440-47-3	E440	0.5	mg/kg	<0.50	----
Cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	----
Copper	7440-50-8	E440	0.5	mg/kg	<0.50	----
Iron	7439-89-6	E440	50	mg/kg	<50	----
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	----
Lithium	7439-93-2	E440	2	mg/kg	<2.0	----
Magnesium	7439-95-4	E440	20	mg/kg	<20	----
Manganese	7439-96-5	E440	1	mg/kg	<1.0	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	----
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	----
Phosphorus	7723-14-0	E440	50	mg/kg	<50	----
Potassium	7440-09-7	E440	100	mg/kg	<100	----
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	----
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	----
Sodium	7440-23-5	E440	50	mg/kg	<50	----
Strontium	7440-24-6	E440	0.5	mg/kg	<0.50	----
Sulfur	7704-34-9	E440	1000	mg/kg	<1000	----
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	----
Tin	7440-31-5	E440	2	mg/kg	<2.0	----
Titanium	7440-32-6	E440	1	mg/kg	<1.0	----
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Metals (QCLot: 2097173) - continued						
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Zirconium	7440-67-7	E440	1	mg/kg	<1.0	----
Volatile Organic Compounds (QCLot: 2096102)						
Benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	----
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----
Toluene	108-88-3	E611A	0.05	mg/kg	<0.050	----
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	----
Hydrocarbons (QCLot: 2096101)						
VPH C6-C10	n/a	E581.VPH	5	mg/kg	<5.0	----
Hydrocarbons (QCLot: 2097159)						
EPH >C10-C16, SGC	n/a	E601G.SG	5	mg/kg	<5.0	----
EPH >C16-C21, SGC	n/a	E601G.SG	5	mg/kg	<5.0	----
EPH >C21-C32, SGC	n/a	E601G.SG	5	mg/kg	<5.0	----
EPH >C34-C50, SGC	n/a	E601G.SG	20	mg/kg	<20	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2096320)						
Acenaphthene	83-32-9	E641A-L	0.005	mg/kg	<0.0050	----
Acenaphthylene	208-96-8	E641A-L	0.005	mg/kg	<0.0050	----
Acridine	260-94-6	E641A-L	0.01	mg/kg	<0.010	----
Anthracene	120-12-7	E641A-L	0.004	mg/kg	<0.0040	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	mg/kg	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.01	mg/kg	<0.010	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	mg/kg	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	mg/kg	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	mg/kg	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	mg/kg	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	mg/kg	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	mg/kg	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	mg/kg	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	mg/kg	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	mg/kg	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	mg/kg	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	mg/kg	<0.010	----
Perylene	198-55-0	E641A-L	0.01	mg/kg	<0.010	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2096320) - continued						
Phenanthrene	85-01-8	E641A-L	0.01	mg/kg	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	mg/kg	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	mg/kg	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2096288)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 2096289)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 2096909)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2096996)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2099166)						
Colour, apparent	----	E330	2	CU	<2.0	----
Anions and Nutrients (QCLot: 2096283)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2096284)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2096285)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2096286)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2096287)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2096292)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 2096365)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 2096366)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 2096033)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 2096033) - continued						
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 2096033) - continued						
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 2096505)									
Moisture	----	E144	0.25	%	50 %	100	90.0	110	----
Metals (QCLot: 2097173)									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	108	80.0	120	----
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	102	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	109	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	106	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	97.6	80.0	120	----
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	104	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	99.4	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	100.0	80.0	120	----
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	98.0	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	103	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	102	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	101	80.0	120	----
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	101	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	104	80.0	120	----
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	93.1	80.0	120	----
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	113	80.0	120	----
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	104	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	104	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	101	80.0	120	----
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	113	80.0	120	----
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	102	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	105	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	90.2	80.0	120	----
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	108	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	109	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	104	80.0	120	----
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	103	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	99.6	80.0	120	----
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	104	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	99.9	80.0	120	----

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Metals (QCLot: 2097173) - continued									
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	106	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	102	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	99.2	80.0	120	----
Volatile Organic Compounds (QCLot: 2096102)									
Benzene	71-43-2	E611A	0.005	mg/kg	3.48 mg/kg	86.9	70.0	130	----
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	3.48 mg/kg	83.2	70.0	130	----
Toluene	108-88-3	E611A	0.05	mg/kg	3.48 mg/kg	88.7	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	6.95 mg/kg	84.7	70.0	130	----
Xylene, o-	95-47-6	E611A	0.03	mg/kg	3.48 mg/kg	83.9	70.0	130	----
Hydrocarbons (QCLot: 2096101)									
VPH C6-C10	n/a	E581.VPH	5	mg/kg	69.2 mg/kg	87.8	80.0	120	----
Hydrocarbons (QCLot: 2097159)									
EPH >C10-C16, SGC	n/a	E601G.SG	5	mg/kg	682 mg/kg	92.6	70.0	130	----
EPH >C16-C21, SGC	n/a	E601G.SG	5	mg/kg	644 mg/kg	95.0	70.0	130	----
EPH >C21-C32, SGC	n/a	E601G.SG	5	mg/kg	540 mg/kg	97.4	70.0	130	----
EPH >C34-C50, SGC	n/a	E601G.SG	20	mg/kg	616 mg/kg	117	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2096320)									
Acenaphthene	83-32-9	E641A-L	0.005	mg/kg	0.5 mg/kg	92.7	60.0	130	----
Acenaphthylene	208-96-8	E641A-L	0.005	mg/kg	0.5 mg/kg	93.7	60.0	130	----
Acridine	260-94-6	E641A-L	0.01	mg/kg	0.5 mg/kg	90.0	60.0	130	----
Anthracene	120-12-7	E641A-L	0.004	mg/kg	0.5 mg/kg	92.9	60.0	130	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	mg/kg	0.5 mg/kg	92.9	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A-L	0.01	mg/kg	0.5 mg/kg	92.3	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	mg/kg	0.5 mg/kg	92.7	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	mg/kg	0.5 mg/kg	95.9	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	mg/kg	0.5 mg/kg	93.3	60.0	130	----
Chrysene	218-01-9	E641A-L	0.01	mg/kg	0.5 mg/kg	99.6	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	mg/kg	0.5 mg/kg	97.8	60.0	130	----
Fluoranthene	206-44-0	E641A-L	0.01	mg/kg	0.5 mg/kg	96.1	60.0	130	----
Fluorene	86-73-7	E641A-L	0.01	mg/kg	0.5 mg/kg	94.6	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	mg/kg	0.5 mg/kg	99.6	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	mg/kg	0.5 mg/kg	83.1	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	mg/kg	0.5 mg/kg	90.8	60.0	130	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike Target Concentration	Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2096320) - continued									
Naphthalene	91-20-3	E641A-L	0.01	mg/kg	0.5 mg/kg	79.4	60.0	130	----
Perylene	198-55-0	E641A-L	0.01	mg/kg	0.5 mg/kg	96.8	60.0	130	----
Phenanthrene	85-01-8	E641A-L	0.01	mg/kg	0.5 mg/kg	93.2	60.0	130	----
Pyrene	129-00-0	E641A-L	0.01	mg/kg	0.5 mg/kg	96.6	60.0	130	----
Quinoline	91-22-5	E641A-L	0.01	mg/kg	0.5 mg/kg	90.5	60.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike Target Concentration	Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High	Qualifier
Physical Tests (QCLot: 2096288)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	97.7	90.0	110	----
Physical Tests (QCLot: 2096289)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	98.4	85.0	115	----
Physical Tests (QCLot: 2096291)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2096909)									
Turbidity	----	E121	0.1	NTU	200 NTU	98.0	85.0	115	----
Physical Tests (QCLot: 2096996)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	102	85.0	115	----
Physical Tests (QCLot: 2099166)									
Colour, apparent	----	E330	2	CU	25 CU	101	85.0	115	----
Anions and Nutrients (QCLot: 2096283)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 2096284)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 2096285)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2096286)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 2096287)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 2096292)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	96.7	80.0	120	----
Anions and Nutrients (QCLot: 2096365)									

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Anions and Nutrients (QCLot: 2096365) - continued									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	105	85.0	115	----
Organic / Inorganic Carbon (QCLot: 2096366)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	99.3	80.0	120	----
Total Metals (QCLot: 2096033)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	0.1 mg/L	105	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	0.05 mg/L	107	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.012 mg/L	108	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.005 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	0.05 mg/L	104	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	0.05 mg/L	99.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.005 mg/L	104	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.002 mg/L	101	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.012 mg/L	105	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.012 mg/L	103	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.012 mg/L	102	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.025 mg/L	105	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.012 mg/L	92.4	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	2.5 mg/L	110	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.012 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	0.5 mg/L	105	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	2.5 mg/L	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.005 mg/L	108	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	0.5 mg/L	104	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.005 mg/L	97.3	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	2.5 mg/L	104	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.012 mg/L	105	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	2.5 mg/L	96.1	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.005 mg/L	99.4	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Total Metals (QCLot: 2096033) - continued									
Thallium, total	7440-28-0	E420	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.025 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.012 mg/L	101	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.005 mg/L	97.9	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0 mg/L	104	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.025 mg/L	105	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.025 mg/L	102	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.005 mg/L	99.3	80.0	120	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2096102)										
HA2502243-003	25-MW1D SS5	Benzene	71-43-2	E611A	1.94 mg/kg	2.18 mg/kg	89.3	60.0	140	----
		Ethylbenzene	100-41-4	E611A	1.81 mg/kg	2.18 mg/kg	83.4	60.0	140	----
		Toluene	108-88-3	E611A	1.96 mg/kg	2.18 mg/kg	90.3	60.0	140	----
		Xylene, m+p-	179601-23-1	E611A	3.71 mg/kg	4.35 mg/kg	85.3	60.0	140	----
		Xylene, o-	95-47-6	E611A	1.84 mg/kg	2.18 mg/kg	84.5	60.0	140	----
Hydrocarbons (QCLot: 2096101)										
HA2502243-003	25-MW1D SS5	VPH C6-C10	n/a	E581.VPH	34.8 mg/kg	43.5 mg/kg	79.8	60.0	140	----
Hydrocarbons (QCLot: 2097159)										
HA2502243-001	25-MW3D SS7	EPH >C10-C16, SGC	n/a	E601G.SG	480 mg/kg	543 mg/kg	88.5	60.0	140	----
		EPH >C16-C21, SGC	n/a	E601G.SG	554 mg/kg	513 mg/kg	108	60.0	140	----
		EPH >C21-C32, SGC	n/a	E601G.SG	410 mg/kg	429 mg/kg	95.6	60.0	140	----
		EPH >C34-C50, SGC	n/a	E601G.SG	531 mg/kg	490 mg/kg	108	60.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2096320)										
HA2502243-001	25-MW3D SS7	Acenaphthene	83-32-9	E641A-L	0.366 mg/kg	0.387 mg/kg	94.6	50.0	140	----
		Acenaphthylene	208-96-8	E641A-L	0.371 mg/kg	0.387 mg/kg	95.9	50.0	140	----
		Acridine	260-94-6	E641A-L	0.345 mg/kg	0.387 mg/kg	89.1	50.0	140	----
		Anthracene	120-12-7	E641A-L	0.359 mg/kg	0.387 mg/kg	92.7	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A-L	0.374 mg/kg	0.387 mg/kg	96.6	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A-L	0.353 mg/kg	0.387 mg/kg	91.1	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A-L	0.374 mg/kg	0.387 mg/kg	96.4	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A-L	0.376 mg/kg	0.387 mg/kg	97.0	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A-L	0.356 mg/kg	0.387 mg/kg	91.9	50.0	140	----
		Chrysene	218-01-9	E641A-L	0.392 mg/kg	0.387 mg/kg	101	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A-L	0.377 mg/kg	0.387 mg/kg	97.2	50.0	140	----
		Fluoranthene	206-44-0	E641A-L	0.371 mg/kg	0.387 mg/kg	95.7	50.0	140	----
		Fluorene	86-73-7	E641A-L	0.367 mg/kg	0.387 mg/kg	94.8	50.0	140	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.388 mg/kg	0.387 mg/kg	100	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A-L	0.343 mg/kg	0.387 mg/kg	88.6	50.0	140	----
		Methylnaphthalene, 2-	91-57-6	E641A-L	0.376 mg/kg	0.387 mg/kg	97.2	50.0	140	----
		Naphthalene	91-20-3	E641A-L	0.319 mg/kg	0.387 mg/kg	82.4	50.0	140	----
		Perylene	198-55-0	E641A-L	0.379 mg/kg	0.387 mg/kg	97.9	50.0	140	----
		Phenanthrene	85-01-8	E641A-L	0.359 mg/kg	0.387 mg/kg	92.8	50.0	140	----
		Pyrene	129-00-0	E641A-L	0.365 mg/kg	0.387 mg/kg	94.3	50.0	140	----
		Quinoline	91-22-5	E641A-L	0.350 mg/kg	0.387 mg/kg	90.3	50.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2096283)										
HA2502193-002	Anonymous	Fluoride	16984-48-8	E235.F	1.02 mg/L	1 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 2096284)										
HA2502193-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.46 mg/L	2.5 mg/L	98.3	75.0	125	----
Anions and Nutrients (QCLot: 2096285)										
HA2502193-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.498 mg/L	0.5 mg/L	99.6	75.0	125	----
Anions and Nutrients (QCLot: 2096286)										
HA2502193-002	Anonymous	Chloride	16887-00-6	E235.Cl	99.2 mg/L	100 mg/L	99.2	75.0	125	----
Anions and Nutrients (QCLot: 2096287)										
HA2502193-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	98.7 mg/L	100 mg/L	98.7	75.0	125	----
Anions and Nutrients (QCLot: 2096292)										
HA2502193-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0206 mg/L	0.02 mg/L	105	70.0	130	----
Anions and Nutrients (QCLot: 2096365)										
HA2502193-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.109 mg/L	0.1 mg/L	109	75.0	125	----
Organic / Inorganic Carbon (QCLot: 2096366)										
HA2502193-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND mg/L	----	ND	70.0	130	----
Total Metals (QCLot: 2096033)										
HA2502194-002	Anonymous	Aluminum, total	7429-90-5	E420	ND mg/L	----	ND	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0521 mg/L	0.05 mg/L	104	70.0	130	----
		Arsenic, total	7440-38-2	E420	ND mg/L	----	ND	70.0	130	----
		Barium, total	7440-39-3	E420	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.00492 mg/L	0.005 mg/L	98.5	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0516 mg/L	0.05 mg/L	103	70.0	130	----
		Boron, total	7440-42-8	E420	0.049 mg/L	0.05 mg/L	97.9	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00534 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, total	7440-70-2	E420	2.34 mg/L	2.5 mg/L	93.8	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00253 mg/L	0.002 mg/L	101	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0130 mg/L	0.012 mg/L	104	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0130 mg/L	0.012 mg/L	104	70.0	130	----
		Copper, total	7440-50-8	E420	0.0130 mg/L	0.012 mg/L	104	70.0	130	----
		Iron, total	7439-89-6	E420	ND mg/L	----	ND	70.0	130	----
		Lead, total	7439-92-1	E420	0.0260 mg/L	0.025 mg/L	104	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0114 mg/L	0.012 mg/L	91.6	70.0	130	----
		Magnesium, total	7439-95-4	E420	2.69 mg/L	2.5 mg/L	107	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	----	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0260 mg/L	0.025 mg/L	104	70.0	130	----
		Phosphorus, total	7723-14-0	E420	0.544 mg/L	0.5 mg/L	109	70.0	130	----
		Potassium, total	7440-09-7	E420	2.43 mg/L	2.5 mg/L	97.2	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.00515 mg/L	0.005 mg/L	103	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 2096033) - continued										
HA2502194-002	Anonymous	Selenium, total	7782-49-2	E420	0.0530 mg/L	0.05 mg/L	106	70.0	130	----
		Silicon, total	7440-21-3	E420	ND mg/L	----	ND	70.0	130	----
		Silver, total	7440-22-4	E420	0.00485 mg/L	0.005 mg/L	97.1	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0124 mg/L	0.012 mg/L	99.3	70.0	130	----
		Sulfur, total	7704-34-9	E420	2.47 mg/L	2.5 mg/L	98.9	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.00487 mg/L	0.005 mg/L	97.5	70.0	130	----
		Thallium, total	7440-28-0	E420	0.0515 mg/L	0.05 mg/L	103	70.0	130	----
		Thorium, total	7440-29-1	E420	0.00472 mg/L	0.005 mg/L	94.4	70.0	130	----
		Tin, total	7440-31-5	E420	0.0256 mg/L	0.025 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0119 mg/L	0.012 mg/L	95.1	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.00489 mg/L	0.005 mg/L	97.8	70.0	130	----
		Uranium, total	7440-61-1	E420	0.000264 mg/L	0 mg/L	105	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0261 mg/L	0.025 mg/L	104	70.0	130	----
		Zinc, total	7440-66-6	E420	0.0246 mg/L	0.025 mg/L	98.6	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.00375 mg/L	0.005 mg/L	75.1	70.0	130	----

Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Metals (QCLot: 2097173)									
QC-2097173-003	RM	Aluminum	7429-90-5	E440	22500 mg/kg	111	70.0	130	----
QC-2097173-003	RM	Antimony	7440-36-0	E440	24.8 mg/kg	99.1	70.0	130	----
QC-2097173-003	RM	Arsenic	7440-38-2	E440	21.2 mg/kg	97.7	70.0	130	----
QC-2097173-003	RM	Barium	7440-39-3	E440	788 mg/kg	108	70.0	130	----
QC-2097173-003	RM	Beryllium	7440-41-7	E440	1.82 mg/kg	104	70.0	130	----
QC-2097173-003	RM	Bismuth	7440-69-9	E440	1.78 mg/kg	85.5	70.0	130	----
QC-2097173-003	RM	Cadmium	7440-43-9	E440	2.15 mg/kg	99.9	70.0	130	----
QC-2097173-003	RM	Calcium	7440-70-2	E440	4900 mg/kg	103	70.0	130	----
QC-2097173-003	RM	Chromium	7440-47-3	E440	56.9 mg/kg	100	70.0	130	----
QC-2097173-003	RM	Cobalt	7440-48-4	E440	32 mg/kg	98.5	70.0	130	----
QC-2097173-003	RM	Copper	7440-50-8	E440	969 mg/kg	107	70.0	130	----
QC-2097173-003	RM	Iron	7439-89-6	E440	32700 mg/kg	103	70.0	130	----
QC-2097173-003	RM	Lead	7439-92-1	E440	919 mg/kg	96.6	70.0	130	----
QC-2097173-003	RM	Lithium	7439-93-2	E440	47.3 mg/kg	100	70.0	130	----
QC-2097173-003	RM	Magnesium	7439-95-4	E440	7780 mg/kg	112	70.0	130	----
QC-2097173-003	RM	Manganese	7439-96-5	E440	8640 mg/kg	106	70.0	130	----
QC-2097173-003	RM	Molybdenum	7439-98-7	E440	25.1 mg/kg	102	70.0	130	----
QC-2097173-003	RM	Nickel	7440-02-0	E440	1000 mg/kg	107	70.0	130	----
QC-2097173-003	RM	Phosphorus	7723-14-0	E440	660 mg/kg	106	70.0	130	----
QC-2097173-003	RM	Potassium	7440-09-7	E440	10800 mg/kg	101	70.0	130	----
QC-2097173-003	RM	Selenium	7782-49-2	E440	1.04 mg/kg	104	60.0	140	----
QC-2097173-003	RM	Silver	7440-22-4	E440	8.98 mg/kg	93.1	70.0	130	----
QC-2097173-003	RM	Sodium	7440-23-5	E440	1770 mg/kg	114	70.0	130	----
QC-2097173-003	RM	Strontium	7440-24-6	E440	41 mg/kg	103	70.0	130	----
QC-2097173-003	RM	Sulfur	7704-34-9	E440	3940 mg/kg	109	50.0	150	----
QC-2097173-003	RM	Thallium	7440-28-0	E440	0.907 mg/kg	96.2	70.0	130	----
QC-2097173-003	RM	Tin	7440-31-5	E440	3.79 mg/kg	100.0	40.0	160	----
QC-2097173-003	RM	Titanium	7440-32-6	E440	2790 mg/kg	105	70.0	130	----
QC-2097173-003	RM	Tungsten	7440-33-7	E440	6.99 mg/kg	# 131	70.0	130	MES
QC-2097173-003	RM	Uranium	7440-61-1	E440	3.97 mg/kg	93.8	70.0	130	----
QC-2097173-003	RM	Vanadium	7440-62-2	E440	66.2 mg/kg	101	70.0	130	----
QC-2097173-003	RM	Zinc	7440-66-6	E440	828 mg/kg	99.8	70.0	130	----
QC-2097173-003	RM	Zirconium	7440-67-7	E440	6.91 mg/kg	119	70.0	130	----

Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).

CERTIFICATE OF ANALYSIS

Work Order	:	**HA2504330**			
Client	:	**Dillon Consulting Limited**	Laboratory	:	ALS Environmental - Halifax
Contact	:	Penny Allen	Account Manager	:	Andrew Martin
Address	:	137 Chain Lake Drive Suite 100 Halifax Nova Scotia Canada B3S 1B3	Address	:	13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	:	902.450.5015 ext. 5001	E-mail	:	andrew.martin@alsglobal.com
Project	:	22-5099	Telephone	:	+1 902 707 4888
PO	:	----	Date Samples Received	:	08-Oct-2025 09:00
C-O-C number	:	----	Date Analysis Commenced	:	10-Oct-2025
Sampler	:	----	Issue Date	:	20-Oct-2025 15:53
Site	:	----			
Quote number	:	Atlantic Canada 2024/2025 SOA			
No. of samples received	:	9			
No. of samples analysed	:	9			

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
David Tremblett	VOC Section Supervisor	VOC, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Jiaxi Wang	Supervisor - Water Chemistry	Inorganics, Dartmouth, Nova Scotia
Jon Fisher	Laboratory Manager - Environmental	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Metals, Waterloo, Ontario
Nik Perkio	Senior Analyst	Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Centralized Prep, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
OWP	Organic water sample contained visible sediment (must be included as part of analysis). Measured concentrations of organic substances in water can be biased high due to presence of sediment.
TMV	Turbidity exceeded upper limit of the nephelometric method. Minimum value reported.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	field	field	field
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		162	34.2	364	289	278
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	<0.6	<0.6	<0.6
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		133	28.0	298	237	228
Colour, apparent	----	E330/WT	2.0	CU		7090	1020	3570	9700	3290
Conductivity	----	E100/WT	1.0	µS/cm		332	92.5	1420	1580	487
Hardness (as CaCO3), dissolved	----	EC100/WT	0.50	mg/L		86.0	21.0	231	505	192
Langelier index (@ 20°C)	----	EC105/WT	0.010	-		-1.79	-2.81	-0.609	-0.503	0.357
Langelier index (@ 4°C)	----	EC105/WT	0.010	-		-2.04	-3.06	-0.856	-0.750	0.108
pH	----	E108/HA	0.10	pH units		6.13	6.44	6.68	6.63	7.63
pH, saturation (@ 20°C)	----	EC105/WT	0.010	pH units		7.92	9.25	7.29	7.13	7.27
pH, saturation (@ 4°C)	----	EC105/WT	0.010	pH units		8.17	9.50	7.54	7.38	7.52
Solids, total dissolved [TDS]	----	E162/HA	10	mg/L		216 DLDS	83 DLDS	850 DLDS	1050 DLDS	278 DLDS
Solids, total suspended [TSS]	----	E160/HA	3.0	mg/L		4560	1080	2060	1400	1590
Turbidity	----	E121/WT	0.10	NTU		>4000 TMV	549	1460	>4000 TMV	958
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		1.91	0.0653	2.42	0.293	1.23
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		21.3	8.95	230 DLDS	142 DLDS	16.2
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.085	0.185	0.140 DLDS	0.132 DLDS	0.201

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Anions and Nutrients										
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		8.58	0.140	3.47	0.793	9.50
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.020	<0.020	<0.100 DLDS	<0.100 DLDS	<0.020
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		<0.0224	<0.0224	<0.112	<0.112	<0.0224
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.050 DLDS	<0.050 DLDS	<0.010
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L		0.0026	0.0774	0.0014	0.0019	0.0015
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		3.23	1.68	3.93	11.3	1.66
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		5.50	4.38	82.2 DLDS	426 DLDS	12.0
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		13.7	0.57	18.6	4.82	5.26
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L		125	<2.50 DLM	30.1	<10.0 DLM	45.4
Ion Balance										
Anion sum	----	EC101/WT	0.10	meq/L		3.38	0.91	14.2	17.6	5.27
Cation sum	----	EC101/WT	0.10	meq/L		4.12	0.89	14.0	17.7	5.41
Ion balance (cations/anions)	----	EC101/WT	0.010	%		122	97.8	98.6	100	103
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0448 DLM	0.0040	0.0256 DLHC	<0.0100 DLHC	<0.0100 DLHC
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00100 DLM	<0.00010	<0.00100 DLHC	<0.00100 DLHC	<0.00100 DLHC
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		<0.00100 DLM	0.00200	<0.00100 DLHC	0.00444 DLHC	<0.00100 DLHC
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0819 DLM	0.00586	0.105 DLHC	0.0424 DLHC	0.135 DLHC
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000200 DLM	<0.000020	<0.000200 DLHC	<0.000200 DLHC	<0.000200 DLHC
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000500 DLM	<0.000050	<0.000500 DLHC	<0.000500 DLHC	<0.000500 DLHC

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.267 DLM	<0.010	0.455 DLHC	0.322 DLHC	0.683 DLHC
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000500 DLM	<0.0000050	<0.0000500 DLHC	<0.0000500 DLHC	<0.0000500 DLHC
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		22.3 DLM	4.29	58.4 DLHC	112 DLHC	61.0 DLHC
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		0.000144 DLM	<0.000010	0.000482 DLHC	0.000107 DLHC	<0.000100 DLHC
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00500 DLM	<0.00050	<0.00500 DLHC	<0.00500 DLHC	<0.00500 DLHC
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00100 DLM	0.00140	<0.00100 DLHC	0.0111 DLHC	<0.00100 DLHC
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		<0.00200 DLM	<0.00020	<0.00200 DLHC	<0.00200 DLHC	<0.00200 DLHC
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		21.8 DLM	0.868	12.6 DLHC	21.7 DLHC	9.86 DLHC
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000500 DLM	<0.000050	<0.000500 DLHC	<0.000500 DLHC	<0.000500 DLHC
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0142 DLM	0.0077	0.0440 DLHC	0.0504 DLHC	0.0102 DLHC
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		7.37 DLM	2.51	20.7 DLHC	54.8 DLHC	9.78 DLHC
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.902 DLM	0.552	0.892 DLHC	6.36 DLHC	0.210 DLHC
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		<0.000500 DLM	0.000376	<0.000500 DLHC	0.00216 DLHC	0.000751 DLHC
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		<0.00500 DLM	0.00084	<0.00500 DLHC	0.0172 DLHC	<0.00500 DLHC
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.500 DLM	0.298	<0.500 DLHC	<0.500 DLHC	<0.500 DLHC
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		6.10 DLM	1.83	33.4 DLHC	16.0 DLHC	13.6 DLHC
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00695 DLM	0.00063	0.0142 DLHC	0.0154 DLHC	0.0184 DLHC
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.00306 DLM	<0.000050	<0.000500 DLHC	<0.000500 DLHC	<0.000500 DLHC
Silicon (as SiO2), dissolved	7440-21-3	EC421.SiO2/WT	0.15	mg/L		27.0	29.1	24.2	28.2	5.18
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		12.6 DLM	13.6	11.3 DLHC	13.2 DLHC	2.42 DLHC

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000100 DLM	<0.000010	<0.000100 DLHC	<0.000100 DLHC	<0.000100 DLHC
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		29.6 DLM	8.46	180 DLHC	142 DLHC	17.6 DLHC
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.202 DLM	0.0520	0.421 DLHC	0.919 DLHC	0.284 DLHC
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		<5.00 DLM	1.37	27.2 DLHC	133 DLHC	<5.00 DLHC
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00200 DLM	<0.00020	<0.00200 DLHC	<0.00200 DLHC	<0.00200 DLHC
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000100 DLM	<0.000010	<0.000100 DLHC	<0.000100 DLHC	<0.000100 DLHC
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00100 DLM	<0.00010	<0.00100 DLHC	<0.00100 DLHC	<0.00100 DLHC
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00100 DLM	<0.00010	<0.00100 DLHC	<0.00100 DLHC	<0.00100 DLHC
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00300 DLM	<0.00030	<0.00300 DLHC	<0.00300 DLHC	<0.00300 DLHC
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		0.00108 DLM	0.00052	0.0155 DLHC	0.00650 DLHC	0.0142 DLHC
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.000163 DLM	0.000022	0.000462 DLHC	0.00179 DLHC	<0.000100 DLHC
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00500 DLM	<0.00050	<0.00500 DLHC	<0.00500 DLHC	<0.00500 DLHC
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0100 DLM	0.0013	<0.0100 DLHC	0.0111 DLHC	<0.0100 DLHC
Zirconium, dissolved	7440-67-7	E421/WT	0.00020	mg/L		<0.00200 DLM	<0.00020	<0.00200 DLHC	<0.00200 DLHC	<0.00200 DLHC
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	Field	Field
Aggregate Organics										
Chemical oxygen demand [COD]	----	E559-L/WT	10	mg/L		298	12	98	60	322
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L		0.0054	0.0019	0.0024	0.0081	0.0044
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	<0.71

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3S ----
					Client sampling date / time	07-Oct-2025 11:45	07-Oct-2025 12:00	07-Oct-2025 10:15	07-Oct-2025 10:30	07-Oct-2025 09:30
						HA2504330-001	HA2504330-002	HA2504330-003	HA2504330-004	HA2504330-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		88.3	89.0	88.6	88.1	87.8
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		98.3	98.5	98.1	98.4	98.2

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	field	field	----
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		10.8	6.3	33.3	288	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	<0.6	<0.6	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	<0.3	<0.3	----
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		8.9	5.2	27.3	236	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Physical Tests										
Colour, apparent	----	E330/WT	2.0	CU		6440	9870	336	6660	----
Conductivity	----	E100/WT	1.0	µS/cm		394	33.1	106	1600	----
Hardness (as CaCO3), dissolved	----	EC100/WT	0.50	mg/L		88.3	5.06	15.3	498	----
Langelier index (@ 20°C)	----	EC105/WT	0.010	-		-2.75	-4.34	-2.11	-0.653	----
Langelier index (@ 4°C)	----	EC105/WT	0.010	-		-3.00	-4.60	-2.36	-0.898	----
pH	----	E108/HA	0.10	pH units		6.37	6.12	7.20	6.50	----
pH, saturation (@ 20°C)	----	EC105/WT	0.010	pH units		9.12	10.46	9.31	7.15	----
pH, saturation (@ 4°C)	----	EC105/WT	0.010	pH units		9.37	10.72	9.56	7.40	----
Solids, total dissolved [TDS]	----	E162/HA	10	mg/L		255 DLDS	35	73 DLDS	1100 DLDS	----
Solids, total suspended [TSS]	----	E160/HA	3.0	mg/L		3960	494	408	2020	----
Turbidity	----	E121/WT	0.10	NTU		>4000 TMV	>4000 TMV	142	3600	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.397	0.0567	0.0623	0.236	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		58.3	6.22	8.04	139 DLDS	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.069	0.026	0.161	0.126 DLDS	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.775	0.120	0.121	1.04	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.020	0.071	<0.020	<0.100 DLDS	----
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		<0.0224	0.0710	<0.0224	<0.112	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.010	<0.050 DLDS	----
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L		<0.0010	<0.0010	0.0036	0.0014	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		5.23	5.26	0.392	7.57	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time: 07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
					HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
					Result	Result	Result	Result	----
Anions and Nutrients									
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	82.5	0.93	10.8	420 DLDS	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L	0.76	<0.50	<0.50	4.83	----
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L	15.9	<5.00 DLM	<2.50 DLM	<10.0 DLM	----
Ion Balance									
Anion sum	----	EC101/WT	0.10	meq/L	3.54	0.30	1.00	17.4	----
Cation sum	----	EC101/WT	0.10	meq/L	3.91	0.30	0.72	17.6	----
Ion balance (cations/anions)	----	EC101/WT	0.010	%	110	100	72.0	101	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L	0.0032	<0.0100 DLHC	0.0012	<0.0100 DLHC	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLHC	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L	0.00478	<0.00100 DLHC	0.00082	0.00577 DLHC	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L	0.0654	0.00189 DLHC	0.00507	0.0411 DLHC	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L	<0.000020	<0.000200 DLHC	0.000040	<0.000200 DLHC	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L	<0.000050	<0.000500 DLHC	<0.000050	<0.000500 DLHC	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L	<0.010	<0.100 DLHC	<0.010	0.303 DLHC	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L	<0.0000050	<0.0000500 DLHC	<0.0000050	<0.0000500 DLHC	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L	21.8	1.30 DLHC	3.81	109 DLHC	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L	0.000436	<0.000100 DLHC	0.000242	<0.000100 DLHC	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L	<0.00050	<0.00500 DLHC	<0.00050	<0.00500 DLHC	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L	0.00025	<0.00100 DLHC	0.00028	0.00890 DLHC	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Dissolved Metals										
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L	<0.00020	0.0600 DLHC	0.00034	<0.00200 DLHC	----	
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L	25.0	<0.100 DLHC	0.440	25.2 DLHC	----	
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L	<0.000050	<0.000500 DLHC	<0.000050	<0.000500 DLHC	----	
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L	0.0256	<0.0100 DLHC	0.0093	0.0448 DLHC	----	
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L	8.22	0.441 DLHC	1.41	54.8 DLHC	----	
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L	1.01	0.0864 DLHC	0.117	6.33 DLHC	----	
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	----	
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L	0.000425	0.000884 DLHC	0.000250	0.00268 DLHC	----	
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L	0.00186	0.0161 DLHC	0.00102	0.0181 DLHC	----	
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L	0.118	<0.500 DLHC	<0.050	<0.500 DLHC	----	
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L	8.08	0.913 DLHC	2.00	16.0 DLHC	----	
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L	0.0120	0.00338 DLHC	0.00382	0.0160 DLHC	----	
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L	<0.000050	<0.000500 DLHC	<0.000050	<0.000500 DLHC	----	
Silicon (as SiO2), dissolved	7440-21-3	EC421.SiO2/WT	0.15	mg/L	32.5	6.24	17.4	27.8	----	
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L	15.2	2.92 DLHC	8.13	13.0 DLHC	----	
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L	<0.000010	0.00315 DLHC	<0.000010	<0.000100 DLHC	----	
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L	22.4	3.86 DLHC	7.89	140 DLHC	----	
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L	0.235	0.0174 DLHC	0.0350	0.920 DLHC	----	
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L	26.9	<5.00 DLHC	3.49	130 DLHC	----	
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L	<0.00020	<0.00200 DLHC	<0.00020	<0.00200 DLHC	----	
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L	<0.000010	<0.000100 DLHC	<0.000010	<0.000100 DLHC	----	

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Dissolved Metals										
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLHC	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLHC	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00300 DLHC	<0.00030	<0.00300 DLHC	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		0.00202	0.452 DLHC	0.00132	0.00799 DLHC	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.000042	<0.000100 DLHC	0.000024	0.00194 DLHC	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00500 DLHC	<0.00050	<0.00500 DLHC	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	<0.0100 DLHC	<0.0010	0.0109 DLHC	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00020	mg/L		<0.00020	<0.00200 DLHC	<0.00020	<0.00200 DLHC	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	Field	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	Field	----
Aggregate Organics										
Chemical oxygen demand [COD]	----	E559-L/WT	10	mg/L		33	24	<10	78	----
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L		0.0026	0.0028	0.0014	0.0073	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	0.88 OWP	0.72 OWP	<0.50	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3D ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	07-Oct-2025 09:40	07-Oct-2025 11:00	07-Oct-2025 11:15	07-Oct-2025 10:30	----
						HA2504330-006	HA2504330-007	HA2504330-008	HA2504330-009	----
						Result	Result	Result	Result	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		88.0	88.6	87.5	87.6	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.8	97.9	98.0	97.5	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **HA2504330**	Page	: 1 of 34
Client	: **Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	: Penny Allen	Account Manager	: Andrew Martin
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth, Nova Scotia Canada B3B 1L2
Telephone	: 902.450.5015 ext. 5001	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 08-Oct-2025 09:00
PO	: ----	Issue Date	: 20-Oct-2025 15:53
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: Atlantic Canada 2024/2025 SOA		
No. of samples received	: 9		
No. of samples analysed	: 9		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Duplicate outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Anions and Nutrients	HA2504330-005	MW25-3S	Kjeldahl nitrogen, total [TKN]	----	E318	20.9 % DUP-H	20%	Duplicate RPD does not meet the DQO for this test.

Result Qualifiers

Qualifier	Description
DUP-H	*Duplicate results outside ALS DQO, due to sample heterogeneity.*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) Dup A	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) MW25-1D	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) MW25-1S	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) MW25-2D	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) MW25-2S	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) MW25-3D	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid) MW25-3S	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid)										
MW25-4D	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)										
Amber glass total (sulfuric acid)										
MW25-4S	E559-L	07-Oct-2025	----	----	----		15-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
Dup A	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
MW25-1D	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
MW25-1S	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
MW25-2D	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
MW25-2S	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
MW25-3D	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid)										
MW25-3S	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) MW25-4D	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) MW25-4S	E562	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Dup A	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-1D	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-1S	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-2D	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-2S	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-3D	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-3S	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-4D	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MW25-4S	E298	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE Dup A	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MW25-1D	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MW25-1S	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MW25-2D	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MW25-2S	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MW25-3D	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MW25-3S	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MW25-4D	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MW25-4S	E235.Cl	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
Dup A	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-1D	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-1S	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-2D	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-2S	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-3D	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-3S	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-4D	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)										
HDPE										
MW25-4S	E378-U	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
Dup A	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MW25-1D	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MW25-1S	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MW25-2D	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MW25-2S	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MW25-3D	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MW25-3S	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Anions and Nutrients : Fluoride in Water by IC										
HDPE MW25-4D	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE MW25-4S	E235.F	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE Dup A	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-1D	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-1S	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-2D	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-2S	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-3D	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-3S	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-4D	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE MW25-4S	E235.NO3	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE Dup A	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MW25-1D	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MW25-1S	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MW25-2D	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MW25-2S	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MW25-3D	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MW25-3S	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	× EHT	14-Oct-2025	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: ✗ = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
MW25-4D	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	✗ EHT	14-Oct-2025	3 days	4 days	✗ EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
MW25-4S	E235.NO2	07-Oct-2025	11-Oct-2025	3 days	4 days	✗ EHT	14-Oct-2025	3 days	4 days	✗ EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
Dup A	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-1D	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-1S	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-2D	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-2S	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-3D	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-3S	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-4D	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MW25-4S	E235.SO4	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	14-Oct-2025	28 days	4 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
Dup A	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MW25-1D	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MW25-1S	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MW25-2D	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MW25-2S	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MW25-3D	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MW25-3S	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid) MW25-4D	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid) MW25-4S	E318	07-Oct-2025	16-Oct-2025	28 days	9 days	✓	16-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) MW25-1D	E372-U	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) MW25-1S	E372-U	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) MW25-4D	E372-U	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) MW25-4S	E372-U	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	17-Oct-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) Dup A	E372-U	07-Oct-2025	15-Oct-2025	28 days	9 days	✓	17-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) MW25-2D	E372-U	07-Oct-2025	15-Oct-2025	28 days	9 days	✓	17-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) MW25-2S	E372-U	07-Oct-2025	15-Oct-2025	28 days	9 days	✓	17-Oct-2025	28 days	9 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MW25-3D	E372-U	07-Oct-2025	15-Oct-2025	28 days	9 days	✓	17-Oct-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MW25-3S	E372-U	07-Oct-2025	15-Oct-2025	28 days	9 days	✓	17-Oct-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
Dup A	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-1D	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-1S	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-2D	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-2S	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-3D	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-3S	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-4D	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MW25-4S	E509	07-Oct-2025	17-Oct-2025	28 days	10 days	✓	17-Oct-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
Dup A	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-1D	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-1S	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-2D	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-2S	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-3D	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-4D	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-4S	E421	07-Oct-2025	10-Oct-2025	180 days	3 days	✓	10-Oct-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MW25-3S	E421	07-Oct-2025	10-Oct-2025	180 days	4 days	✓	10-Oct-2025	180 days	4 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
Dup A	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-1D	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-1S	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-2D	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-2S	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-4D	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-4S	E358-L	07-Oct-2025	12-Oct-2025	28 days	5 days	✓	15-Oct-2025	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-3D	E358-L	07-Oct-2025	12-Oct-2025	28 days	6 days	✓	15-Oct-2025	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MW25-3S	E358-L	07-Oct-2025	12-Oct-2025	28 days	6 days	✓	15-Oct-2025	28 days	6 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
Dup A	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
MW25-1D	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
MW25-1S	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
MW25-2D	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
MW25-2S	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
MW25-3D	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
MW25-3S	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) MW25-4D	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) MW25-4S	E355-L	07-Oct-2025	15-Oct-2025	28 days	8 days	✓	16-Oct-2025	28 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE Dup A	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-1D	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-1S	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-2D	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-2S	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-3D	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-3S	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-4D	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE MW25-4S	E290	07-Oct-2025	11-Oct-2025	14 days	4 days	✓	11-Oct-2025	14 days	4 days	✓
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-1D	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	169 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-1S	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	169 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-4D	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	169 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE Dup A	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	170 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-2D	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	170 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-2S	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	170 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-4S	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	170 hrs	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-3D	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	171 hrs	× EHT
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE MW25-3S	E330	07-Oct-2025	----	----	----		14-Oct-2025	48 hrs	171 hrs	× EHT
Physical Tests : Conductivity in Water										
HDPE Dup A	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-1D	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-1S	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-2D	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-2S	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-3D	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-3S	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE MW25-4D	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE MW25-4S	E100	07-Oct-2025	11-Oct-2025	28 days	4 days	✓	11-Oct-2025	28 days	4 days	✓
Physical Tests : pH by Meter										
HDPE MW25-1D	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	72 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	72 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MW25-1S	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	72 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	72 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE Dup A	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MW25-2D	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MW25-4D	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MW25-4S	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	73 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MW25-2S	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	74 hrs	× EHTR-FM	10-Oct-2025	0.25 hrs	74 hrs	× EHTR-FM

Matrix: **Water**

Evaluation: ✗ = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE MW25-3D	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	74 hrs	✗ EHTR-FM	10-Oct-2025	0.25 hrs	74 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE MW25-3S	E108	07-Oct-2025	10-Oct-2025	0.25 hrs	74 hrs	✗ EHTR-FM	10-Oct-2025	0.25 hrs	74 hrs	✗ EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE Dup A	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-1D	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-1S	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-2D	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-2S	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-3D	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-3S	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Physical Tests : TDS by Gravimetry										
HDPE MW25-4D	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MW25-4S	E162	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE Dup A	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-1D	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-1S	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-2D	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-2S	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-3D	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-3S	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE MW25-4D	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE MW25-4S	E160	07-Oct-2025	----	----	----		14-Oct-2025	7 days	7 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE Dup A	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-1D	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-1S	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-2D	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-2S	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-3D	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-3S	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-4D	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Physical Tests : Turbidity by Nephelometry										
HDPE MW25-4S	E121	07-Oct-2025	----	----	----		11-Oct-2025	3 days	4 days	× EHT
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) Dup A	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MW25-1D	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MW25-1S	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MW25-2D	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MW25-2S	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MW25-3D	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MW25-3S	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
MW25-4D	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
MW25-4S	E611D	07-Oct-2025	13-Oct-2025	14 days	6 days	✓	14-Oct-2025	14 days	6 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2271945	1	19	5.2	5.0	✓
pH by Meter	E108	2269867	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2272275	1	19	5.2	5.0	✓
TSS by Gravimetry	E160	2274063	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	2274064	1	9	11.1	5.2	✓
Chloride in Water by IC	E235.Cl	2271942	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2271939	1	15	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2271941	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2271940	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2271943	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2271946	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2277427	1	16	6.2	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2277426	1	13	7.6	5.0	✓
Colour (Apparent) by Spectrometer	E330	2274670	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2277428	1	17	5.8	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2273089	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2277425	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2271948	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2271458	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2281502	1	13	7.6	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2276995	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2277429	1	16	6.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2273883	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2271945	1	19	5.2	5.0	✓
pH by Meter	E108	2269867	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2272275	1	19	5.2	5.0	✓
TSS by Gravimetry	E160	2274063	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	2274064	1	9	11.1	5.2	✓
Chloride in Water by IC	E235.Cl	2271942	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2271939	1	15	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2271941	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2271940	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2271943	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2271946	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2277427	1	16	6.2	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2277426	2	13	15.3	5.0	✓
Colour (Apparent) by Spectrometer	E330	2274670	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2277428	1	17	5.8	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2273089	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2277425	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2271948	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2271458	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2281502	1	13	7.6	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2276995	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2277429	1	16	6.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2273883	1	20	5.0	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2271945	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	2272275	1	19	5.2	5.0	✓
TSS by Gravimetry	E160	2274063	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	2274064	1	9	11.1	5.2	✓
Chloride in Water by IC	E235.Cl	2271942	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2271939	1	15	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2271941	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2271940	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2271943	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2271946	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2277427	1	16	6.2	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2277426	2	13	15.3	5.0	✓
Colour (Apparent) by Spectrometer	E330	2274670	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2277428	1	17	5.8	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2273089	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2277425	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2271948	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2271458	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2281502	1	13	7.6	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2276995	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2277429	1	16	6.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2273883	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Chloride in Water by IC	E235.Cl	2271942	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2271939	1	15	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2271941	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2271940	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Sulfate in Water by IC	E235.SO4	2271943	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2277427	1	16	6.2	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2277426	1	13	7.6	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2277428	1	17	5.8	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2273089	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2277425	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2271948	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2271458	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2281502	1	13	7.6	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2276995	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2277429	1	16	6.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2273883	1	20	5.0	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Halifax	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Waterloo	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TSS by Gravimetry	E160 ALS Environmental - Halifax	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. 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.
TDS by Gravimetry	E162 ALS Environmental - Halifax	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Chloride in Water by IC	E235.Cl ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Colour (Apparent) by Spectrometer	E330 ALS Environmental - Waterloo	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove carbonate-based Inorganic Carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. Forms of carbon associated with inorganic or organic molecules (e.g. SCN and CN) are included in NPOC if they are not removed by purging under acidic conditions. Notably, NPOC excludes most volatile organic compounds and free cyanide. For samples where the majority of Total Carbon is inorganic, this method provides greater accuracy and reliability versus the TOC by subtraction method (TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Waterloo	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L ALS Environmental - Waterloo	Water	APHA 5220 D (mod)	Samples are analyzed using the closed reflux colourimetric method.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Waterloo	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K3Fe(CN)6) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Waterloo	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Ion Balance using Dissolved Metals	EC101 ALS Environmental - Waterloo	Water	APHA 1030E	Cation Sum, Anion Sum, and Ion Balance are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Dissolved species are used where available. Minor ions are included where data is present. Ion Balance cannot be calculated accurately for waters with very low electrical conductivity (EC).
Saturation Index using Laboratory pH (Ca-D)	EC105 ALS Environmental - Waterloo	Water	APHA 2330B	Langelier Index provides an indication of scale formation potential at a given pH and temperature, and is calculated as per APHA 2330B Saturation Index. Positive values indicate oversaturation with respect to CaCO3. Negative values indicate undersaturation of CaCO3. This calculation uses laboratory pH measurements and provides estimates of Langelier Index at temperatures of 4, 15, 20, 25, 66, and 77°C. Ryznar Stability Index is an alternative index used for scale formation and corrosion potential. If available, Field pH measurements are recommended for best accuracy (test code EC104).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate and Nitrite (as N) (Calculation)	EC235.N+N ALS Environmental - Waterloo	Water	EPA 300.0	Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).
Dissolved Silicon as Silica (Calculation)	EC421.SiO2 ALS Environmental - Waterloo	Water	N/A	Dissolved Silicon (as SiO2) is a calculated parameter. Dissolved Silicon (as SiO2 mg/L) = 2.139 x Dissolved Silicon (mg/L).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Waterloo	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.

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QUALITY CONTROL REPORT

Work Order	: **HA2504330**	Page	: 1 of 17
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	: Penny Allen	Account Manager	: Andrew Martin
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth, Nova Scotia Canada B3B 1L2
Telephone	: 902.450.5015 ext. 5001	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 08-Oct-2025 09:00
PO	: ----	Date Analysis Commenced	: 10-Oct-2025
C-O-C number	: ----	Issue Date	: 20-Oct-2025 15:53
Sampler	: ----		
Site	: ----		
Quote number	: Atlantic Canada 2024/2025 SOA		
No. of samples received	: 9		
No. of samples analysed	: 9		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
David Tremblett	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Jiaxi Wang	Supervisor - Water Chemistry	Halifax Inorganics, Dartmouth, Nova Scotia
Jon Fisher	Laboratory Manager - Environmental	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Centralized Prep, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2269867)											
HA2504144-001	Anonymous	pH	----	E108	0.10	pH units	7.25	7.18	1.04%	4%	----
Physical Tests (QC Lot: 2271945)											
HA2504415-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	1110	1120	0.449%	10%	----
Physical Tests (QC Lot: 2271946)											
HA2504415-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	657	659	0.389%	20%	----
Physical Tests (QC Lot: 2272275)											
HA2504330-001	MW25-1S	Turbidity	----	E121	0.10	NTU	>4000	>4000	0.00%	15%	----
Physical Tests (QC Lot: 2274063)											
HA2504342-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 2274064)											
HA2504330-003	MW25-2S	Solids, total dissolved [TDS]	----	E162	20	mg/L	850	824	3.05%	20%	----
Physical Tests (QC Lot: 2274670)											
HA2504330-001	MW25-1S	Colour, apparent	----	E330	200	CU	7090	7160	0.981%	20%	----
Anions and Nutrients (QC Lot: 2271939)											
WT2529040-001	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.975	0.987	0.012	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2271940)											
WT2529040-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2271941)											
WT2529040-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.050	mg/L	0.116	0.077	0.040	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2271942)											
WT2529040-001	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	<2.50	<2.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2271943)											
WT2529040-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	631	634	0.469%	20%	----
Anions and Nutrients (QC Lot: 2271948)											
HA2504330-001	MW25-1S	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	0.0026	0.0030	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2277425)											
HA2504330-002	MW25-1D	Phosphorus, total	7723-14-0	E372-U	0.0040	mg/L	1.68	1.66	1.28%	20%	----
Anions and Nutrients (QC Lot: 2277426)											
HA2504330-005	MW25-3S	Kjeldahl nitrogen, total [TKN]	----	E318	0.500	mg/L	9.50	11.7	20.9%	20%	DUP-H
Anions and Nutrients (QC Lot: 2277427)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2277427) - continued											
HA2504330-001	MW25-1S	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	1.91	1.93	0.999%	20%	----
Organic / Inorganic Carbon (QC Lot: 2273089)											
HA2504330-001	MW25-1S	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	13.7	13.9	1.20%	20%	----
Organic / Inorganic Carbon (QC Lot: 2277428)											
HA2504330-003	MW25-2S	Carbon, total organic [TOC]	----	E355-L	10.0	mg/L	30.1	30.7	0.55	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2271458)											
HA2504330-001	MW25-1S	Aluminum, dissolved	7429-90-5	E421	0.0100	mg/L	0.0448	0.0489	0.0041	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00100	mg/L	0.0819	0.0857	4.59%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000200	mg/L	<0.000200	<0.000200	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.100	mg/L	0.267	0.235	0.032	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000500	mg/L	<0.0000500	<0.0000500	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.500	mg/L	22.3	22.1	1.19%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000100	mg/L	0.000144	0.000135	0.000009	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00500	mg/L	<0.00500	<0.00500	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.100	mg/L	21.8	21.5	1.28%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0100	mg/L	0.0142	0.0132	0.0010	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0500	mg/L	7.37	7.43	0.771%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00100	mg/L	0.902	0.902	0.0555%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	<0.00500	<0.00500	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.500	mg/L	6.10	6.18	1.30%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00200	mg/L	0.00695	0.00720	0.00025	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000500	mg/L	0.00306	0.00256	0.000501	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.500	mg/L	12.6	12.5	1.19%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.500	mg/L	29.6	30.6	3.51%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00200	mg/L	0.202	0.192	4.90%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2271458) - continued											
HA2504330-001	MW25-1S	Sulfur, dissolved	7704-34-9	E421	5.00	mg/L	<5.00	<5.00	0	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00300	mg/L	<0.00300	<0.00300	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00100	mg/L	0.00108	0.00108	0.000005	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000100	mg/L	0.000163	0.000160	0.000003	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421	0.00500	mg/L	<0.00500	<0.00500	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2281502)											
HA2504330-001	MW25-1S	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 2276995)											
HA2504330-001	MW25-1S	Chemical oxygen demand [COD]	----	E559-L	10	mg/L	298	277	7.36%	20%	----
Aggregate Organics (QC Lot: 2277429)											
HA2504330-004	MW25-2D	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0081	0.0079	0.0002	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2273883)											
HA2504330-001	MW25-1S	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2273883) - continued											
HA2504330-001	MW25-1S	Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----

Qualifiers

Qualifier	*Description*
DUP-H	*Duplicate results outside ALS DQO, due to sample heterogeneity.*

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2271945)						
Conductivity	----	E100	1	µS/cm	1.1	----
Physical Tests (QCLot: 2271946)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 2272275)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2274063)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 2274064)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2274670)						
Colour, apparent	----	E330	2	CU	<2.0	----
Anions and Nutrients (QCLot: 2271939)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2271940)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2271941)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2271942)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2271943)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2271948)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 2277425)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2277426)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2277427)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2281515)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Organic / Inorganic Carbon (QCLot: 2273089)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Organic / Inorganic Carbon (QCLot: 2273089) - continued						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 2277428)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2271458)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2271458) - continued						
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2281502)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Aggregate Organics (QCLot: 2276995)						
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	<10	----
Aggregate Organics (QCLot: 2277429)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 2273883)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2273883) - continued						
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 2269867)									
pH	----	E108	----	pH units	7 pH units	99.7	98.0	102	----
Physical Tests (QCLot: 2271945)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	103	90.0	110	----
Physical Tests (QCLot: 2271946)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	100	85.0	115	----
Physical Tests (QCLot: 2272275)									
Turbidity	----	E121	0.1	NTU	200 NTU	94.5	85.0	115	----
Physical Tests (QCLot: 2274063)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	100	85.0	115	----
Physical Tests (QCLot: 2274064)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	94.0	85.0	115	----
Physical Tests (QCLot: 2274670)									
Colour, apparent	----	E330	2	CU	25 CU	103	85.0	115	----
Anions and Nutrients (QCLot: 2271939)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 2271940)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2271941)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 2271942)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 2271943)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 2271948)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	101	80.0	120	----
Anions and Nutrients (QCLot: 2277425)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	99.0	80.0	120	----
Anions and Nutrients (QCLot: 2277426)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	110	75.0	125	----
Anions and Nutrients (QCLot: 2277427)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2281515)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	101	75.0	125	----
Organic / Inorganic Carbon (QCLot: 2273089)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	94.7	80.0	120	----
Organic / Inorganic Carbon (QCLot: 2277428)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	106	80.0	120	----
Dissolved Metals (QCLot: 2271458)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	102	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	91.0	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	100	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	99.1	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	92.3	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	96.0	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	90.6	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	93.8	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	93.1	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	99.1	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	95.2	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	93.9	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	94.2	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	94.9	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	95.6	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	93.2	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	104	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	96.5	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	93.1	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	94.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	97.6	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	99.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	94.2	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	96.3	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	98.4	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	96.6	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	98.2	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2271458) - continued									
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	94.6	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	95.0	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	94.5	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	92.5	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	96.1	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	95.1	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	95.8	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	96.4	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	95.2	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	96.2	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	92.3	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	97.1	80.0	120	----
Aggregate Organics (QCLot: 2276995)									
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	100 mg/L	103	85.0	115	----
Aggregate Organics (QCLot: 2277429)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	99.8	85.0	115	----
Volatile Organic Compounds (QCLot: 2273883)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	105	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	98.4	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	100.0	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	72.8	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	88.0	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	90.2	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	96.9	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	92.3	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	87.0	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	74.9	60.0	140	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2273883) - continued									
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	99.7	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	99.3	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	95.7	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	99.7	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	91.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	92.1	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	96.0	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	76.5	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	98.3	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	78.7	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	91.9	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	92.8	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	97.0	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	91.9	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	91.6	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	93.6	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	90.4	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	92.8	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	94.0	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	97.0	70.0	130	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2271939)										
WT2529040-001	Anonymous	Fluoride	16984-48-8	E235.F	5.28 mg/L	5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 2271940)										
WT2529040-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	12.1 mg/L	12.5 mg/L	96.6	75.0	125	----
Anions and Nutrients (QCLot: 2271941)										
WT2529040-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	2.55 mg/L	2.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 2271942)										
WT2529040-001	Anonymous	Chloride	16887-00-6	E235.Cl	503 mg/L	500 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 2271943)										
WT2529040-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2271948)										
HA2504330-001	MW25-1S	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0200 mg/L	0.02 mg/L	102	70.0	130	----
Anions and Nutrients (QCLot: 2277425)										
HA2504330-002	MW25-1D	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 2277426)										
HA2504330-005	MW25-3S	Kjeldahl nitrogen, total [TKN]	----	E318	26.1 mg/L	25 mg/L	104	70.0	130	----
Anions and Nutrients (QCLot: 2277427)										
HA2504330-001	MW25-1S	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Organic / Inorganic Carbon (QCLot: 2273089)										
HA2504330-001	MW25-1S	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2277428)										
HA2504330-003	MW25-2S	Carbon, total organic [TOC]	----	E355-L	ND mg/L	----	ND	70.0	130	----
Dissolved Metals (QCLot: 2271458)										
HA2504330-001	MW25-1S	Aluminum, dissolved	7429-90-5	E421	0.0982 mg/L	0.1 mg/L	98.2	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0497 mg/L	0.05 mg/L	99.3	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0624 mg/L	0.05 mg/L	125	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00476 mg/L	0.005 mg/L	95.3	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0426 mg/L	0.05 mg/L	85.2	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00492 mg/L	0.005 mg/L	98.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00255 mg/L	0.002 mg/L	102	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0124 mg/L	0.012 mg/L	98.9	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2271458) - continued										
HA2504330-001	MW25-1S	Cobalt, dissolved	7440-48-4	E421	0.0120 mg/L	0.012 mg/L	95.7	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0112 mg/L	0.012 mg/L	90.0	70.0	130	----
		Iron, dissolved	7439-89-6	E421	ND mg/L	----	ND	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0228 mg/L	0.025 mg/L	91.2	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	ND mg/L	----	ND	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0123 mg/L	0.012 mg/L	98.6	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0237 mg/L	0.025 mg/L	95.0	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.640 mg/L	0.5 mg/L	128	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0522 mg/L	0.05 mg/L	104	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00445 mg/L	0.005 mg/L	88.9	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.76 mg/L	2.5 mg/L	111	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00511 mg/L	0.005 mg/L	102	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0471 mg/L	0.05 mg/L	94.2	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00448 mg/L	0.005 mg/L	89.5	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0247 mg/L	0.025 mg/L	98.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0124 mg/L	0.012 mg/L	99.2	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00488 mg/L	0.005 mg/L	97.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.000225 mg/L	0 mg/L	90.0	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0248 mg/L	0.025 mg/L	99.4	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0267 mg/L	0.025 mg/L	107	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00494 mg/L	0.005 mg/L	98.8	70.0	130	----
Dissolved Metals (QCLot: 2281502)										
HA2504330-002	MW25-1D	Mercury, dissolved	7439-97-6	E509	0.000101 mg/L	0 mg/L	101	70.0	130	----
Aggregate Organics (QCLot: 2276995)										
HA2504330-001	MW25-1S	Chemical oxygen demand [COD]	----	E559-L	ND mg/L	----	ND	75.0	125	----
Aggregate Organics (QCLot: 2277429)										
HA2504330-004	MW25-2D	Phenols, total (4AAP)	----	E562	0.0198 mg/L	0.02 mg/L	99.2	75.0	125	----
Volatile Organic Compounds (QCLot: 2273883)										
HA2504330-001	MW25-1S	Acetone	67-64-1	E611D	117 µg/L	100 µg/L	117	60.0	140	----
		Benzene	71-43-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Bromoform	75-25-2	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		Bromomethane	74-83-9	E611D	83.6 µg/L	100 µg/L	83.6	60.0	140	----
		Carbon disulfide	75-15-0	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	90.2 µg/L	100 µg/L	90.2	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2273883) - continued										
HA2504330-001	MW25-1S	Chlorobenzene	108-90-7	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Chloroethane	75-00-3	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Chloroform	67-66-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Chloromethane	74-87-3	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	122 µg/L	100 µg/L	122	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloromethane	75-09-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	99.5 µg/L	100 µg/L	99.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	99.2 µg/L	100 µg/L	99.2	60.0	140	----
		Ethylbenzene	100-41-4	E611D	95.4 µg/L	100 µg/L	95.4	60.0	140	----
		Hexane, n-	110-54-3	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	93 µg/L	100 µg/L	93.0	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	117 µg/L	100 µg/L	117	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	98 µg/L	100 µg/L	97.8	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Styrene	100-42-5	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	91.9 µg/L	100 µg/L	91.9	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Toluene	108-88-3	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		Trichloroethylene	79-01-6	E611D	96.0 µg/L	100 µg/L	96.0	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Vinyl chloride	75-01-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	188 µg/L	200 µg/L	94.1	60.0	140	----
		Xylene, o-	95-47-6	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----

CERTIFICATE OF ANALYSIS

Work Order	:	**HA2601051**		
Client	:	**Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	:	Bailey Milos	Account Manager	: Marie Muise
Address	:	137 Chain Lake Drive Suite 100 Halifax Nova Scotia Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	:	----	E-mail	: marie.muise@alsglobal.com
Project	:	22-5099	Telephone	: +1 902 707 4888
PO	:	----	Date Samples Received	: 31-Mar-2026 09:00
C-O-C number	:	CA202600001152_P-CA202600006225	Date Analysis Commenced	: 01-Apr-2026
Sampler	:	----	Issue Date	: 08-Apr-2026 19:03
Site	:	----		
Quote number	:	Atlantic Canada 2024-2026 SOA		
No. of samples received	:	9		
No. of samples analysed	:	9		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	VOC, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Inorganics, Dartmouth, Nova Scotia
Jon Fisher	Laboratory Manager - Environmental	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Metals, Waterloo, Ontario
Nik Perkio	Senior Analyst	Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	Description
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).
TMV	Turbidity exceeded upper limit of the nephelometric method. Minimum value reported.

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	field	field	field
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		122	44.7	477	329	1.6
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	<0.6	<0.6	<0.6
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		100	36.6	391	270	1.3
Colour, apparent	----	E330/WT	2.0	CU		3790	2210	9500	6400	14000
Conductivity	----	E100/WT	1.0	µS/cm		237	101	1490	1600	364
Hardness (as CaCO3), dissolved	----	EC100/WT	0.50	mg/L		59.1	22.7	659	511	87.3
Langelier index (@ 20°C)	----	EC105/WT	0.010	-		-1.02	-2.27	0.383	-0.076	-4.99
Langelier index (@ 4°C)	----	EC105/WT	0.010	-		-1.27	-2.52	0.137	-0.322	-5.25
pH	----	E108/WT	0.10	pH units		7.17	6.88	7.12	6.99	4.90
pH, saturation (@ 20°C)	----	EC105/WT	0.010	pH units		8.19	9.15	6.74	7.07	9.89
pH, saturation (@ 4°C)	----	EC105/WT	0.010	pH units		8.44	9.40	6.98	7.31	10.15
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L		171 DLDS	162 DLDS	1170 DLDS	1150 DLDS	940 DLDS
Solids, total suspended [TSS]	----	E160/HA	3.0	mg/L		5580	1040	34700	3720	51600
Turbidity	----	E121/WT	0.10	NTU		1700	697	>4000 TMV	>4000 TMV	>4000 TMV
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.829	0.0488	0.754	0.174	0.467
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		17.0	7.30	28.1 DLDS	124 DLDS	54.9
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.077	0.216	0.108 DLDS	0.128 DLDS	0.063

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Anions and Nutrients										
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		2.92	0.183	1.71	1.24	2.53
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.020	<0.020	<0.100 DLDS	<0.100 DLDS	<0.020
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		<0.022	<0.022	<0.11	<0.11	<0.022
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.050 DLDS	<0.050 DLDS	<0.010
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L		<0.0010	0.167	<0.0010	<0.0100 DLM	<0.0050 DLM
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		2.90	1.65	12.9	3.34	28.8
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		1.55	3.15	440 DLDS	401 DLDS	72.8
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		5.40	0.93	7.84	5.23	1.18
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L		40.9	<10.0 DLM	13.6	29.5	41.7
Ion Balance										
Anion sum	----	EC101/WT	0.10	meq/L		2.51	1.01	17.8	17.2	3.09
Cation sum	----	EC101/WT	0.10	meq/L		3.00	0.98	17.9	17.8	3.82
Ion balance (cations/anions)	----	EC101/WT	0.010	%		120	97.0	101	103	124
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0112	0.0167	0.0068	0.0033	0.0064
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00108	0.00190	0.00118	0.00551	0.00866
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0369	0.00596	0.104	0.0234	0.0644
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		0.000047	<0.000020	0.000089	0.000032	<0.000020
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.074	<0.010	0.850	0.367	<0.010
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		15.3	4.57	175	118	21.8
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		0.000060	0.000016	0.000168	0.000098	0.000456
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.00060	0.00069	0.00021	0.0147	0.00043
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		<0.00020	0.00061	<0.00020	0.00089	<0.00020
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		23.8	0.304	18.3	11.1	22.5
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	0.000066	<0.000050
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0112	0.0094	0.0435	0.0524	0.0259
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		5.08	2.75	54.0	52.6	7.98
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.668	0.491	2.79	6.09	1.02
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.000315	0.000497	0.000279	0.000387	0.000425
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00280	0.00057	0.00385	0.00593	0.00397
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		0.137	0.279	0.178	0.151	0.130
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		4.13	2.00	50.5	17.2	8.08
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00436	0.00064	0.00938	0.00635	0.0115
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.000104	<0.000050	0.000168	<0.000050	<0.000050
Silicon (as SiO2), dissolved	7440-21-3	EC421.SiO2/WT	0.15	mg/L		23.1	33.2	19.2	30.6	34.0
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		10.8	15.5	8.98	14.3	15.9

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		17.8	10.1	61.4	149	22.6
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.133	0.0525	0.914	0.936	0.226
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		0.70	1.01	154	151	24.6
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	0.00050	<0.00030	<0.00030	<0.00030
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		0.00112	0.00124	0.0158	0.00115	0.00138
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.000109	0.000016	0.0297	0.00245	0.000028
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		0.0016	0.0029	0.0017	0.0097	0.0021
Zirconium, dissolved	7440-67-7	E421/WT	0.00020	mg/L		<0.00020	<0.00020	0.00022	<0.00020	<0.00020
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	Field	Field
Aggregate Organics										
Chemical oxygen demand [COD]	----	E559-L/WT	10	mg/L		135	20	87	60	262
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	<0.71

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-1S ----	MW25-1D ----	MW25-2S ----	MW25-2D ----	MW25-3D ----
					Client sampling date / time	30-Mar-2026 16:10	30-Mar-2026 14:55	30-Mar-2026 14:30	30-Mar-2026 15:30	30-Mar-2026 11:20
						HA2601051-001	HA2601051-002	HA2601051-003	HA2601051-004	HA2601051-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		98.2	97.7	98.8	98.1	98.1
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		101	100	101	101	101

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
						HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
						Result	Result	Result	Result	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	field	field	----
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		254	6.2	23.2	5.4	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	<0.6	<0.6	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	<0.3	<0.3	----
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		208	5.1	19.0	4.4	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
Client sample ID									
Client sampling date / time					30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
					HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
					Result	Result	Result	Result	----
Physical Tests									
Colour, apparent	----	E330/WT	2.0	CU	788	2590	5490	8790	----
Conductivity	----	E100/WT	1.0	µS/cm	427	32.0	62.3	31.0	----
Hardness (as CaCO3), dissolved	----	EC100/WT	0.50	mg/L	174	4.41	11.1	4.36	----
Langelier index (@ 20°C)	----	EC105/WT	0.010	-	0.417	-4.19	-2.82	-4.65	----
Langelier index (@ 4°C)	----	EC105/WT	0.010	-	0.168	-4.44	-3.08	-4.90	----
pH	----	E108/WT	0.10	pH units	7.77	6.33	6.80	6.02	----
pH, saturation (@ 20°C)	----	EC105/WT	0.010	pH units	7.35	10.52	9.62	10.67	----
pH, saturation (@ 4°C)	----	EC105/WT	0.010	pH units	7.60	10.77	9.88	10.92	----
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L	264 DLDS	52 DLDS	92 DLDS	217 DLDS	----
Solids, total suspended [TSS]	----	E160/HA	3.0	mg/L	509	12300	9480	12800	----
Turbidity	----	E121/WT	0.10	NTU	159	2130	>4000 TMV	>4000 TMV	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L	0.834	0.0169	0.0303	0.0142	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L	12.5	5.23	4.82	5.17	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L	0.140	<0.020	0.045	<0.020	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L	1.88	0.326	0.595	0.278	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L	<0.020	0.288	0.293	0.257	----
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L	<0.022	0.288	0.293	0.257	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	----
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L	0.0014	0.0025	0.0112	0.0038	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L	0.206	5.75	3.74	5.18	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
						HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
						Result	Result	Result	Result	----
Anions and Nutrients										
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		14.5	0.75	4.07	0.76	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		5.25	0.82	1.39	0.66	----
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L		19.8	<10.0 DLM	<10.0 DLM	<10.0 DLM	----
Ion Balance										
Anion sum	----	EC101/WT	0.10	meq/L		4.82	0.29	0.62	0.27	----
Cation sum	----	EC101/WT	0.10	meq/L		4.82	0.26	0.56	0.26	----
Ion balance (cations/anions)	----	EC101/WT	0.010	%		100	89.7	90.3	96.3	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0101	0.0354	0.0099	0.0123	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00025	<0.00010	0.00043	<0.00010	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.120	0.00300	0.00258	0.00274	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	0.000022	<0.000020	0.000024	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.500	<0.010	<0.010	<0.010	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000050	0.0000307	<0.0000050	0.0000282	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		55.1	1.21	2.72	1.19	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		0.000030	0.000064	0.000020	0.000057	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00010	0.00063	0.00035	0.00067	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
Client sampling date / time					30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
					HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
					Result	Result	Result	Result	----
Dissolved Metals									
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L	0.00022	0.0507	0.00041	0.0513	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L	8.03	0.031	<0.010	<0.010	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L	0.0130	<0.0010	0.0051	<0.0010	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L	8.91	0.338	1.04	0.336	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L	0.156	0.0434	0.0330	0.0484	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L	0.000537	0.000170	0.000380	0.000173	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L	0.00090	0.00750	0.00203	0.00811	----
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L	11.9	0.683	1.38	0.641	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L	0.0136	0.00223	0.00069	0.00228	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	----
Silicon (as SiO2), dissolved	7440-21-3	EC421.SiO2/WT	0.15	mg/L	3.76	4.36	13.5	4.17	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L	1.76	2.04	6.29	1.95	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L	<0.000010	0.00218	<0.000010	0.00201	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L	15.5	3.42	6.86	3.42	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L	0.242	0.0158	0.0224	0.0158	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L	4.82	<0.50	1.23	<0.50	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time: 30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
					HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
					Result	Result	Result	Result	----
Dissolved Metals									
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L	<0.00010	<0.00010	0.00024	<0.00010	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L	<0.00030	0.00113	<0.00030	0.00030	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L	0.00618	0.0926	0.0173	0.0892	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L	0.000071	0.000053	0.000032	0.000052	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L	0.0019	0.0057	0.0011	0.0056	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	----
Dissolved mercury filtration location	----	EP509/WT	-	-	Field	Field	Field	Field	----
Dissolved metals filtration location	----	EP421/WT	-	-	Field	Field	Field	Field	----
Aggregate Organics									
Chemical oxygen demand [COD]	----	E559-L/WT	10	mg/L	63	26	22	43	----
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Volatile Organic Compounds									
Acetone	67-64-1	E611D/WT	20	µg/L	<20	<20	<20	<20	----
Benzene	71-43-2	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L	<0.20	<0.20	<0.20	<0.20	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
Client sampling date / time					30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
					HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
					Result	Result	Result	Result	----
Volatile Organic Compounds									
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L	<0.20	<0.20	<0.20	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L	<0.71	<0.71	<0.71	<0.71	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L	<0.30	<0.30	<0.30	<0.30	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L	<0.30	<0.30	<0.30	<0.30	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
						HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MW25-3S ----	MW25-4S ----	MW25-4D ----	Dup A ----	----
					Client sampling date / time	30-Mar-2026 12:30	30-Mar-2026 12:45	30-Mar-2026 13:10	30-Mar-2026 12:45	----
						HA2601051-006	HA2601051-007	HA2601051-008	HA2601051-009	----
						Result	Result	Result	Result	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		97.1	98.1	97.0	97.4	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		100	101	99.9	100.0	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

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Quality Control Interpretive Report

Work Order	:	**HA2601051**		
Client	:	Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	:	Bailey Milos	Account Manager	: Marie Muise
Address	:	137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	:	----	Telephone	: +1 902 707 4888
Project	:	22-5099	Date Samples Received	: 31-Mar-2026 09:00
PO	:	----	Issue Date	: 08-Apr-2026 19:03
C-O-C number	:	CA202600001152_P-CA202600006225		
Sampler	:	----		
Site	:	----		
Quote number	:	Atlantic Canada 2024-2026 SOA		
No. of samples received	:	9		
No. of samples analysed	:	9		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- Method Blank value outliers occur - please see following pages for full details.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix :**Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result		Limits	Comment
Method Blank (MB) Values									
Physical Tests	QC-MRG2-2521460-001	----	Conductivity	----	E100	2.7 µS/cm	B	2 µS/cm	Blank result exceeds permitted value
Anions and Nutrients	QC-2523156--001	----	Kjeldahl nitrogen, total [TKN]	----	E318	0.054 mg/L	B	0.05 mg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
B	*Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and/or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)												
Amber glass total (sulfuric acid)												
MW25-1S	001	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	2 days	✓
MW25-1D	002	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	2 days	✓
MW25-2S	003	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	2 days	✓
MW25-2D	004	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	2 days	✓
MW25-3D	005	2526115	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	3 days	✓
MW25-3S	006	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	3 days	✓
MW25-4S	007	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	3 days	✓
MW25-4D	008	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	3 days	✓
Dup A	009	2522958	E559-L	30-Mar-2026	----	----	----		02-Apr-2026	28 days	3 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry												
Amber glass total (sulfuric acid)												
MW25-1S	001	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-1D	002	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry												
Amber glass total (sulfuric acid)												
MW25-2S	003	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2D	004	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3D	005	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3S	006	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4S	007	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4D	008	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup A	009	2523158	E562	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence												
Amber glass total (sulfuric acid)												
MW25-1S	001	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-1D	002	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2S	003	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2D	004	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3D	005	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3S	006	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4S	007	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4D	008	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup A	009	2523159	E298	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC												
HDPE												
MW25-1S	001	2521489	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-1D	002	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2S	003	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2D	004	2521489	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-3D	005	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-3S	006	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4S	007	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4D	008	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Dup A	009	2521455	E235.Cl	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)												
HDPE												
MW25-1S	001	2521485	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
MW25-1D	002	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
MW25-2S	003	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
MW25-2D	004	2521485	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
MW25-3D	005	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
MW25-3S	006	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
MW25-4S	007	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)												
HDPE												
MW25-4D	008	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
Dup A	009	2521463	E378-U	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	06-Apr-2026	3 days	7 days	× EHT
Anions and Nutrients : Fluoride in Water by IC												
HDPE												
MW25-1S	001	2521486	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-1D	002	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2S	003	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2D	004	2521486	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-3D	005	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-3S	006	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4S	007	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4D	008	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Dup A	009	2521452	E235.F	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC												
HDPE												
MW25-1S	001	2521487	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-1D	002	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-2S	003	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC												
HDPE												
MW25-2D	004	2521487	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-3D	005	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	3 days	✓
MW25-3S	006	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-4S	007	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-4D	008	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
Dup A	009	2521453	E235.NO3	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC												
HDPE												
MW25-1S	001	2521488	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-1D	002	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-2S	003	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-2D	004	2521488	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-3D	005	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	3 days	✓
MW25-3S	006	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-4S	007	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
MW25-4D	008	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓
Dup A	009	2521454	E235.NO2	30-Mar-2026	01-Apr-2026	3 days	2 days	✓	02-Apr-2026	3 days	2 days	✓

Matrix: Water

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Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC												
HDPE												
MW25-1S	001	2521490	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-1D	002	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2S	003	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2D	004	2521490	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-3D	005	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-3S	006	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4S	007	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4D	008	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Dup A	009	2521456	E235.SO4	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)												
Amber glass total (sulfuric acid)												
MW25-1S	001	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-1D	002	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2S	003	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2D	004	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3D	005	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3S	006	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4S	007	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓

Matrix: Water

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Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)												
Amber glass total (sulfuric acid)												
MW25-4D	008	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
Dup A	009	2523156	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)												
Amber glass total (sulfuric acid)												
MW25-1S	001	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-1D	002	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-2S	003	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-2D	004	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-3D	005	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-3S	006	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-4S	007	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
MW25-4D	008	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Dup A	009	2523157	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS												
Glass vial dissolved (hydrochloric acid)												
MW25-1S	001	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-1D	002	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2S	003	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-2D	004	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓

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Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Mercury in Water by CVAAS												
Glass vial dissolved (hydrochloric acid)												
MW25-3D	005	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-3S	006	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4S	007	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-4D	008	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Dup A	009	2521283	E509	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS												
HDPE dissolved (nitric acid)												
MW25-1S	001	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	1 days	✓	01-Apr-2026	180 days	1 days	✓
MW25-1D	002	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	1 days	✓	01-Apr-2026	180 days	1 days	✓
MW25-2S	003	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	2 days	✓	01-Apr-2026	180 days	2 days	✓
MW25-2D	004	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	1 days	✓	01-Apr-2026	180 days	1 days	✓
MW25-3D	005	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	2 days	✓	01-Apr-2026	180 days	2 days	✓
MW25-3S	006	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	2 days	✓	01-Apr-2026	180 days	2 days	✓
MW25-4S	007	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	2 days	✓	01-Apr-2026	180 days	2 days	✓
MW25-4D	008	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	2 days	✓	01-Apr-2026	180 days	2 days	✓
Dup A	009	2521352	E421	30-Mar-2026	01-Apr-2026	180 days	2 days	✓	01-Apr-2026	180 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)												
Amber glass - dissolved (field filtered/sulfuric acid)												
MW25-1S	001	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	06-Apr-2026	28 days	7 days	✓

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					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)												
Amber glass - dissolved (field filtered/sulfuric acid)												
MW25-1D	002	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2S	003	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2D	004	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	2 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3D	005	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3S	006	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4S	007	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4D	008	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup A	009	2522515	E358-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)												
Amber glass total (sulfuric acid)												
MW25-1S	001	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-1D	002	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2S	003	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-2D	004	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3D	005	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-3S	006	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4S	007	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
MW25-4D	008	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓

Matrix: Water

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Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)												
Amber glass total (sulfuric acid)												
Dup A	009	2523160	E355-L	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Physical Tests : Alkalinity Species by Titration												
HDPE												
MW25-1S	001	2521492	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-1D	002	2521461	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
MW25-2S	003	2521461	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
MW25-2D	004	2521492	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-3D	005	2521461	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
MW25-3S	006	2521461	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
MW25-4S	007	2521461	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
MW25-4D	008	2521461	E290	30-Mar-2026	01-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
Dup A	009	2521461	E290	30-Mar-2026	04-Apr-2026	14 days	5 days	✓	02-Apr-2026	14 days	3 days	✓
Physical Tests : Colour (Apparent) by Spectrometer												
HDPE												
MW25-1S	001	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	47 hrs	✓
MW25-1D	002	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	48 hrs	✓
MW25-2S	003	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	48 hrs	✓
MW25-2D	004	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	47 hrs	✓

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					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : Colour (Apparent) by Spectrometer												
HDPE												
MW25-3D	005	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	51 hrs	× EHT
MW25-3S	006	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	50 hrs	× EHT
MW25-4S	007	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	50 hrs	× EHT
MW25-4D	008	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	50 hrs	× EHT
Dup A	009	2521495	E330	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	50 hrs	× EHT
Physical Tests : Conductivity in Water												
HDPE												
MW25-1S	001	2521491	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-1D	002	2521460	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-2S	003	2521460	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-2D	004	2521491	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	2 days	✓
MW25-3D	005	2521460	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-3S	006	2521460	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-4S	007	2521460	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
MW25-4D	008	2521460	E100	30-Mar-2026	01-Apr-2026	28 days	2 days	✓	02-Apr-2026	28 days	3 days	✓
Dup A	009	2521460	E100	30-Mar-2026	04-Apr-2026	28 days	5 days	✓	02-Apr-2026	28 days	3 days	✓

Matrix: Water

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Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter												
HDPE												
MW25-1S	001	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	52 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	140 hrs	× EHTR-FM
MW25-1D	002	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	52 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	141 hrs	× EHTR-FM
MW25-2S	003	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	52 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	141 hrs	× EHTR-FM
MW25-2D	004	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	53 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	140 hrs	× EHTR-FM
MW25-3D	005	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	55 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	144 hrs	× EHTR-FM
MW25-3S	006	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	54 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	143 hrs	× EHTR-FM
MW25-4S	007	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	54 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	143 hrs	× EHTR-FM
MW25-4D	008	2524814	E108	30-Mar-2026	01-Apr-2026	0.25 hrs	53 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	143 hrs	× EHTR-FM
Dup A	009	2524814	E108	30-Mar-2026	04-Apr-2026	0.25 hrs	123 hrs	× EHTR-FM	05-Apr-2026	0.25 hrs	143 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry												
HDPE												
MW25-1S	001	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-1D	002	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-2S	003	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-2D	004	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓

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Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry												
HDPE												
MW25-3D	005	2526075	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-3S	006	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-4S	007	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-4D	008	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Dup A	009	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Physical Tests : TSS by Gravimetry												
HDPE												
MW25-1S	001	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-1D	002	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-2S	003	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-2D	004	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-3D	005	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-3S	006	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-4S	007	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
MW25-4D	008	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Dup A	009	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Physical Tests : Turbidity by Nephelometry												
HDPE												
MW25-1S	001	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	1 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry												
HDPE												
MW25-1D	002	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	1 days	✓
MW25-2S	003	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	2 days	✓
MW25-2D	004	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	1 days	✓
MW25-3D	005	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	2 days	✓
MW25-3S	006	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	2 days	✓
MW25-4S	007	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	2 days	✓
MW25-4D	008	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	2 days	✓
Dup A	009	2521393	E121	30-Mar-2026	----	----	----		01-Apr-2026	3 days	2 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS												
Glass vial (sodium bisulfate)												
MW25-1S	001	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-1D	002	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-2S	003	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-2D	004	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-3D	005	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	3 days	✓
MW25-3S	006	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-4S	007	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓
MW25-4D	008	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method					Extraction / Preparation				Analysis			
Container						Holding Times				Holding Times		
Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Preparation Date	Rec	Actual	Eval	Analysis Date	Rec	Actual	Eval
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS												
Glass vial (sodium bisulfate)												
Dup A	009	2522426	E611D	30-Mar-2026	02-Apr-2026	14 days	2 days	✓	02-Apr-2026	14 days	2 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2521491	2	29	6.9	5.0	✓
pH by Meter	E108	2524814	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2521393	1	20	5.0	5.0	✓
TSS by Gravimetry	E160	2525949	1	17	5.9	5.0	✓
TDS by Gravimetry	E162	2526080	2	38	5.3	5.0	✓
Chloride in Water by IC	E235.Cl	2521489	2	29	6.9	5.0	✓
Fluoride in Water by IC	E235.F	2521486	2	26	7.7	5.0	✓
Nitrite in Water by IC	E235.NO2	2521488	2	30	6.7	5.0	✓
Nitrate in Water by IC	E235.NO3	2521487	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2521490	2	29	6.9	5.0	✓
Alkalinity Species by Titration	E290	2521492	2	32	6.2	5.0	✓
Ammonia by Fluorescence	E298	2523159	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2523156	2	18	11.1	5.0	✓
Colour (Apparent) by Spectrometer	E330	2521495	1	12	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2523160	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2522515	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2523157	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2521485	2	36	5.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2521352	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2521283	1	20	5.0	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2522958	2	38	5.3	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2523158	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2522426	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2521491	2	29	6.9	5.0	✓
pH by Meter	E108	2524814	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2521393	1	20	5.0	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	2525949	1	17	5.9	5.0	✓
TDS by Gravimetry	E162	2526080	2	38	5.3	5.0	✓
Chloride in Water by IC	E235.Cl	2521489	2	29	6.9	5.0	✓
Fluoride in Water by IC	E235.F	2521486	2	26	7.7	5.0	✓
Nitrite in Water by IC	E235.NO2	2521488	2	30	6.7	5.0	✓
Nitrate in Water by IC	E235.NO3	2521487	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2521490	2	29	6.9	5.0	✓
Alkalinity Species by Titration	E290	2521492	2	32	6.2	5.0	✓
Ammonia by Fluorescence	E298	2523159	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2523156	3	18	16.7	5.0	✓
Colour (Apparent) by Spectrometer	E330	2521495	1	12	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2523160	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2522515	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2523157	2	20	10.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2521485	2	36	5.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2521352	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2521283	1	20	5.0	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2522958	2	38	5.3	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2523158	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2522426	1	20	5.0	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2521491	2	29	6.9	5.0	✓
Turbidity by Nephelometry	E121	2521393	1	20	5.0	5.0	✓
TSS by Gravimetry	E160	2525949	1	17	5.9	5.0	✓
TDS by Gravimetry	E162	2526080	2	38	5.3	5.0	✓
Chloride in Water by IC	E235.Cl	2521489	2	29	6.9	5.0	✓
Fluoride in Water by IC	E235.F	2521486	2	26	7.7	5.0	✓
Nitrite in Water by IC	E235.NO2	2521488	2	30	6.7	5.0	✓
Nitrate in Water by IC	E235.NO3	2521487	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2521490	2	29	6.9	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Method Blanks (MB)							
Alkalinity Species by Titration	E290	2521492	2	32	6.2	5.0	✓
Ammonia by Fluorescence	E298	2523159	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2523156	3	18	16.7	5.0	✓
Colour (Apparent) by Spectrometer	E330	2521495	1	12	8.3	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2523160	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2522515	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2523157	2	20	10.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2521485	2	36	5.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2521352	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2521283	1	20	5.0	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2522958	2	38	5.3	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2523158	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2522426	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Chloride in Water by IC	E235.Cl	2521489	2	29	6.9	5.0	✓
Fluoride in Water by IC	E235.F	2521486	2	26	7.7	5.0	✓
Nitrite in Water by IC	E235.NO2	2521488	2	30	6.7	5.0	✓
Nitrate in Water by IC	E235.NO3	2521487	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2521490	2	29	6.9	5.0	✓
Ammonia by Fluorescence	E298	2523159	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2523156	2	18	11.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2523160	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2522515	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2523157	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2521485	2	36	5.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2521352	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2521283	1	20	5.0	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2522958	2	38	5.3	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2523158	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2522426	1	20	5.0	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L ALS Environmental - Waterloo	Water	APHA 5220 D (mod)	Samples are analyzed using the closed reflux colourimetric method.
Chloride in Water by IC	E235.Cl ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Colour (Apparent) by Spectrometer	E330 ALS Environmental - Waterloo	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Conductivity in Water	E100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
Conductivity Screen (Internal Use Only)	ES100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Waterloo	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).

Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Waterloo	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Dissolved Silicon as Silica (Calculation)	EC421.SiO2 ALS Environmental - Waterloo	Water	N/A	Dissolved Silicon (as SiO2) is a calculated parameter. Dissolved Silicon (as SiO2 mg/L) = 2.139 x Dissolved Silicon (mg/L).
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Ion Balance using Dissolved Metals	EC101 ALS Environmental - Waterloo	Water	APHA 1030E	Cation Sum, Anion Sum, and Ion Balance are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Dissolved species are used where available. Minor ions are included where data is present. Ion Balance cannot be calculated accurately for waters with very low electrical conductivity (EC).
Nitrate and Nitrite (as N) (Calculation)	EC235.N+N ALS Environmental - Waterloo	Water	EPA 300.0	Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Waterloo	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K3Fe(CN)6) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
Saturation Index using Laboratory pH (Ca-D)	EC105 ALS Environmental - Waterloo	Water	APHA 2330B	Langelier Index provides an indication of scale formation potential at a given pH and temperature, and is calculated as per APHA 2330B Saturation Index. Positive values indicate oversaturation with respect to CaCO3. Negative values indicate undersaturation of CaCO3. This calculation uses laboratory pH measurements and provides estimates of Langelier Index at temperatures of 4, 15, 20, 25, 66, and 77°C. Ryznar Stability Index is an alternative index used for scale formation and corrosion potential. If available, Field pH measurements are recommended for best accuracy (test code EC104).
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
TDS by Gravimetry	E162 ALS Environmental - Waterloo	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).

Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove carbonate-based Inorganic Carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. Forms of carbon associated with inorganic or organic molecules (e.g. SCN and CN) are included in NPOC if they are not removed by purging under acidic conditions. Notably, NPOC excludes most volatile organic compounds and free cyanide. For samples where the majority of Total Carbon is inorganic, this method provides greater accuracy and reliability versus the TOC by subtraction method (TC minus TIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
TSS by Gravimetry	E160 ALS Environmental - Halifax	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. 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.
Turbidity by Nephelometry	E121 ALS Environmental - Waterloo	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Preparation Methods	***Method / Lab***	***Matrix***	***Method Reference***	***Method Descriptions***
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Autotitrator	EP108-TITR ALS Environmental - Waterloo	Water		Sample preparation for parameters analysed by Autotitrator
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Preparation for Ion Chromatography	EP235-IC ALS Environmental - Waterloo	Water		Sample preparation for ion chromatography

Preparation for Orthophosphate	EP378-PO4 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod)	Sample preparation for orthophosphate analysis
Preparation for Phenols (4AAP) by Colorimetry	EP562 ALS Environmental - Waterloo	Water		Phenols (4AAP) in Water by Colorimetry
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Waterloo	Water		Preparation for Total Organic Carbon by Combustion
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.

QUALITY CONTROL REPORT

Work Order	: **HA2601051**		
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	: Bailey Milos	Account Manager	: Marie Muise
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	: ----	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 31-Mar-2026 09:00
PO	: ----	Date Analysis Commenced	: 01-Apr-2026
C-O-C number	: CA202600001152_P-CA202600006225	Issue Date	: 08-Apr-2026 19:03
Sampler	: ----		
Site	: ----		
Quote number	: Atlantic Canada 2024-2026 SOA		
No. of samples received	: 9		
No. of samples analysed	: 9		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Laboratory Manager - Environmental	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Halifax Inorganics, Dartmouth, Nova Scotia
Nik Perkio	Senior Analyst	Waterloo Metals, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key: Anonymous=Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number=Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO=Data Quality Objective.
LOR=Limit of Reporting (detection limit).
RPD=Relative Percent Difference
# =Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Sub-Matrix: Drinking Water

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2526080)											
WT2607224-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	339	344	1.61 %	20%	---

Sub-Matrix: Groundwater

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2521393)											
HA2601051-001	MW25-1S	Turbidity	----	E121	0.10	NTU	1700	1730	1.57 %	15%	---
Physical Tests(QC Lot: 2521460)											
HA2601440-019	Anonymous	Conductivity	----	E100	1.0	µS/cm	136	135	0.148 %	10%	---
Physical Tests(QC Lot: 2521461)											
HA2601440-019	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	57.0	56.8	0.457 %	20%	---
Physical Tests(QC Lot: 2521495)											
HA2601051-001	MW25-1S	Colour, apparent	----	E330	200	CU	3790	3760	0.727 %	20%	---
Physical Tests(QC Lot: 2525949)											
HA2601051-001	MW25-1S	Solids, total suspended [TSS]	----	E160	15.0	mg/L	5580	5830	4.47 %	20%	---
Anions and Nutrients(QC Lot: 2521452)											
HA2601051-002	MW25-1D	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.216	0.215	0.342 %	20%	---
Anions and Nutrients(QC Lot: 2521453)											
HA2601051-002	MW25-1D	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2521454)											
HA2601051-002	MW25-1D	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2521455)											
HA2601051-002	MW25-1D	Chloride	16887-00-6	E235.Cl	0.50	mg/L	7.30	7.27	0.503 %	20%	---
Anions and Nutrients(QC Lot: 2521456)											
HA2601051-002	MW25-1D	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	3.15	3.15	0.0660 %	20%	---
Anions and Nutrients(QC Lot: 2521463)											
HA2601051-002	MW25-1D	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0020	mg/L	0.167	0.168	0.616 %	20%	---
Anions and Nutrients(QC Lot: 2521485)											
HA2601051-001	MW25-1S	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2521486)											
HA2601051-001	MW25-1S	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.077	0.075	0.002	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2521487)											
HA2601051-001	MW25-1S	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---

Sub-Matrix: **Groundwater**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients(QC Lot: 2521488)											
HA2601051-001	MW25-1S	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2521489)											
HA2601051-001	MW25-1S	Chloride	16887-00-6	E235.Cl	0.50	mg/L	17.0	16.9	0.880 %	20%	---
Anions and Nutrients(QC Lot: 2521490)											
HA2601051-001	MW25-1S	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.55	1.45	0.10	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523156)											
HA2601051-002	MW25-1D	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.183	0.193	0.010	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523157)											
HA2601051-001	MW25-1S	Phosphorus, total	7723-14-0	E372-U	0.200	mg/L	2.90	2.95	1.57 %	20%	---
Anions and Nutrients(QC Lot: 2523159)											
HA2601051-003	MW25-2S	Ammonia, total (as N)	7664-41-7	E298	0.0250	mg/L	0.754	0.700	7.51 %	20%	---
Anions and Nutrients(QC Lot: 2526112)											
HA2601051-005	MW25-3D	Kjeldahl nitrogen, total [TKN]	----	E318	0.500	mg/L	2.53	1.64	0.889	Diff <2x LOR	---
Organic / Inorganic Carbon(QC Lot: 2522515)											
HA2601051-001	MW25-1S	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	5.40	5.76	6.47 %	20%	---
Organic / Inorganic Carbon(QC Lot: 2523160)											
HA2601051-004	MW25-2D	Carbon, total organic [TOC]	----	E355-L	10.0	mg/L	29.5	<10.0	19.5	Diff <2x LOR	---
Dissolved Metals(QC Lot: 2521283)											
HA2601051-001	MW25-1S	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	---
Dissolved Metals(QC Lot: 2521352)											
HA2601051-001	MW25-1S	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0112	0.0103	8.55 %	20%	---
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00108	0.00111	3.28 %	20%	---
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0369	0.0368	0.184 %	20%	---
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	0.000047	0.000053	0.000006	Diff <2x LOR	---
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.074	0.074	0.0003	Diff <2x LOR	---
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	---
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	15.3	16.0	4.63 %	20%	---
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000060	0.000059	0.000002	Diff <2x LOR	---
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00060	0.00061	0.000010	Diff <2x LOR	---
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	23.8	23.8	0.216 %	20%	---
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0112	0.0116	2.76 %	20%	---
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	5.08	4.99	1.82 %	20%	---
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.668	0.674	0.911 %	20%	---

Sub-Matrix: Groundwater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals(QC Lot: 2521352)											
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000315	0.000320	0.000005	Diff <2x LOR	---
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00280	0.00280	0.0000009	Diff <2x LOR	---
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	0.137	0.129	0.009	Diff <2x LOR	---
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	4.13	4.13	0.0477 %	20%	---
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00436	0.00430	1.36 %	20%	---
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000104	0.000124	0.000020	Diff <2x LOR	---
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	10.8	11.0	1.18 %	20%	---
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	17.8	18.0	1.07 %	20%	---
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.133	0.132	0.182 %	20%	---
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	0.70	0.84	0.13	Diff <2x LOR	---
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	---
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00112	0.00113	1.14 %	20%	---
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000109	0.000112	2.98 %	20%	---
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0016	0.0016	0.00002	Diff <2x LOR	---
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
Aggregate Organics(QC Lot: 2523158)											
HA2601051-005	MW25-3D	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
Aggregate Organics(QC Lot: 2526115)											
HA2601051-005	MW25-3D	Chemical oxygen demand [COD]	----	E559-L	10	mg/L	262	254	3.22 %	20%	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2521491)											
WT2607064-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	615	623	1.29 %	10%	---
Physical Tests(QC Lot: 2521492)											
WT2607064-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	255	259	1.65 %	20%	---
Physical Tests(QC Lot: 2524814)											
WT2607269-002	Anonymous	pH	----	E108	0.10	pH units	7.65	7.78	1.69 %	4%	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2526075)											
HA2601498-004	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	170	168	2	Diff <2x LOR	---
Aggregate Organics(QC Lot: 2522958)											
EO2602077-001	Anonymous	Chemical oxygen demand [COD]	----	E559-L	10	mg/L	29	29	0.8	Diff <2x LOR	---
Volatile Organic Compounds(QC Lot: 2522426)											
WT2607458-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	---
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	---
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	---
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	---
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	---
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds(QC Lot: 2522426)											
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	---
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	---
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2521393)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests(QC Lot: 2521460)						
Conductivity	----	E100	1	µS/cm	# 2.7	B
Physical Tests(QC Lot: 2521461)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests(QC Lot: 2521491)						
Conductivity	----	E100	1	µS/cm	1.6	----
Physical Tests(QC Lot: 2521492)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests(QC Lot: 2521495)						
Colour, apparent	----	E330	2	CU	<2.0	----
Physical Tests(QC Lot: 2524814)						
pH	----	E108	----	pH units	----	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2525949)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests(QC Lot: 2526075)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests(QC Lot: 2526080)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients(QC Lot: 2521452)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2521453)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2521454)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients(QC Lot: 2521455)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients(QC Lot: 2521456)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2521463)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2521485)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2521486)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2521487)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2521488)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients(QC Lot: 2521489)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients(QC Lot: 2521490)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2523156)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	# 0.054	B
Anions and Nutrients(QC Lot: 2523157)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients(QC Lot: 2523159)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients(QC Lot: 2526112)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients(QC Lot: 2528383)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients(QC Lot: 2528639)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon(QC Lot: 2522515)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon(QC Lot: 2523160)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Dissolved Metals(QC Lot: 2521283)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Dissolved Metals(QC Lot: 2521352)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals(QC Lot: 2521352)						
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Aggregate Organics(QC Lot: 2522958)						
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	<10	----
Aggregate Organics(QC Lot: 2523158)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Aggregate Organics(QC Lot: 2526115)						
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	<10	----
Volatile Organic Compounds(QC Lot: 2522426)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds(QC Lot: 2522426)						
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----

Qualifiers

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	*CAS Number*	*Method*	*LOR*	*Unit*	*Target Concentration*	*LCS*	*Low*	*High*	*Qualifier*
Physical Tests(QC Lot: 2521393)									
Turbidity	----	E121	0.1	NTU	200 NTU	100.0	85.0	115	----
Physical Tests(QC Lot: 2521460)									
Conductivity	----	E100	1	µS/cm	1409 µS/cm	102	90.0	110	----
Physical Tests(QC Lot: 2521461)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	112	85.0	115	----
Physical Tests(QC Lot: 2521491)									
Conductivity	----	E100	1	µS/cm	1409 µS/cm	101	90.0	110	----
Physical Tests(QC Lot: 2521492)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	107	85.0	115	----
Physical Tests(QC Lot: 2521495)									
Colour, apparent	----	E330	2	CU	25 CU	106	85.0	115	----
Physical Tests(QC Lot: 2524814)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests(QC Lot: 2525949)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	97.5	85.0	115	----
Physical Tests(QC Lot: 2526075)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	103	85.0	115	----
Physical Tests(QC Lot: 2526080)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	99.0	85.0	115	----
Anions and Nutrients(QC Lot: 2521452)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients(QC Lot: 2521453)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients(QC Lot: 2521454)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	102	90.0	110	----
Anions and Nutrients(QC Lot: 2521455)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2521456)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2521463)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	99.5	80.0	120	----
Anions and Nutrients(QC Lot: 2521485)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	100	80.0	120	----
Anions and Nutrients(QC Lot: 2521486)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients(QC Lot: 2521487)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2521488)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	96.5	90.0	110	----
Anions and Nutrients(QC Lot: 2521489)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2521490)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	98.9	90.0	110	----
Anions and Nutrients(QC Lot: 2523156)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	109	75.0	125	----
Anions and Nutrients(QC Lot: 2523157)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	102	80.0	120	----
Anions and Nutrients(QC Lot: 2523159)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	100	85.0	115	----
Anions and Nutrients(QC Lot: 2526112)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	95.0	75.0	125	----
Anions and Nutrients(QC Lot: 2528383)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	101	75.0	125	----
Anions and Nutrients(QC Lot: 2528639)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	96.2	80.0	120	----
Organic / Inorganic Carbon(QC Lot: 2522515)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	101	80.0	120	----
Organic / Inorganic Carbon(QC Lot: 2523160)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	99.7	80.0	120	----
Dissolved Metals(QC Lot: 2521283)									
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	108	80.0	120	----
Dissolved Metals(QC Lot: 2521352)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	105	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	101	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	101	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	98.7	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	103	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	100	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.0025 mg/L	105	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	103	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	102	80.0	120	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals(QC Lot: 2521352)									
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	103	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	103	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	104	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.0125 mg/L	97.2	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	109	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.0125 mg/L	103	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	99.8	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	100	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	103	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	99.3	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	102	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	103	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	107	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.0125 mg/L	105	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	102	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	100	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	104	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.0125 mg/L	100.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	100	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.0002 mg/L	103	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	105	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	99.8	80.0	120	----
Aggregate Organics(QC Lot: 2522958)									
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	100 mg/L	93.7	85.0	115	----
Aggregate Organics(QC Lot: 2523158)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	98.8	85.0	115	----
Aggregate Organics(QC Lot: 2526115)									
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	100 mg/L	101	85.0	115	----
Volatile Organic Compounds(QC Lot: 2522426)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	97.9	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	91.3	70.0	130	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds(QC Lot: 2522426)									
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	70.4	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	98.8	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	99.2	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	89.0	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	97.7	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	90.6	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	87.2	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	97.7	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	87.0	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	98.9	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	88.8	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	94.9	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	90.7	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	89.7	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	100	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	86.8	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	82.7	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	91.4	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	89.6	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds(QC Lot: 2522426)									
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	112	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	89.1	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	110	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	105	70.0	130	----
Volatile Organic Compounds Surrogates(QC Lot: 2522426)									
Bromofluorobenzene, 4-	460-00-4	E611D	1	µg/L	10 µg/L	100.0	70	130	----
Difluorobenzene, 1,4-	540-36-3	E611D	1	µg/L	10 µg/L	101	70	130	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for

Sub-Matrix: Groundwater

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
					Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2521452)										
HA2601051-002	MW25-1D	Fluoride	16984-48-8	E235.F	1.07 mg/L	1 mg/L	107	75.0	125	---
Anions and Nutrients(QC Lot: 2521453)										
HA2601051-002	MW25-1D	Nitrate (as N)	14797-55-8	E235.NO3	2.52 mg/L	2.5 mg/L	101	75.0	125	---
Anions and Nutrients(QC Lot: 2521454)										
HA2601051-002	MW25-1D	Nitrite (as N)	14797-65-0	E235.NO2	0.517 mg/L	0.5 mg/L	103	75.0	125	---
Anions and Nutrients(QC Lot: 2521455)										
HA2601051-002	MW25-1D	Chloride	16887-00-6	E235.Cl	102 mg/L	100 mg/L	102	75.0	125	---
Anions and Nutrients(QC Lot: 2521456)										
HA2601051-002	MW25-1D	Sulfate (as SO4)	14808-79-8	E235.SO4	102 mg/L	100 mg/L	102	75.0	125	---
Anions and Nutrients(QC Lot: 2521463)										
HA2601051-002	MW25-1D	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	ND	----	ND	70.0	130	---
Anions and Nutrients(QC Lot: 2521485)										
HA2601051-001	MW25-1S	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0178 mg/L	0.0196 mg/L	91.1	70.0	130	---
Anions and Nutrients(QC Lot: 2521486)										
HA2601051-001	MW25-1S	Fluoride	16984-48-8	E235.F	0.942 mg/L	1 mg/L	94.2	75.0	125	---
Anions and Nutrients(QC Lot: 2521487)										
HA2601051-001	MW25-1S	Nitrate (as N)	14797-55-8	E235.NO3	2.41 mg/L	2.5 mg/L	96.6	75.0	125	---

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2521488)										
HA2601051-001	MW25-1S	Nitrite (as N)	14797-65-0	E235.NO2	0.470 mg/L	0.5 mg/L	93.9	75.0	125	---
Anions and Nutrients(QC Lot: 2521489)										
HA2601051-001	MW25-1S	Chloride	16887-00-6	E235.Cl	98.2 mg/L	100 mg/L	98.2	75.0	125	---
Anions and Nutrients(QC Lot: 2521490)										
HA2601051-001	MW25-1S	Sulfate (as SO4)	14808-79-8	E235.SO4	95.8 mg/L	100 mg/L	95.8	75.0	125	---
Anions and Nutrients(QC Lot: 2523156)										
HA2601051-002	MW25-1D	Kjeldahl nitrogen, total [TKN]	----	E318	2.41 mg/L	2.5 mg/L	96.5	70.0	130	---
Anions and Nutrients(QC Lot: 2523157)										
HA2601051-001	MW25-1S	Phosphorus, total	7723-14-0	E372-U	ND	----	ND	70.0	130	---
Anions and Nutrients(QC Lot: 2523159)										
HA2601051-003	MW25-2S	Ammonia, total (as N)	7664-41-7	E298	ND	----	ND	75.0	125	---
Anions and Nutrients(QC Lot: 2526112)										
HA2601051-005	MW25-3D	Kjeldahl nitrogen, total [TKN]	----	E318	22.8 mg/L	25 mg/L	91.1	70.0	130	---
Organic / Inorganic Carbon(QC Lot: 2522515)										
HA2601051-001	MW25-1S	Carbon, dissolved organic [DOC]	----	E358-L	ND	----	ND	70.0	130	---
Organic / Inorganic Carbon(QC Lot: 2523160)										
HA2601051-004	MW25-2D	Carbon, total organic [TOC]	----	E355-L	83.8 mg/L	100 mg/L	83.8	70.0	130	---
Dissolved Metals(QC Lot: 2521283)										
HA2601051-002	MW25-1D	Mercury, dissolved	7439-97-6	E509	0.000112 mg/L	0.0001 mg/L	112	70.0	130	---
Dissolved Metals(QC Lot: 2521352)										
HA2601051-002	MW25-1D	Aluminum, dissolved	7429-90-5	E421	0.0969 mg/L	0.1 mg/L	96.9	70.0	130	---
		Antimony, dissolved	7440-36-0	E421	0.0507 mg/L	0.05 mg/L	101	70.0	130	---
		Arsenic, dissolved	7440-38-2	E421	0.0529 mg/L	0.05 mg/L	106	70.0	130	---
		Barium, dissolved	7440-39-3	E421	0.0117 mg/L	0.0125 mg/L	93.3	70.0	130	---
		Beryllium, dissolved	7440-41-7	E421	0.00490 mg/L	0.005 mg/L	98.0	70.0	130	---
		Bismuth, dissolved	7440-69-9	E421	0.0442 mg/L	0.05 mg/L	88.3	70.0	130	---
		Boron, dissolved	7440-42-8	E421	0.046 mg/L	0.05 mg/L	92.5	70.0	130	---
		Cadmium, dissolved	7440-43-9	E421	0.00507 mg/L	0.005 mg/L	101	70.0	130	---
		Calcium, dissolved	7440-70-2	E421	ND	----	ND	70.0	130	---
		Cesium, dissolved	7440-46-2	E421	0.00252 mg/L	0.0025 mg/L	101	70.0	130	---
		Chromium, dissolved	7440-47-3	E421	0.0122 mg/L	0.0125 mg/L	97.4	70.0	130	---
		Cobalt, dissolved	7440-48-4	E421	0.0119 mg/L	0.0125 mg/L	95.4	70.0	130	---
		Copper, dissolved	7440-50-8	E421	0.0122 mg/L	0.0125 mg/L	97.7	70.0	130	---
		Iron, dissolved	7439-89-6	E421	ND	----	ND	70.0	130	---
		Lead, dissolved	7439-92-1	E421	0.0244 mg/L	0.025 mg/L	97.5	70.0	130	---
		Lithium, dissolved	7439-93-2	E421	0.0110 mg/L	0.0125 mg/L	87.9	70.0	130	---
		Magnesium, dissolved	7439-95-4	E421	ND	----	ND	70.0	130	---

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Dissolved Metals(QC Lot: 2521352)										
		Manganese, dissolved	7439-96-5	E421	ND	----	ND	70.0	130	---
		Molybdenum, dissolved	7439-98-7	E421	0.0120 mg/L	0.0125 mg/L	96.1	70.0	130	---
		Nickel, dissolved	7440-02-0	E421	0.0241 mg/L	0.025 mg/L	96.3	70.0	130	---
		Phosphorus, dissolved	7723-14-0	E421	0.492 mg/L	0.5 mg/L	98.3	70.0	130	---
		Potassium, dissolved	7440-09-7	E421	2.39 mg/L	2.5 mg/L	95.8	70.0	130	---
		Rubidium, dissolved	7440-17-7	E421	0.00490 mg/L	0.005 mg/L	98.0	70.0	130	---
		Selenium, dissolved	7782-49-2	E421	0.0555 mg/L	0.05 mg/L	111	70.0	130	---
		Silicon, dissolved	7440-21-3	E421	ND	----	ND	70.0	130	---
		Silver, dissolved	7440-22-4	E421	0.00490 mg/L	0.005 mg/L	97.9	70.0	130	---
		Sodium, dissolved	7440-23-5	E421	ND	----	ND	70.0	130	---
		Strontium, dissolved	7440-24-6	E421	ND	----	ND	70.0	130	---
		Sulfur, dissolved	7704-34-9	E421	2.34 mg/L	2.5 mg/L	93.6	70.0	130	---
		Tellurium, dissolved	13494-80-9	E421	0.00547 mg/L	0.005 mg/L	109	70.0	130	---
		Thallium, dissolved	7440-28-0	E421	0.0481 mg/L	0.05 mg/L	96.1	70.0	130	---
		Thorium, dissolved	7440-29-1	E421	0.00487 mg/L	0.005 mg/L	97.5	70.0	130	---
		Tin, dissolved	7440-31-5	E421	0.0245 mg/L	0.025 mg/L	97.9	70.0	130	---
		Titanium, dissolved	7440-32-6	E421	0.0122 mg/L	0.0125 mg/L	97.5	70.0	130	---
		Tungsten, dissolved	7440-33-7	E421	0.00472 mg/L	0.005 mg/L	94.4	70.0	130	---
		Uranium, dissolved	7440-61-1	E421	0.000247 mg/L	0.0002 mg/L	98.9	70.0	130	---
		Vanadium, dissolved	7440-62-2	E421	0.0243 mg/L	0.025 mg/L	97.4	70.0	130	---
		Zinc, dissolved	7440-66-6	E421	0.0259 mg/L	0.025 mg/L	104	70.0	130	---
		Zirconium, dissolved	7440-67-7	E421	0.00493 mg/L	0.005 mg/L	98.6	70.0	130	---
Aggregate Organics(QC Lot: 2522958)										
EO2602077-001	Anonymous	Chemical oxygen demand [COD]	----	E559-L	94 mg/L	100 mg/L	93.6	75.0	125	---
Aggregate Organics(QC Lot: 2523158)										
HA2601051-005	MW25-3D	Phenols, total (4AAP)	----	E562	0.0221 mg/L	0.02 mg/L	110	75.0	125	---
Aggregate Organics(QC Lot: 2526115)										
HA2601051-005	MW25-3D	Chemical oxygen demand [COD]	----	E559-L	ND	----	ND	75.0	125	---
Volatile Organic Compounds(QC Lot: 2522426)										
WT2607458-001	Anonymous	Acetone	67-64-1	E611D	112 µg/L	100 µg/L	112	60.0	140	---
		Benzene	71-43-2	E611D	98.9 µg/L	100 µg/L	98.9	60.0	140	---
		Bromodichloromethane	75-27-4	E611D	95.9 µg/L	100 µg/L	95.9	60.0	140	---
		Bromoform	75-25-2	E611D	97.5 µg/L	100 µg/L	97.5	60.0	140	---
		Bromomethane	74-83-9	E611D	63.8 µg/L	100 µg/L	63.8	60.0	140	---
		Carbon disulfide	75-15-0	E611D	86.7 µg/L	100 µg/L	86.7	60.0	140	---
		Carbon tetrachloride	56-23-5	E611D	91.3 µg/L	100 µg/L	91.3	60.0	140	---
		Chlorobenzene	108-90-7	E611D	99.3 µg/L	100 µg/L	99.3	60.0	140	---

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Volatile Organic Compounds(QC Lot: 2522426)										
		Chloroethane	75-00-3	E611D	79.2 µg/L	100 µg/L	79.2	60.0	140	---
		Chloroform	67-66-3	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	---
		Chloromethane	74-87-3	E611D	77.3 µg/L	100 µg/L	77.3	60.0	140	---
		Dibromochloromethane	124-48-1	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	---
		Dibromoethane, 1,2-	106-93-4	E611D	96.0 µg/L	100 µg/L	96.0	60.0	140	---
		Dichlorobenzene, 1,2-	95-50-1	E611D	100 µg/L	100 µg/L	100	60.0	140	---
		Dichlorobenzene, 1,3-	541-73-1	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	---
		Dichlorobenzene, 1,4-	106-46-7	E611D	102 µg/L	100 µg/L	102	60.0	140	---
		Dichlorodifluoromethane	75-71-8	E611D	73.1 µg/L	100 µg/L	73.1	60.0	140	---
		Dichloroethane, 1,1-	75-34-3	E611D	103 µg/L	100 µg/L	103	60.0	140	---
		Dichloroethane, 1,2-	107-06-2	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	---
		Dichloroethylene, 1,1-	75-35-4	E611D	94.5 µg/L	100 µg/L	94.5	60.0	140	---
		Dichloroethylene, cis-1,2-	156-59-2	E611D	98.5 µg/L	100 µg/L	98.5	60.0	140	---
		Dichloroethylene, trans-1,2-	156-60-5	E611D	96.0 µg/L	100 µg/L	96.0	60.0	140	---
		Dichloromethane	75-09-2	E611D	91.0 µg/L	100 µg/L	91.0	60.0	140	---
		Dichloropropane, 1,2-	78-87-5	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	---
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	---
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	92.9 µg/L	100 µg/L	92.9	60.0	140	---
		Ethylbenzene	100-41-4	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	---
		Hexane, n-	110-54-3	E611D	99.5 µg/L	100 µg/L	99.5	60.0	140	---
		Hexanone, 2-	591-78-6	E611D	107 µg/L	100 µg/L	107	60.0	140	---
		Methyl ethyl ketone [MEK]	78-93-3	E611D	98 µg/L	100 µg/L	97.6	60.0	140	---
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	90 µg/L	100 µg/L	90.4	60.0	140	---
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	---
		Styrene	100-42-5	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	---
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	95.6 µg/L	100 µg/L	95.6	60.0	140	---
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	---
		Tetrachloroethylene	127-18-4	E611D	91.4 µg/L	100 µg/L	91.4	60.0	140	---
		Toluene	108-88-3	E611D	98.1 µg/L	100 µg/L	98.1	60.0	140	---
		Trichloroethane, 1,1,1-	71-55-6	E611D	92.9 µg/L	100 µg/L	92.9	60.0	140	---
		Trichloroethane, 1,1,2-	79-00-5	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	---
		Trichloroethylene	79-01-6	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	---
		Trichlorofluoromethane	75-69-4	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	---
		Vinyl chloride	75-01-4	E611D	73.9 µg/L	100 µg/L	73.9	60.0	140	---
		Xylene, m+p-	179601-23-1	E611D	202 µg/L	200 µg/L	101	60.0	140	---
		Xylene, o-	95-47-6	E611D	98.7 µg/L	100 µg/L	98.7	60.0	140	---

Sub-Matrix: **Groundwater**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Volatile Organic Compounds Surrogates(QC Lot: 2522426)										
		Bromofluorobenzene, 4-	460-00-4	E611D	10.1 µg/L	10 µg/L	101	70.0	130	---
		Difluorobenzene, 1,4-	540-36-3	E611D	9.9 µg/L	10 µg/L	99.5	70.0	130	---

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Work Order CA20260000

CA20260000115

Print Date	31-03-2026 09:44 *
eCOC WO#	CA202600001152
Status	Submitted (Pre-login)
Submit Date	16-03-2026 09:05 *
Lab	ALS Environmental Halifax
Client	Dillon Consulting Limited
Office	Halifax
Project	22-5099
Quote	Atlantic Canada 2024-2026 SOA
Site	
Contact	Bailey Milos
Purchase Order No.	
Sampler Contact	
Created By	Marie Muise
Modified Date	16-03-2026 09:05 *
Overall Description	
Special Instructions	
TAT Priority	

Environmental Division
Halifax
Work Order Reference
HA2601051

Telephone : +1 902 707 4888

Samples

Sample No.	Sample Type	Sample Name	Sample Point	Sampling Date	Filtered/Preserved	Field Data
1	Water/Groundwater	MW25-1S			Field Filtered/Field Preserved or Pre-charged	
2	Water/Groundwater	MW25-1D			Field Filtered/Field Preserved or Pre-charged	
3	Water/Groundwater	MW25-2S			Field Filtered/Field Preserved or Pre-charged	
4	Water/Groundwater	MW25-2D			Field Filtered/Field Preserved or Pre-charged	
5	Water/Groundwater	MW25-3S			Field Filtered/Field Preserved or Pre-charged	
6	Water/Groundwater	MW25-3D			Field Filtered/Field Preserved or Pre-charged	
7	Water/Groundwater	MW25-4S			Field Filtered/Field Preserved or Pre-charged	

* (UTC-04:00) Atlantic Time (Canada)

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Work Order CA20260000

CA20260000115

Sample No.	Sample Type	Sample Name	Sample Point	Sampling Date	Filtered/Preserved	Field Data
8	Water/Groundwater	MW25-4D			Field Filtered/Field Preserved or Pre-charged	
9	Water/Groundwater	Dup A			Field Filtered/Field Preserved or Pre-charged	

Test Items

Sample No.	Containers *	- DOC (Dissolved Organic Carbon)	- General Chemistry+COD+TKN +Phenols 4AAP+T-P+Dissolved Metals In Water	- Mercury, Dissolved in Water	- Total Suspended Solids (TSS)	- VOCs in Water
1	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
2	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
3	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
4	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
5	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
6	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
7	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
8	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑
9	A, B, Cx2, D, Ex3, F	☑	☑	☑	☑	☑

* (UTC-04:00) Atlantic Time (Canada)

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Work Order CA2026000

CA20260000115

* Containers Legend

**-Could not load complete list of containers. Remaining containers to be assigned by Laboratory

Containers		Name	Size	Category
A		Amber glass - dissolved (field filtered/sulfuric acid)	100 mL	Purple/white
B		Amber glass total (sulfuric acid)	100 mL	Purple/white
C		Glass vial (sodium bisulfate)	40 mL	Blue/white
D		Glass vial dissolved (hydrochloric acid)	40 mL	Yellow/black
E		HDPE	250 mL	Green/white
F		HDPE dissolved (nitric acid)	125 mL	Warm red/white

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

* (UTC-04:00) Atlantic Time (Canada)

CERTIFICATE OF ANALYSIS

Work Order	:	**HA2601062**		
Client	:	**Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	:	Bailey Milos	Account Manager	: Marie Muise
Address	:	137 Chain Lake Drive Suite 100 Halifax Nova Scotia Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	:	----	E-mail	: marie.muise@alsglobal.com
Project	:	22-5099	Telephone	: +1 902 707 4888
PO	:	----	Date Samples Received	: 31-Mar-2026 09:00
C-O-C number	:	CA202600001166_P-CA202600006317	Date Analysis Commenced	: 01-Apr-2026
Sampler	:	----	Issue Date	: 10-Apr-2026 09:11
Site	:	----		
Quote number	:	Atlantic Canada 2024-2026 SOA		
No. of samples received	:	4		
No. of samples analysed	:	4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	VOC, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Inorganics, Dartmouth, Nova Scotia
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Robyn MacCormack	Analyst	Inorganics, Dartmouth, Nova Scotia
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
					Client sampling date / time	30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
						HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
						Result	Result	Result	Result	----
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		<1.2	<1.2	<1.2	<1.2	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	<0.6	<0.6	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	<0.3	<0.3	----
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	----
Colour, apparent	----	E330/WT	2.0	CU		302	298	309	303	----
Conductivity	----	E100/WT	1.0	µS/cm		42.0	46.7	49.2	48.8	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WT	0.50	mg/L		2.22	3.26	3.71	3.72	----
Langelier index (@ 20°C)	----	EC105A/WT	0.010	-		-7.11	-6.87	-6.77	-6.76	----
Langelier index (@ 4°C)	----	EC105A/WT	0.010	-		-7.37	-7.13	-7.02	-7.02	----
pH	----	E108/HA	0.10	pH units		4.10	4.12	4.20	4.12	----
pH, saturation (@ 20°C)	----	EC105A/WT	0.010	pH units		11.21	10.99	10.97	10.88	----
pH, saturation (@ 4°C)	----	EC105A/WT	0.010	pH units		11.47	11.25	11.22	11.14	----
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L		42	40	50	52	----
Solids, total suspended [TSS]	----	E160/HA	3.0	mg/L		<3.0	<3.0	<3.0	<3.0	----
Turbidity	----	E121/WT	0.10	NTU		0.30	0.43	0.48	0.38	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0088	0.0098	0.0074	0.0070	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		4.62	6.10	6.39	6.44	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		<0.020	<0.020	<0.020	<0.020	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.419	0.365	0.376	0.409	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.020	<0.020	<0.020	<0.020	----

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
					Client sampling date / time	30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
						HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
						Result	Result	Result	Result	----
Anions and Nutrients										
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		<0.022	<0.022	<0.022	<0.022	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	----
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0067	0.0064	0.0067	0.0064	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		1.25	1.86	2.14	2.11	----
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L		18.4	18.2	21.6	20.3	----
Ion Balance										
Anion sum	----	EC101A/WT	0.10	meq/L		0.16	0.21	0.22	0.23	----
Cation sum (total)	----	EC101A/WT	0.10	meq/L		0.34	0.41	0.40	0.41	----
Ion balance (cations/anions)	----	EC101A/WT	0.01	%		212	195	182	178	----
Total Metals										
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L		0.363	0.407	0.371	0.368	----
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L		0.00018	0.00021	0.00022	0.00022	----
Barium, total	7440-39-3	E420/WT	0.00010	mg/L		0.00164	0.00228	0.00228	0.00225	----
Beryllium, total	7440-41-7	E420/WT	0.000020	mg/L		0.000029	0.000030	0.000035	0.000030	----
Bismuth, total	7440-69-9	E420/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	----
Boron, total	7440-42-8	E420/WT	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	----
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L		0.0000083	0.0000110	0.0000112	0.0000110	----
Calcium, total	7440-70-2	E420/WT	0.100	mg/L		0.299	0.512	0.668	0.676	----

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
Client sample ID									
Client sampling date / time					30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
					HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
					Result	Result	Result	Result	----
Total Metals									
Cesium, total	7440-46-2	E420/WT	0.000010	mg/L	0.000040	0.000040	0.000041	0.000037	----
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L	0.00013	0.00015	0.00014	0.00014	----
Copper, total	7440-50-8	E420/WT	0.00050	mg/L	<0.00050	0.00058	0.00054	0.00052	----
Iron, total	7439-89-6	E420/WT	0.010	mg/L	0.261	0.277	0.272	0.253	----
Lead, total	7439-92-1	E420/WT	0.000050	mg/L	0.000938	0.000981	0.000973	0.000958	----
Lithium, total	7439-93-2	E420/WT	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Magnesium, total	7439-95-4	E420/WT	0.0050	mg/L	0.357	0.482	0.495	0.493	----
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L	0.00300	0.00557	0.00548	0.00531	----
Mercury, total	7439-97-6	E508/WT	0.0000050	mg/L	0.0000065	0.0000060	0.0000075	0.0000082	----
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L	0.000082	0.000073	0.000068	0.000073	----
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Phosphorus, total	7723-14-0	E420/WT	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	----
Potassium, total	7440-09-7	E420/WT	0.050	mg/L	0.161	0.242	0.270	0.265	----
Rubidium, total	7440-17-7	E420/WT	0.00020	mg/L	0.00057	0.00078	0.00080	0.00085	----
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L	0.000110	0.000109	0.000107	0.000123	----
Silicon (as SiO2), total	7631-86-9	EC420.SiO2/WT	0.25	mg/L	3.61	4.04	4.04	4.00	----
Silicon, total	7440-21-3	E420/WT	0.10	mg/L	1.69	1.89	1.89	1.87	----
Silver, total	7440-22-4	E420/WT	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	----
Sodium, total	7440-23-5	E420/WT	0.050	mg/L	3.82	4.79	4.76	4.75	----
Strontium, total	7440-24-6	E420/WT	0.00020	mg/L	0.00384	0.00586	0.00657	0.00655	----

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
Client sampling date / time					30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
					HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
					Result	Result	Result	Result	----
Total Metals									
Sulfur, total	7704-34-9	E420/WT	0.50	mg/L	<0.50	0.74	0.84	0.79	----
Tellurium, total	13494-80-9	E420/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	----
Thallium, total	7440-28-0	E420/WT	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	----
Thorium, total	7440-29-1	E420/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	----
Tin, total	7440-31-5	E420/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	----
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L	0.00346	0.00432	0.00418	0.00389	----
Tungsten, total	7440-33-7	E420/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	----
Uranium, total	7440-61-1	E420/WT	0.000010	mg/L	0.000023	0.000048	0.000046	0.000047	----
Vanadium, total	7440-62-2	E420/WT	0.00050	mg/L	0.00108	0.00116	0.00103	0.00101	----
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	----
Zirconium, total	7440-67-7	E420/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	----
Aggregate Organics									
Biochemical oxygen demand [BOD]	----	E550/HA	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	----
Chemical oxygen demand [COD]	----	E559-L/WT	10	mg/L	47	46	52	46	----
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Volatile Organic Compounds									
Acetone	67-64-1	E611D/WT	20	µg/L	<20	<20	<20	<20	----
Benzene	71-43-2	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
					Client sampling date / time	30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
						HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
					Client sampling date / time	30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
						HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----

Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

					Client sample ID	SW1 ----	SW2 ----	SW3 ----	Dup B ----	----
					Client sampling date / time	30-Mar-2026 16:30	30-Mar-2026 16:55	30-Mar-2026 17:00	30-Mar-2026 17:00	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2601062-001	HA2601062-002	HA2601062-003	HA2601062-004	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		95.8	95.8	96.4	95.9	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		100	99.7	100	99.6	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

Quality Control Interpretive Report

Work Order	:	**HA2601062**			
Client	:	Dillon Consulting Limited	Laboratory	:	ALS Environmental - Halifax
Contact	:	Bailey Milos	Account Manager	:	Marie Muise
Address	:	137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	:	13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	:	----	Telephone	:	+1 902 707 4888
Project	:	22-5099	Date Samples Received	:	31-Mar-2026 09:00
PO	:	----	Issue Date	:	10-Apr-2026 09:11
C-O-C number	:	CA202600001166_P-CA202600006317			
Sampler	:	----			
Site	:	----			
Quote number	:	Atlantic Canada 2024-2026 SOA			
No. of samples received	:	4			
No. of samples analysed	:	4			

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix :**Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result		Limits	Comment
Laboratory Control Sample (LCS) Recoveries									
Volatile Organic Compounds	QC-2523555--002	----	Methyl isobutyl ketone [MIBK]	108-10-1	E611D	69.8 %	MES	70.0-130%	Recovery less than lower control limit

Result Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and/or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Biochemical Oxygen Demand - 5 day												
HDPE [BOD HT-48h]												
SW1	001	2521214	E550	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	45 hrs	✓
SW2	002	2521214	E550	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	44 hrs	✓
SW3	003	2521214	E550	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	44 hrs	✓
Dup B	004	2521214	E550	30-Mar-2026	----	----	----		01-Apr-2026	48 hrs	44 hrs	✓
Aggregate Organics : Chemical Oxygen Demand by Colourimetry (Low Level)												
Amber glass total (sulfuric acid)												
SW1	001	2526115	E559-L	30-Mar-2026	----	----	----		06-Apr-2026	28 days	7 days	✓
SW2	002	2526115	E559-L	30-Mar-2026	----	----	----		06-Apr-2026	28 days	7 days	✓
SW3	003	2526115	E559-L	30-Mar-2026	----	----	----		06-Apr-2026	28 days	7 days	✓
Dup B	004	2526115	E559-L	30-Mar-2026	----	----	----		06-Apr-2026	28 days	7 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry												
Amber glass total (sulfuric acid)												
SW1	001	2525818	E562	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
SW2	002	2525818	E562	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry												
Amber glass total (sulfuric acid)												
SW3	003	2525818	E562	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
Dup B	004	2525818	E562	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence												
Amber glass total (sulfuric acid)												
SW1	001	2525817	E298	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
SW2	002	2525817	E298	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
SW3	003	2525817	E298	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Dup B	004	2525817	E298	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC												
HDPE												
SW1	001	2523496	E235.Cl	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW2	002	2523496	E235.Cl	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW3	003	2523496	E235.Cl	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup B	004	2523496	E235.Cl	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)												
HDPE												
SW1	001	2523502	E378-U	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	07-Apr-2026	3 days	8 days	× EHT
SW2	002	2523502	E378-U	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	07-Apr-2026	3 days	8 days	× EHT
SW3	003	2523502	E378-U	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	07-Apr-2026	3 days	8 days	× EHT

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)												
HDPE												
Dup B	004	2523502	E378-U	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	07-Apr-2026	3 days	8 days	× EHT
Anions and Nutrients : Fluoride in Water by IC												
HDPE												
SW1	001	2523493	E235.F	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW2	002	2523493	E235.F	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW3	003	2523493	E235.F	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup B	004	2523493	E235.F	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Nitrate in Water by IC												
HDPE												
SW1	001	2523494	E235.NO3	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
SW2	002	2523494	E235.NO3	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
SW3	003	2523494	E235.NO3	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
Dup B	004	2523494	E235.NO3	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
Anions and Nutrients : Nitrite in Water by IC												
HDPE												
SW1	001	2523495	E235.NO2	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
SW2	002	2523495	E235.NO2	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
SW3	003	2523495	E235.NO2	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
Dup B	004	2523495	E235.NO2	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Water by IC												
HDPE												
SW1	001	2523497	E235.SO4	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW2	002	2523497	E235.SO4	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW3	003	2523497	E235.SO4	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup B	004	2523497	E235.SO4	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)												
Amber glass total (sulfuric acid)												
SW1	001	2525815	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
SW2	002	2525815	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
SW3	003	2525815	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Dup B	004	2525815	E318	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)												
Amber glass total (sulfuric acid)												
SW1	001	2525816	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
SW2	002	2525816	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
SW3	003	2525816	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Dup B	004	2525816	E372-U	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)												
Amber glass total (sulfuric acid)												
SW1	001	2527887	E355-L	30-Mar-2026	07-Apr-2026	28 days	8 days	✓	08-Apr-2026	28 days	9 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)												
Amber glass total (sulfuric acid)												
SW2	002	2527887	E355-L	30-Mar-2026	07-Apr-2026	28 days	8 days	✓	08-Apr-2026	28 days	9 days	✓
SW3	003	2527887	E355-L	30-Mar-2026	07-Apr-2026	28 days	8 days	✓	08-Apr-2026	28 days	9 days	✓
Dup B	004	2527887	E355-L	30-Mar-2026	07-Apr-2026	28 days	8 days	✓	08-Apr-2026	28 days	9 days	✓
Physical Tests : Alkalinity Species by Titration												
HDPE												
SW1	001	2523499	E290	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	05-Apr-2026	14 days	6 days	✓
SW2	002	2523499	E290	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	05-Apr-2026	14 days	6 days	✓
SW3	003	2523499	E290	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	05-Apr-2026	14 days	6 days	✓
Dup B	004	2523499	E290	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	05-Apr-2026	14 days	6 days	✓
Physical Tests : Colour (Apparent) by Spectrometer												
HDPE												
SW1	001	2523610	E330	30-Mar-2026	----	----	----		02-Apr-2026	48 hrs	73 hrs	× EHT
SW2	002	2523610	E330	30-Mar-2026	----	----	----		02-Apr-2026	48 hrs	72 hrs	× EHT
SW3	003	2523610	E330	30-Mar-2026	----	----	----		02-Apr-2026	48 hrs	72 hrs	× EHT
Dup B	004	2523610	E330	30-Mar-2026	----	----	----		02-Apr-2026	48 hrs	72 hrs	× EHT
Physical Tests : Conductivity in Water												
HDPE												
SW1	001	2523498	E100	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	05-Apr-2026	28 days	6 days	✓
SW2	002	2523498	E100	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	05-Apr-2026	28 days	6 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : Conductivity in Water												
HDPE												
SW3	003	2523498	E100	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	05-Apr-2026	28 days	6 days	✓
Dup B	004	2523498	E100	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	05-Apr-2026	28 days	6 days	✓
Physical Tests : pH by Meter												
HDPE												
SW1	001	2529090	E108	30-Mar-2026	02-Apr-2026	0.25 hrs	75 hrs	× EHTR-FM	09-Apr-2026	0.25 hrs	237 hrs	× EHTR-FM
SW2	002	2529090	E108	30-Mar-2026	02-Apr-2026	0.25 hrs	75 hrs	× EHTR-FM	09-Apr-2026	0.25 hrs	237 hrs	× EHTR-FM
SW3	003	2529090	E108	30-Mar-2026	02-Apr-2026	0.25 hrs	75 hrs	× EHTR-FM	09-Apr-2026	0.25 hrs	237 hrs	× EHTR-FM
Dup B	004	2529090	E108	30-Mar-2026	02-Apr-2026	0.25 hrs	75 hrs	× EHTR-FM	09-Apr-2026	0.25 hrs	237 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry												
HDPE												
SW1	001	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
SW2	002	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
SW3	003	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Dup B	004	2526080	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Physical Tests : TSS by Gravimetry												
HDPE												
SW1	001	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry												
HDPE												
SW2	002	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
SW3	003	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Dup B	004	2525949	E160	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Physical Tests : Turbidity by Nephelometry												
HDPE												
SW1	001	2523434	E121	30-Mar-2026	----	----	----		02-Apr-2026	3 days	2 days	✓
SW2	002	2523434	E121	30-Mar-2026	----	----	----		02-Apr-2026	3 days	2 days	✓
SW3	003	2523434	E121	30-Mar-2026	----	----	----		02-Apr-2026	3 days	2 days	✓
Dup B	004	2523434	E121	30-Mar-2026	----	----	----		02-Apr-2026	3 days	2 days	✓
Total Metals : Total Mercury in Water by CVAAS												
Glass vial total (hydrochloric acid)												
SW1	001	2523878	E508	30-Mar-2026	03-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW2	002	2523878	E508	30-Mar-2026	03-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
SW3	003	2523878	E508	30-Mar-2026	03-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Dup B	004	2523878	E508	30-Mar-2026	03-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS												
HDPE total (nitric acid)												
SW1	001	2523557	E420	30-Mar-2026	03-Apr-2026	180 days	3 days	✓	03-Apr-2026	180 days	3 days	✓
SW2	002	2523557	E420	30-Mar-2026	03-Apr-2026	180 days	3 days	✓	03-Apr-2026	180 days	3 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Total Metals : Total Metals in Water by CRC ICPMS												
HDPE total (nitric acid)												
SW3	003	2523557	E420	30-Mar-2026	03-Apr-2026	180 days	3 days	✓	03-Apr-2026	180 days	3 days	✓
Dup B	004	2523557	E420	30-Mar-2026	03-Apr-2026	180 days	3 days	✓	03-Apr-2026	180 days	3 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS												
Glass vial (sodium bisulfate)												
SW1	001	2523555	E611D	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	02-Apr-2026	14 days	3 days	✓
SW2	002	2523555	E611D	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	02-Apr-2026	14 days	3 days	✓
SW3	003	2523555	E611D	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	02-Apr-2026	14 days	3 days	✓
Dup B	004	2523555	E611D	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	02-Apr-2026	14 days	3 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2523498	1	20	5.0	5.0	✓
pH by Meter	E108	2529090	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2523434	1	19	5.3	5.0	✓
TSS by Gravimetry	E160	2525949	1	17	5.9	5.0	✓
TDS by Gravimetry	E162	2526080	1	19	5.3	5.0	✓
Chloride in Water by IC	E235.Cl	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2523497	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2523499	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2525817	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2525815	1	20	5.0	5.0	✓
Colour (Apparent) by Spectrometer	E330	2523610	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2527887	1	12	8.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2525816	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2523557	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	2523878	1	16	6.2	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	2521214	1	17	5.9	5.3	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2526115	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2525818	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2523555	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2523498	1	20	5.0	5.0	✓
pH by Meter	E108	2529090	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2523434	1	19	5.3	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	2525949	1	17	5.9	5.0	✓
TDS by Gravimetry	E162	2526080	1	19	5.3	5.0	✓
Chloride in Water by IC	E235.Cl	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2523497	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2523499	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2525817	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2525815	1	20	5.0	5.0	✓
Colour (Apparent) by Spectrometer	E330	2523610	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2527887	1	12	8.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2525816	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2523557	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	2523878	1	16	6.2	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	2521214	1	17	5.9	5.3	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2526115	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2525818	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2523555	1	20	5.0	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2523498	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2523434	1	19	5.3	5.0	✓
TSS by Gravimetry	E160	2525949	1	17	5.9	5.0	✓
TDS by Gravimetry	E162	2526080	1	19	5.3	5.0	✓
Chloride in Water by IC	E235.Cl	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2523497	1	20	5.0	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Method Blanks (MB)							
Alkalinity Species by Titration	E290	2523499	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2525817	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2525815	1	20	5.0	5.0	✓
Colour (Apparent) by Spectrometer	E330	2523610	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2527887	1	12	8.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2525816	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2523557	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	2523878	1	16	6.2	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	2521214	1	17	5.9	5.3	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2526115	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2525818	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2523555	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Chloride in Water by IC	E235.Cl	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2523497	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2525817	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2525815	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2527887	1	12	8.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2525816	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2523557	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	2523878	1	16	6.2	5.0	✓
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L	2526115	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2525818	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2523555	1	20	5.0	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Halifax	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Chemical Oxygen Demand by Colourimetry (Low Level)	E559-L ALS Environmental - Waterloo	Water	APHA 5220 D (mod)	Samples are analyzed using the closed reflux colourimetric method.
Chloride in Water by IC	E235.Cl ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Colour (Apparent) by Spectrometer	E330 ALS Environmental - Waterloo	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Conductivity in Water	E100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
Conductivity Screen (Internal Use Only)	ES100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Waterloo	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Waterloo	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed as CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because hardness is a property of water due to dissolved divalent cations. In non-turbid waters, Hardness from total Ca/Mg is normally comparable to Dissolved Hardness, but may be biased high if particulate forms of Ca or Mg are present.

Ion Balance using Total Metals	EC101A ALS Environmental - Waterloo	Water	APHA 1030E	Cation Sum (using total metals), Anion Sum, and Ion Balance are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Minor ions are included where data is present. Ion Balance cannot be calculated accurately for waters with very low electrical conductivity (EC).
Nitrate and Nitrite (as N) (Calculation)	EC235.N+N ALS Environmental - Waterloo	Water	EPA 300.0	Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
pH by Meter	E108 ALS Environmental - Halifax	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Waterloo	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K3Fe(CN)6) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
Saturation Index using Laboratory pH (Ca-T)	EC105A ALS Environmental - Waterloo	Water	APHA 2330B	Langelier Index provides an indication of scale formation potential at a given pH and temperature, and is calculated as per APHA 2330B Saturation Index. Positive values indicate oversaturation with respect to CaCO3. Negative values indicate undersaturation of CaCO3. This calculation uses laboratory pH measurements and provides estimates of Langelier Index at temperatures of 4, 15, 20, 25, 66, and 77°C. Ryznar Stability Index is an alternative index used for scale formation and corrosion potential.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
TDS by Gravimetry	E162 ALS Environmental - Waterloo	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Total Mercury in Water by CVAAS	E508 ALS Environmental - Waterloo	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Waterloo	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove carbonate-based Inorganic Carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. Forms of carbon associated with inorganic or organic molecules (e.g. SCN and CN) are included in NPOC if they are not removed by purging under acidic conditions. Notably, NPOC excludes most volatile organic compounds and free cyanide. For samples where the majority of Total Carbon is inorganic, this method provides greater accuracy and reliability versus the TOC by subtraction method (TC minus TIC).

Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Silicon as Silica (Calculation)	EC420.SiO2 ALS Environmental - Waterloo	Water	N/A	Total Silicon (as SiO2) is a calculated parameter. Total Silicon (as SiO2 mg/L) = 2.139 x Total Silicon (mg/L).
TSS by Gravimetry	E160 ALS Environmental - Halifax	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. 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.
Turbidity by Nephelometry	E121 ALS Environmental - Waterloo	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Preparation Methods	***Method / Lab***	***Matrix***	***Method Reference***	***Method Descriptions***
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Mercury Water BrCl Digestion	EP508 ALS Environmental - Waterloo	Water	EPA 1631E (mod)	Water samples are digested with BrCl.
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Autotitrator	EP108-TITR ALS Environmental - Waterloo	Water		Sample preparation for parameters analysed by Autotitrator
Preparation for Ion Chromatography	EP235-IC ALS Environmental - Waterloo	Water		Sample preparation for ion chromatography
Preparation for Orthophosphate	EP378-PO4 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod)	Sample preparation for orthophosphate analysis
Preparation for Phenols (4AAP) by Colorimetry	EP562 ALS Environmental - Waterloo	Water		Phenols (4AAP) in Water by Colorimetry
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Waterloo	Water		Preparation for Total Organic Carbon by Combustion

Total Metals Water Digestion	EP420 ALS Environmental - Waterloo	Water	EPA 200.2 (mod)	Water samples are digested with HNO3 and HCl to liberate "total recoverable" metals.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **HA2601062**		
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	: Bailey Milos	Account Manager	: Marie Muise
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	: ----	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 31-Mar-2026 09:00
PO	: ----	Date Analysis Commenced	: 01-Apr-2026
C-O-C number	: CA202600001166_P-CA202600006317	Issue Date	: 10-Apr-2026 09:11
Sampler	: ----		
Site	: ----		
Quote number	: Atlantic Canada 2024-2026 SOA		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Halifax Inorganics, Dartmouth, Nova Scotia
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Robyn MacCormack	Analyst	Halifax Inorganics, Dartmouth, Nova Scotia
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
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General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:

Anonymous=Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number=Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO=Data Quality Objective.
LOR=Limit of Reporting (detection limit).
RPD=Relative Percent Difference
# =Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Sub-Matrix: Drinking Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2526080)											
WT2607224-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	339	344	1.61 %	20%	---

Sub-Matrix: Freshwater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2523498)											
HA2601515-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	35.1	36.0	2.53 %	10%	---
Physical Tests(QC Lot: 2523499)											
HA2601515-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	1.1	1.2	0.1	Diff <2x LOR	---

Sub-Matrix: Groundwater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2525949)											
HA2601051-001	Anonymous	Solids, total suspended [TSS]	----	E160	15.0	mg/L	5580	5830	4.47 %	20%	---
Aggregate Organics(QC Lot: 2526115)											
HA2601051-005	Anonymous	Chemical oxygen demand [COD]	----	E559-L	10	mg/L	262	254	3.22 %	20%	---

Sub-Matrix: Surface Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2523610)											
HA2601062-001	SW1	Colour, apparent	----	E330	4.0	CU	302	299	0.818 %	20%	---
Anions and Nutrients(QC Lot: 2523493)											
HA2601062-001	SW1	Fluoride	16984-48-8	E235.F	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523494)											
HA2601062-001	SW1	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---

Sub-Matrix: **Surface Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients(QC Lot: 2523495)											
HA2601062-001	SW1	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523496)											
HA2601062-001	SW1	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.62	4.63	0.009	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523497)											
HA2601062-001	SW1	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.25	1.23	0.01	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523502)											
HA2601062-001	SW1	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2525815)											
HA2601062-001	SW1	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.419	0.409	0.010	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2525816)											
HA2601062-002	SW2	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0064	0.0067	0.0002	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2525817)											
HA2601062-003	SW3	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0074	0.0083	0.0009	Diff <2x LOR	---
Organic / Inorganic Carbon(QC Lot: 2527887)											
HA2601480-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	7.86	7.91	0.624 %	20%	---
Total Metals(QC Lot: 2523557)											
HA2601062-001	SW1	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.363	0.367	1.17 %	20%	---
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00018	0.00019	0.00001	Diff <2x LOR	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00164	0.00160	2.10 %	20%	---
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000029	0.000029	0.0000003	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000083	0.0000084	0.0000001	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.100	mg/L	0.299	0.303	0.004	Diff <2x LOR	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000040	0.000037	0.000003	Diff <2x LOR	---
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00013	0.00013	0.000003	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	0.261	0.266	1.76 %	20%	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000938	0.000927	1.19 %	20%	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.357	0.359	0.347 %	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00300	0.00300	0.243 %	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000082	0.000084	0.000002	Diff <2x LOR	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.161	0.165	0.004	Diff <2x LOR	---

Sub-Matrix: Surface Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals(QC Lot: 2523557)											
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00057	0.00062	0.00006	Diff <2x LOR	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000110	0.000110	0.0000001	Diff <2x LOR	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.69	1.74	2.84 %	20%	---
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Sodium, total	7440-23-5	E420	0.050	mg/L	3.82	3.93	2.97 %	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.00384	0.00388	0.994 %	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00346	0.00363	4.79 %	20%	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000023	0.000023	0.0000006	Diff <2x LOR	---
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00108	0.00108	0.0000003	Diff <2x LOR	---
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	---
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
Total Metals(QC Lot: 2523878)											
HA2601062-001	SW1	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000065	0.0000057	0.0000008	Diff <2x LOR	---
Aggregate Organics(QC Lot: 2521214)											
HA2601062-001	SW1	Biochemical oxygen demand [BOD]	----	E550	2.0	mg/L	<2.0	<2.0	0	Diff <2x LOR	---
Aggregate Organics(QC Lot: 2525818)											
HA2601062-004	Dup B	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---

Sub-Matrix: Wastewater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2529090)											
HA2601058-001	Anonymous	pH	----	E108	0.10	pH units	7.57	7.61	0.448 %	4%	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2523434)											
HA2601501-001	Anonymous	Turbidity	----	E121	0.10	NTU	0.76	0.77	0.01	Diff <2x LOR	---
Volatile Organic Compounds(QC Lot: 2523555)											
WT2607527-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	---
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	---
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	---
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	---
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	---
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---

Sub-Matrix: Water

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Laboratory Duplicate (DUP) Report						
					LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds(QC Lot: 2523555)											
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	---
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	---
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2523434)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests(QC Lot: 2523498)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests(QC Lot: 2523499)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests(QC Lot: 2523610)						
Colour, apparent	----	E330	2	CU	<2.0	----
Physical Tests(QC Lot: 2525949)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests(QC Lot: 2526080)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests(QC Lot: 2529090)						
pH	----	E108	----	pH units	----	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients(QC Lot: 2523493)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2523494)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2523495)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients(QC Lot: 2523496)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients(QC Lot: 2523497)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2523502)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2525815)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients(QC Lot: 2525816)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients(QC Lot: 2525817)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon(QC Lot: 2527887)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals(QC Lot: 2523557)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals(QC Lot: 2523557)						
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals(QC Lot: 2523878)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Aggregate Organics(QC Lot: 2521214)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics(QC Lot: 2525818)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Aggregate Organics(QC Lot: 2526115)						
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	<10	----
Volatile Organic Compounds(QC Lot: 2523555)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds(QC Lot: 2523555)						
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds(QC Lot: 2523555)						
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests(QC Lot: 2523434)									
Turbidity	----	E121	0.1	NTU	200 NTU	100.0	85.0	115	----
Physical Tests(QC Lot: 2523498)									
Conductivity	----	E100	1	µS/cm	1409 µS/cm	101	90.0	110	----
Physical Tests(QC Lot: 2523499)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	106	85.0	115	----
Physical Tests(QC Lot: 2523610)									
Colour, apparent	----	E330	2	CU	25 CU	99.7	85.0	115	----
Physical Tests(QC Lot: 2525949)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	97.5	85.0	115	----
Physical Tests(QC Lot: 2526080)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	99.0	85.0	115	----
Physical Tests(QC Lot: 2529090)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Anions and Nutrients(QC Lot: 2523493)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2523494)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.5	90.0	110	----
Anions and Nutrients(QC Lot: 2523495)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	99.9	90.0	110	----
Anions and Nutrients(QC Lot: 2523496)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.5	90.0	110	----
Anions and Nutrients(QC Lot: 2523497)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	98.8	90.0	110	----
Anions and Nutrients(QC Lot: 2523502)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	99.0	80.0	120	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients(QC Lot: 2525815)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	104	75.0	125	----
Anions and Nutrients(QC Lot: 2525816)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	101	80.0	120	----
Anions and Nutrients(QC Lot: 2525817)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----
Organic / Inorganic Carbon(QC Lot: 2527887)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	102	80.0	120	----
Total Metals(QC Lot: 2523557)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	0.05 mg/L	96.2	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.0125 mg/L	97.9	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.005 mg/L	103	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	0.05 mg/L	99.8	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.005 mg/L	95.2	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	2.5 mg/L	97.7	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.0025 mg/L	96.0	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.0125 mg/L	100	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.0125 mg/L	98.4	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.0125 mg/L	99.3	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.025 mg/L	98.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.0125 mg/L	111	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	2.5 mg/L	107	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.0125 mg/L	99.6	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.0125 mg/L	95.3	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.025 mg/L	98.3	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	0.5 mg/L	105	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	2.5 mg/L	94.3	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.005 mg/L	99.8	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	0.05 mg/L	97.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	0.5 mg/L	101	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.005 mg/L	98.1	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	2.5 mg/L	107	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.0125 mg/L	103	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	2.5 mg/L	102	80.0	120	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Metals(QC Lot: 2523557)									
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.005 mg/L	92.8	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	0.05 mg/L	99.2	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.005 mg/L	95.5	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.025 mg/L	96.4	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.0125 mg/L	100	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.005 mg/L	98.7	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.0002 mg/L	105	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.025 mg/L	100.0	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.025 mg/L	98.4	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.005 mg/L	95.3	80.0	120	----
Total Metals(QC Lot: 2523878)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0.0001 mg/L	99.4	80.0	120	----
Aggregate Organics(QC Lot: 2521214)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	106	85.0	115	----
Aggregate Organics(QC Lot: 2525818)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	98.2	85.0	115	----
Aggregate Organics(QC Lot: 2526115)									
Chemical oxygen demand [COD]	----	E559-L	10	mg/L	100 mg/L	101	85.0	115	----
Volatile Organic Compounds(QC Lot: 2523555)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	90.9	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	92.2	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	74.1	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	102	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	107	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	91.7	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	93.6	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	86.8	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	105	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	92.8	70.0	130	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds(QC Lot: 2523555)									
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	92.5	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	94.6	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	94.3	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	119	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	82.8	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	74.4	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	# 69.8	70.0	130	MES
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	99.1	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	90.1	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	89.8	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	121	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	91.8	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	113	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Volatile Organic Compounds Surrogates(QC Lot: 2523555)									
Bromofluorobenzene, 4-	460-00-4	E611D	1	µg/L	10 µg/L	101	70	130	----
Difluorobenzene, 1,4-	540-36-3	E611D	1	µg/L	10 µg/L	101	70	130	----

Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2523493)										
HA2601062-001	SW1	Fluoride	16984-48-8	E235.F	0.981 mg/L	1 mg/L	98.1	75.0	125	---
Anions and Nutrients(QC Lot: 2523494)										
HA2601062-001	SW1	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	---
Anions and Nutrients(QC Lot: 2523495)										
HA2601062-001	SW1	Nitrite (as N)	14797-65-0	E235.NO2	0.480 mg/L	0.5 mg/L	96.0	75.0	125	---
Anions and Nutrients(QC Lot: 2523496)										
HA2601062-001	SW1	Chloride	16887-00-6	E235.Cl	95.9 mg/L	100 mg/L	95.9	75.0	125	---
Anions and Nutrients(QC Lot: 2523497)										
HA2601062-001	SW1	Sulfate (as SO4)	14808-79-8	E235.SO4	96.5 mg/L	100 mg/L	96.5	75.0	125	---
Anions and Nutrients(QC Lot: 2523502)										
HA2601062-001	SW1	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0179 mg/L	0.0196 mg/L	91.5	70.0	130	---
Anions and Nutrients(QC Lot: 2525815)										
HA2601062-001	SW1	Kjeldahl nitrogen, total [TKN]	----	E318	2.32 mg/L	2.5 mg/L	93.0	70.0	130	---
Anions and Nutrients(QC Lot: 2525816)										
HA2601062-002	SW2	Phosphorus, total	7723-14-0	E372-U	0.0970 mg/L	0.1 mg/L	97.0	70.0	130	---
Anions and Nutrients(QC Lot: 2525817)										
HA2601062-003	SW3	Ammonia, total (as N)	7664-41-7	E298	0.107 mg/L	0.1 mg/L	107	75.0	125	---
Organic / Inorganic Carbon(QC Lot: 2527887)										
HA2601480-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND	----	ND	70.0	130	---
Total Metals(QC Lot: 2523557)										
HA2601062-002	SW2	Aluminum, total	7429-90-5	E420	ND	----	ND	70.0	130	---
		Antimony, total	7440-36-0	E420	0.0500 mg/L	0.05 mg/L	100	70.0	130	---
		Arsenic, total	7440-38-2	E420	0.0517 mg/L	0.05 mg/L	103	70.0	130	---
		Barium, total	7440-39-3	E420	0.0122 mg/L	0.0125 mg/L	97.4	70.0	130	---
		Beryllium, total	7440-41-7	E420	0.00495 mg/L	0.005 mg/L	99.0	70.0	130	---
		Bismuth, total	7440-69-9	E420	0.0524 mg/L	0.05 mg/L	105	70.0	130	---
		Boron, total	7440-42-8	E420	0.050 mg/L	0.05 mg/L	101	70.0	130	---
		Cadmium, total	7440-43-9	E420	0.00491 mg/L	0.005 mg/L	98.2	70.0	130	---
		Calcium, total	7440-70-2	E420	2.42 mg/L	2.5 mg/L	96.9	70.0	130	---
		Cesium, total	7440-46-2	E420	0.00252 mg/L	0.0025 mg/L	101	70.0	130	---
		Chromium, total	7440-47-3	E420	0.0125 mg/L	0.0125 mg/L	100	70.0	130	---
		Cobalt, total	7440-48-4	E420	0.0126 mg/L	0.0125 mg/L	101	70.0	130	---
		Copper, total	7440-50-8	E420	0.0126 mg/L	0.0125 mg/L	101	70.0	130	---
		Iron, total	7439-89-6	E420	ND	----	ND	70.0	130	---

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Total Metals(QC Lot: 2523557)										
		Lead, total	7439-92-1	E420	0.0254 mg/L	0.025 mg/L	102	70.0	130	---
		Lithium, total	7439-93-2	E420	0.0129 mg/L	0.0125 mg/L	103	70.0	130	---
		Magnesium, total	7439-95-4	E420	2.73 mg/L	2.5 mg/L	109	70.0	130	---
		Manganese, total	7439-96-5	E420	0.0117 mg/L	0.0125 mg/L	93.4	70.0	130	---
		Molybdenum, total	7439-98-7	E420	0.0124 mg/L	0.0125 mg/L	99.6	70.0	130	---
		Nickel, total	7440-02-0	E420	0.0249 mg/L	0.025 mg/L	99.5	70.0	130	---
		Phosphorus, total	7723-14-0	E420	0.495 mg/L	0.5 mg/L	99.1	70.0	130	---
		Potassium, total	7440-09-7	E420	2.33 mg/L	2.5 mg/L	93.1	70.0	130	---
		Rubidium, total	7440-17-7	E420	0.00509 mg/L	0.005 mg/L	102	70.0	130	---
		Selenium, total	7782-49-2	E420	0.0507 mg/L	0.05 mg/L	101	70.0	130	---
		Silicon, total	7440-21-3	E420	ND	----	ND	70.0	130	---
		Silver, total	7440-22-4	E420	0.00510 mg/L	0.005 mg/L	102	70.0	130	---
		Sodium, total	7440-23-5	E420	ND	----	ND	70.0	130	---
		Strontium, total	7440-24-6	E420	0.0134 mg/L	0.0125 mg/L	107	70.0	130	---
		Sulfur, total	7704-34-9	E420	2.50 mg/L	2.5 mg/L	99.9	70.0	130	---
		Tellurium, total	13494-80-9	E420	0.00489 mg/L	0.005 mg/L	97.7	70.0	130	---
		Thallium, total	7440-28-0	E420	0.0514 mg/L	0.05 mg/L	103	70.0	130	---
		Thorium, total	7440-29-1	E420	0.00492 mg/L	0.005 mg/L	98.4	70.0	130	---
		Tin, total	7440-31-5	E420	0.0247 mg/L	0.025 mg/L	98.8	70.0	130	---
		Titanium, total	7440-32-6	E420	0.0123 mg/L	0.0125 mg/L	98.5	70.0	130	---
		Tungsten, total	7440-33-7	E420	0.00503 mg/L	0.005 mg/L	101	70.0	130	---
		Uranium, total	7440-61-1	E420	0.000263 mg/L	0.0002 mg/L	105	70.0	130	---
		Vanadium, total	7440-62-2	E420	0.0251 mg/L	0.025 mg/L	100	70.0	130	---
		Zinc, total	7440-66-6	E420	0.0242 mg/L	0.025 mg/L	96.7	70.0	130	---
		Zirconium, total	7440-67-7	E420	0.00477 mg/L	0.005 mg/L	95.5	70.0	130	---
Total Metals(QC Lot: 2523878)										
HA2601062-002	SW2	Mercury, total	7439-97-6	E508	0.000104 mg/L	0.0001 mg/L	104	70.0	130	---
Aggregate Organics(QC Lot: 2525818)										
HA2601062-004	Dup B	Phenols, total (4AAP)	----	E562	0.0194 mg/L	0.02 mg/L	96.9	75.0	125	---
Aggregate Organics(QC Lot: 2526115)										
HA2601051-005	Anonymous	Chemical oxygen demand [COD]	----	E559-L	ND	----	ND	75.0	125	---
Volatile Organic Compounds(QC Lot: 2523555)										
WT2607527-001	Anonymous	Acetone	67-64-1	E611D	90 µg/L	100 µg/L	89.9	60.0	140	---
		Benzene	71-43-2	E611D	101 µg/L	100 µg/L	101	60.0	140	---
		Bromodichloromethane	75-27-4	E611D	93.1 µg/L	100 µg/L	93.1	60.0	140	---
		Bromoform	75-25-2	E611D	88.7 µg/L	100 µg/L	88.7	60.0	140	---
		Bromomethane	74-83-9	E611D	67.3 µg/L	100 µg/L	67.3	60.0	140	---

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Volatile Organic Compounds(QC Lot: 2523555)										
		Carbon disulfide	75-15-0	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	---
		Carbon tetrachloride	56-23-5	E611D	104 µg/L	100 µg/L	104	60.0	140	---
		Chlorobenzene	108-90-7	E611D	101 µg/L	100 µg/L	101	60.0	140	---
		Chloroethane	75-00-3	E611D	85.4 µg/L	100 µg/L	85.4	60.0	140	---
		Chloroform	67-66-3	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	---
		Chloromethane	74-87-3	E611D	81.8 µg/L	100 µg/L	81.8	60.0	140	---
		Dibromochloromethane	124-48-1	E611D	93.9 µg/L	100 µg/L	93.9	60.0	140	---
		Dibromoethane, 1,2-	106-93-4	E611D	83.1 µg/L	100 µg/L	83.1	60.0	140	---
		Dichlorobenzene, 1,2-	95-50-1	E611D	103 µg/L	100 µg/L	103	60.0	140	---
		Dichlorobenzene, 1,3-	541-73-1	E611D	107 µg/L	100 µg/L	107	60.0	140	---
		Dichlorobenzene, 1,4-	106-46-7	E611D	109 µg/L	100 µg/L	109	60.0	140	---
		Dichlorodifluoromethane	75-71-8	E611D	84.9 µg/L	100 µg/L	84.9	60.0	140	---
		Dichloroethane, 1,1-	75-34-3	E611D	105 µg/L	100 µg/L	105	60.0	140	---
		Dichloroethane, 1,2-	107-06-2	E611D	88.7 µg/L	100 µg/L	88.7	60.0	140	---
		Dichloroethylene, 1,1-	75-35-4	E611D	105 µg/L	100 µg/L	105	60.0	140	---
		Dichloroethylene, cis-1,2-	156-59-2	E611D	98.7 µg/L	100 µg/L	98.7	60.0	140	---
		Dichloroethylene, trans-1,2-	156-60-5	E611D	104 µg/L	100 µg/L	104	60.0	140	---
		Dichloromethane	75-09-2	E611D	88.5 µg/L	100 µg/L	88.5	60.0	140	---
		Dichloropropane, 1,2-	78-87-5	E611D	92.6 µg/L	100 µg/L	92.6	60.0	140	---
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	---
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	87.9 µg/L	100 µg/L	87.9	60.0	140	---
		Ethylbenzene	100-41-4	E611D	106 µg/L	100 µg/L	106	60.0	140	---
		Hexane, n-	110-54-3	E611D	111 µg/L	100 µg/L	111	60.0	140	---
		Hexanone, 2-	591-78-6	E611D	78 µg/L	100 µg/L	78.0	60.0	140	---
		Methyl ethyl ketone [MEK]	78-93-3	E611D	72 µg/L	100 µg/L	71.6	60.0	140	---
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	67 µg/L	100 µg/L	66.6	60.0	140	---
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	101 µg/L	100 µg/L	101	60.0	140	---
		Styrene	100-42-5	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	---
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	---
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	88.4 µg/L	100 µg/L	88.4	60.0	140	---
		Tetrachloroethylene	127-18-4	E611D	105 µg/L	100 µg/L	105	60.0	140	---
		Toluene	108-88-3	E611D	103 µg/L	100 µg/L	103	60.0	140	---
		Trichloroethane, 1,1,1-	71-55-6	E611D	102 µg/L	100 µg/L	102	60.0	140	---
		Trichloroethane, 1,1,2-	79-00-5	E611D	86.6 µg/L	100 µg/L	86.6	60.0	140	---
		Trichloroethylene	79-01-6	E611D	105 µg/L	100 µg/L	105	60.0	140	---
		Trichlorofluoromethane	75-69-4	E611D	114 µg/L	100 µg/L	114	60.0	140	---
		Vinyl chloride	75-01-4	E611D	81.8 µg/L	100 µg/L	81.8	60.0	140	---

Sub-Matrix: **Groundwater**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Volatile Organic Compounds(QC Lot: 2523555)										
		Xylene, m+p-	179601-23-1	E611D	223 µg/L	200 µg/L	111	60.0	140	---
		Xylene, o-	95-47-6	E611D	104 µg/L	100 µg/L	104	60.0	140	---
Volatile Organic Compounds Surrogates(QC Lot: 2523555)										
		Bromofluorobenzene, 4-	460-00-4	E611D	10.1 µg/L	10 µg/L	101	70.0	130	---
		Difluorobenzene, 1,4-	540-36-3	E611D	10.0 µg/L	10 µg/L	100	70.0	130	---

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Work Order CA202600001166

CA202600001166

Print Date	31-03-2026 09:43 *
eCOC WO#	CA202600001166
Status	Submitted (Pre-login)
Submit Date	16-03-2026 09:32 *
Lab	ALS Environmental Halifax
Client	Dillon Consulting Limited
Office	Halifax
Project	22-5099
Quote	Atlantic Canada 2024-2026 SOA
Site	
Contact	Bailey Milos
Purchase Order No.	
Sampler Contact	
Created By	Marie Muise
Modified Date	16-03-2026 09:32 *
Overall Description	
Special Instructions	
TAT Priority	

Environmental Division
Halifax
Work Order Reference
HA2601062

Telephone : +1 902 707 4888

Samples

Sample No.	Sample Type	Sample Name	Sample Point	Sampling Date	Filtered/Preserved	Field Data
1	Water/Surface Water	SW1				
2	Water/Surface Water	SW2				
3	Water/Surface Water	SW3				
4	Water/Surface Water	Dup B				

* (UTC-04:00) Atlantic Time (Canada)

Test Items

Sample No.	Containers *	- BOD	- Gen chem plus total metals, TKN,TSS,COD,TP,Phenols	- Total Mercury in Water	- VOCs in Water
1	A, Bx2, C, Dx2, E, F	☑	☑	☑	☑
2	A, Bx2, C, Dx2, E, F	☑	☑	☑	☑
3	A, Bx2, C, Dx2, E, F	☑	☑	☑	☑
4	A, Bx2, C, Dx2, E, F	☑	☑	☑	☑

* Containers Legend

Containers		Name	Size	Category
A		Amber glass total (sulfuric acid)	100 mL	Purple/white
B		Glass vial (sodium bisulfate)	40 mL	Blue/white
C		Glass vial total (hydrochloric acid)	40 mL	Yellow/black
D		HDPE	250 mL	Green/white
E		HDPE	500 mL	Green/white
F		HDPE total (nitric acid)	125 mL	Warm red/white

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

CERTIFICATE OF ANALYSIS

Work Order	: **HA2601471**		
Amendment	: **1**		
Client	: **Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	: Bailey Milos	Account Manager	: Marie Muise
Address	: 137 Chain Lake Drive Suite 100 Halifax Nova Scotia Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	: ----	E-mail	: marie.muise@alsglobal.com
Project	: 22-5099	Telephone	: +1 902 707 4888
PO	: ----	Date Samples Received	: 31-Mar-2026 09:00
C-O-C number	: ----	Date Analysis Commenced	: 02-Apr-2026
Sampler	: ----	Issue Date	: 05-Jun-2026 09:35
Site	: ----		
Quote number	: Atlantic Canada 2024-2026 SOA		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Nik Perkio	Senior Analyst	Metals, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Robyn MacCormack	Analyst	Inorganics, Dartmouth, Nova Scotia

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

Amendment (05/06/2026): This report has been amended as a result of a request to change sample identification numbers (IDs) received by ALS from Penny Allen on June 5, 2026. All analysis results are as per the previous report.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	DW-6006 ----	----	----	----	----
					Client sampling date / time	30-Mar-2026 10:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2601471-001	----	----	----	----
						Result	----	----	----	----
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		20.6	----	----	----	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	----	----	----	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		16.9	----	----	----	----
Colour, apparent	----	E330/WT	2.0	CU		260	----	----	----	----
Conductivity	----	E100/WT	1.0	µS/cm		124	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WT	0.50	mg/L		22.7	----	----	----	----
Langelier index (@ 20°C)	----	EC105A/WT	0.010	-		-3.18	----	----	----	----
Langelier index (@ 4°C)	----	EC105A/WT	0.010	-		-3.43	----	----	----	----
pH	----	E108/HA	0.10	pH units		6.29	----	----	----	----
pH, saturation (@ 20°C)	----	EC105A/WT	0.010	pH units		9.47	----	----	----	----
pH, saturation (@ 4°C)	----	EC105A/WT	0.010	pH units		9.72	----	----	----	----
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L		101 DLDS	----	----	----	----
Turbidity	----	E121/WT	0.10	NTU		34.0	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0531	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		19.4	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.131	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.020	----	----	----	----
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		<0.022	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	DW-6006 ----	----	----	----	----
					Client sampling date / time	30-Mar-2026 10:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2601471-001	----	----	----	----
						Result	----	----	----	----
Anions and Nutrients										
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L		<0.0010	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		8.68	----	----	----	----
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L		1.10	----	----	----	----
Ion Balance										
Anion sum	----	EC101A/WT	0.10	meq/L		1.07	----	----	----	----
Cation sum (total)	----	EC101A/WT	0.10	meq/L		1.25	----	----	----	----
Ion balance (cations/anions)	----	EC101A/WT	0.01	%		117	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L		0.0035	----	----	----	----
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L		0.0157	----	----	----	----
Barium, total	7440-39-3	E420/WT	0.00010	mg/L		0.00607	----	----	----	----
Beryllium, total	7440-41-7	E420/WT	0.000020	mg/L		<0.000020	----	----	----	----
Bismuth, total	7440-69-9	E420/WT	0.000050	mg/L		<0.000050	----	----	----	----
Boron, total	7440-42-8	E420/WT	0.010	mg/L		0.014	----	----	----	----
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L		<0.0000050	----	----	----	----
Calcium, total	7440-70-2	E420/WT	0.100	mg/L		4.45	----	----	----	----
Cesium, total	7440-46-2	E420/WT	0.000010	mg/L		0.000076	----	----	----	----
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L		0.00110	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	DW-6006 ----	----	----	----	----
					Client sampling date / time	30-Mar-2026 10:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2601471-001	----	----	----	----
						Result	----	----	----	----
Total Metals										
Copper, total	7440-50-8	E420/WT	0.00050	mg/L		0.0141	----	----	----	----
Iron, total	7439-89-6	E420/WT	0.010	mg/L		4.12	----	----	----	----
Lead, total	7439-92-1	E420/WT	0.000050	mg/L		0.000181	----	----	----	----
Lithium, total	7439-93-2	E420/WT	0.0010	mg/L		0.0146	----	----	----	----
Magnesium, total	7439-95-4	E420/WT	0.0050	mg/L		2.81	----	----	----	----
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L		0.384	----	----	----	----
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L		0.000360	----	----	----	----
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L		0.00069	----	----	----	----
Phosphorus, total	7723-14-0	E420/WT	0.050	mg/L		0.301	----	----	----	----
Potassium, total	7440-09-7	E420/WT	0.050	mg/L		1.67	----	----	----	----
Rubidium, total	7440-17-7	E420/WT	0.00020	mg/L		0.00296	----	----	----	----
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L		<0.000050	----	----	----	----
Silicon (as SiO2), total	7631-86-9	EC420.SiO2/WT	0.25	mg/L		24.6	----	----	----	----
Silicon, total	7440-21-3	E420/WT	0.10	mg/L		11.5	----	----	----	----
Silver, total	7440-22-4	E420/WT	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/WT	0.050	mg/L		13.5	----	----	----	----
Strontium, total	7440-24-6	E420/WT	0.00020	mg/L		0.0522	----	----	----	----
Sulfur, total	7704-34-9	E420/WT	0.50	mg/L		2.91	----	----	----	----
Tellurium, total	13494-80-9	E420/WT	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/WT	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, total	7440-29-1	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	DW-6006 ----	----	----	----	----
					Client sampling date / time	30-Mar-2026 10:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		HA2601471-001	----	----	----	----
						Result	----	----	----	----
Total Metals										
Tin, total	7440-31-5	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/WT	0.00010	mg/L		<0.00010	----	----	----	----
Uranium, total	7440-61-1	E420/WT	0.000010	mg/L		<0.000010	----	----	----	----
Vanadium, total	7440-62-2	E420/WT	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L		0.0187	----	----	----	----
Zirconium, total	7440-67-7	E420/WT	0.00020	mg/L		<0.00020	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

QUALITY CONTROL REPORT

Work Order	: **HA2601471**		
Amendment	: **1**		
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	: Bailey Milos	Account Manager	: Marie Muise
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	: ----	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 31-Mar-2026 09:00
PO	: ----	Date Analysis Commenced	: 02-Apr-2026
C-O-C number	: ----	Issue Date	: 05-Jun-2026 09:35
Sampler	: ----		
Site	: ----		
Quote number	: Atlantic Canada 2024-2026 SOA		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Metals, Waterloo, Ontario
Robyn MacCormack	Analyst	Halifax Inorganics, Dartmouth, Nova Scotia

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:

Anonymous=Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number=Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO=Data Quality Objective.
LOR=Limit of Reporting (detection limit).
RPD=Relative Percent Difference
# =Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Sub-Matrix: Freshwater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2523498)											
HA2601515-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	35.1	36.0	2.53 %	10%	---
Physical Tests(QC Lot: 2523499)											
HA2601515-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	1.1	1.2	0.1	Diff <2x LOR	---

Sub-Matrix: Groundwater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients(QC Lot: 2525831)											
HA2601440-008	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0088	0.0094	0.0006	Diff <2x LOR	---
Organic / Inorganic Carbon(QC Lot: 2525832)											
HA2601440-009	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	10.5	9.37	11.0 %	20%	---

Sub-Matrix: Surface Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2523610)											
HA2601062-001	Anonymous	Colour, apparent	----	E330	4.0	CU	302	299	0.818 %	20%	---
Anions and Nutrients(QC Lot: 2523493)											
HA2601062-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523494)											
HA2601062-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523495)											
HA2601062-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523496)											
HA2601062-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.62	4.63	0.009	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523497)											
HA2601062-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.25	1.23	0.01	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2523502)											
HA2601062-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---

Sub-Matrix: Surface Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals(QC Lot: 2523557)											
HA2601062-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.363	0.367	1.17 %	20%	---
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00018	0.00019	0.00001	Diff <2x LOR	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00164	0.00160	2.10 %	20%	---
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000029	0.000029	0.0000003	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000083	0.0000084	0.0000001	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.100	mg/L	0.299	0.303	0.004	Diff <2x LOR	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000040	0.000037	0.000003	Diff <2x LOR	---
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00013	0.00013	0.000003	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	0.261	0.266	1.76 %	20%	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000938	0.000927	1.19 %	20%	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.357	0.359	0.347 %	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00300	0.00300	0.243 %	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000082	0.000084	0.000002	Diff <2x LOR	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.161	0.165	0.004	Diff <2x LOR	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00057	0.00062	0.00006	Diff <2x LOR	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000110	0.000110	0.0000001	Diff <2x LOR	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.69	1.74	2.84 %	20%	---
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Sodium, total	7440-23-5	E420	0.050	mg/L	3.82	3.93	2.97 %	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.00384	0.00388	0.994 %	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00346	0.00363	4.79 %	20%	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000023	0.000023	0.0000006	Diff <2x LOR	---

Sub-Matrix: Surface Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals(QC Lot: 2523557)											
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00108	0.00108	0.0000003	Diff <2x LOR	---
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	---
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---

Sub-Matrix: Wastewater

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2527209)											
HA2601061-001	Anonymous	pH	----	E108	0.10	pH units	7.76	7.78	0.206 %	4%	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2523434)											
HA2601501-001	Anonymous	Turbidity	----	E121	0.10	NTU	0.76	0.77	0.01	Diff <2x LOR	---
Physical Tests(QC Lot: 2526075)											
HA2601498-004	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	170	168	2	Diff <2x LOR	---

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2523434)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests(QC Lot: 2523498)						
Conductivity	----	E100	1	µS/cm	<1.0	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2523499)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests(QC Lot: 2523610)						
Colour, apparent	----	E330	2	CU	<2.0	----
Physical Tests(QC Lot: 2526075)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests(QC Lot: 2527209)						
pH	----	E108	----	pH units	----	----
Anions and Nutrients(QC Lot: 2523493)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2523494)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2523495)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients(QC Lot: 2523496)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients(QC Lot: 2523497)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2523502)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2525831)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon(QC Lot: 2525832)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals(QC Lot: 2523557)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals(QC Lot: 2523557)						
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Physical Tests(QC Lot: 2523434)									
Turbidity	----	E121	0.1	NTU	200 NTU	100.0	85.0	115	----
Physical Tests(QC Lot: 2523498)									
Conductivity	----	E100	1	µS/cm	1409 µS/cm	101	90.0	110	----
Physical Tests(QC Lot: 2523499)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	106	85.0	115	----
Physical Tests(QC Lot: 2523610)									
Colour, apparent	----	E330	2	CU	25 CU	99.7	85.0	115	----
Physical Tests(QC Lot: 2526075)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	103	85.0	115	----
Physical Tests(QC Lot: 2527209)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Anions and Nutrients(QC Lot: 2523493)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2523494)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.5	90.0	110	----
Anions and Nutrients(QC Lot: 2523495)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	99.9	90.0	110	----
Anions and Nutrients(QC Lot: 2523496)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.5	90.0	110	----
Anions and Nutrients(QC Lot: 2523497)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	98.8	90.0	110	----
Anions and Nutrients(QC Lot: 2523502)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	99.0	80.0	120	----
Anions and Nutrients(QC Lot: 2525831)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----
Organic / Inorganic Carbon(QC Lot: 2525832)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	98.4	80.0	120	----
Total Metals(QC Lot: 2523557)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	0.05 mg/L	96.2	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.0125 mg/L	97.9	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.005 mg/L	103	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	0.05 mg/L	99.8	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.005 mg/L	95.2	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	2.5 mg/L	97.7	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.0025 mg/L	96.0	80.0	120	----

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals(QC Lot: 2523557)									
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.0125 mg/L	100	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.0125 mg/L	98.4	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.0125 mg/L	99.3	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.025 mg/L	98.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.0125 mg/L	111	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	2.5 mg/L	107	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.0125 mg/L	99.6	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.0125 mg/L	95.3	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.025 mg/L	98.3	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	0.5 mg/L	105	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	2.5 mg/L	94.3	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.005 mg/L	99.8	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	0.05 mg/L	97.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	0.5 mg/L	101	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.005 mg/L	98.1	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	2.5 mg/L	107	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.0125 mg/L	103	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	2.5 mg/L	102	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.005 mg/L	92.8	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	0.05 mg/L	99.2	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.005 mg/L	95.5	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.025 mg/L	96.4	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.0125 mg/L	100	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.005 mg/L	98.7	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.0002 mg/L	105	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.025 mg/L	100.0	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.025 mg/L	98.4	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.005 mg/L	95.3	80.0	120	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2523493)										
HA2601062-001	Anonymous	Fluoride	16984-48-8	E235.F	0.981 mg/L	1 mg/L	98.1	75.0	125	---
Anions and Nutrients(QC Lot: 2523494)										
HA2601062-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	---
Anions and Nutrients(QC Lot: 2523495)										
HA2601062-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.480 mg/L	0.5 mg/L	96.0	75.0	125	---
Anions and Nutrients(QC Lot: 2523496)										
HA2601062-001	Anonymous	Chloride	16887-00-6	E235.Cl	95.9 mg/L	100 mg/L	95.9	75.0	125	---
Anions and Nutrients(QC Lot: 2523497)										
HA2601062-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.5 mg/L	100 mg/L	96.5	75.0	125	---
Anions and Nutrients(QC Lot: 2523502)										
HA2601062-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0179 mg/L	0.0196 mg/L	91.5	70.0	130	---
Anions and Nutrients(QC Lot: 2525831)										
HA2601440-008	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.107 mg/L	0.1 mg/L	107	75.0	125	---
Organic / Inorganic Carbon(QC Lot: 2525832)										
HA2601440-009	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND	----	ND	70.0	130	---
Total Metals(QC Lot: 2523557)										
HA2601062-002	Anonymous	Aluminum, total	7429-90-5	E420	ND	----	ND	70.0	130	---
		Antimony, total	7440-36-0	E420	0.0500 mg/L	0.05 mg/L	100	70.0	130	---
		Arsenic, total	7440-38-2	E420	0.0517 mg/L	0.05 mg/L	103	70.0	130	---
		Barium, total	7440-39-3	E420	0.0122 mg/L	0.0125 mg/L	97.4	70.0	130	---
		Beryllium, total	7440-41-7	E420	0.00495 mg/L	0.005 mg/L	99.0	70.0	130	---
		Bismuth, total	7440-69-9	E420	0.0524 mg/L	0.05 mg/L	105	70.0	130	---
		Boron, total	7440-42-8	E420	0.050 mg/L	0.05 mg/L	101	70.0	130	---
		Cadmium, total	7440-43-9	E420	0.00491 mg/L	0.005 mg/L	98.2	70.0	130	---
		Calcium, total	7440-70-2	E420	2.42 mg/L	2.5 mg/L	96.9	70.0	130	---
		Cesium, total	7440-46-2	E420	0.00252 mg/L	0.0025 mg/L	101	70.0	130	---
		Chromium, total	7440-47-3	E420	0.0125 mg/L	0.0125 mg/L	100	70.0	130	---
		Cobalt, total	7440-48-4	E420	0.0126 mg/L	0.0125 mg/L	101	70.0	130	---
		Copper, total	7440-50-8	E420	0.0126 mg/L	0.0125 mg/L	101	70.0	130	---
		Iron, total	7439-89-6	E420	ND	----	ND	70.0	130	---
		Lead, total	7439-92-1	E420	0.0254 mg/L	0.025 mg/L	102	70.0	130	---
		Lithium, total	7439-93-2	E420	0.0129 mg/L	0.0125 mg/L	103	70.0	130	---
		Magnesium, total	7439-95-4	E420	2.73 mg/L	2.5 mg/L	109	70.0	130	---
		Manganese, total	7439-96-5	E420	0.0117 mg/L	0.0125 mg/L	93.4	70.0	130	---
		Molybdenum, total	7439-98-7	E420	0.0124 mg/L	0.0125 mg/L	99.6	70.0	130	---
		Nickel, total	7440-02-0	E420	0.0249 mg/L	0.025 mg/L	99.5	70.0	130	---
		Phosphorus, total	7723-14-0	E420	0.495 mg/L	0.5 mg/L	99.1	70.0	130	---

Sub-Matrix: Groundwater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Total Metals(QC Lot: 2523557)										
		Potassium, total	7440-09-7	E420	2.33 mg/L	2.5 mg/L	93.1	70.0	130	---
		Rubidium, total	7440-17-7	E420	0.00509 mg/L	0.005 mg/L	102	70.0	130	---
		Selenium, total	7782-49-2	E420	0.0507 mg/L	0.05 mg/L	101	70.0	130	---
		Silicon, total	7440-21-3	E420	ND	----	ND	70.0	130	---
		Silver, total	7440-22-4	E420	0.00510 mg/L	0.005 mg/L	102	70.0	130	---
		Sodium, total	7440-23-5	E420	ND	----	ND	70.0	130	---
		Strontium, total	7440-24-6	E420	0.0134 mg/L	0.0125 mg/L	107	70.0	130	---
		Sulfur, total	7704-34-9	E420	2.50 mg/L	2.5 mg/L	99.9	70.0	130	---
		Tellurium, total	13494-80-9	E420	0.00489 mg/L	0.005 mg/L	97.7	70.0	130	---
		Thallium, total	7440-28-0	E420	0.0514 mg/L	0.05 mg/L	103	70.0	130	---
		Thorium, total	7440-29-1	E420	0.00492 mg/L	0.005 mg/L	98.4	70.0	130	---
		Tin, total	7440-31-5	E420	0.0247 mg/L	0.025 mg/L	98.8	70.0	130	---
		Titanium, total	7440-32-6	E420	0.0123 mg/L	0.0125 mg/L	98.5	70.0	130	---
		Tungsten, total	7440-33-7	E420	0.00503 mg/L	0.005 mg/L	101	70.0	130	---
		Uranium, total	7440-61-1	E420	0.000263 mg/L	0.0002 mg/L	105	70.0	130	---
		Vanadium, total	7440-62-2	E420	0.0251 mg/L	0.025 mg/L	100	70.0	130	---
		Zinc, total	7440-66-6	E420	0.0242 mg/L	0.025 mg/L	96.7	70.0	130	---
		Zirconium, total	7440-67-7	E420	0.00477 mg/L	0.005 mg/L	95.5	70.0	130	---

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Quality Control Interpretive Report

Work Order	: **HA2601471**			
Amendment	: **1**			
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax	
Contact	: Bailey Milos	Account Manager	: Marie Muise	
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2	
Telephone	: ----	Telephone	: +1 902 707 4888	
Project	: 22-5099	Date Samples Received	: 31-Mar-2026 09:00	
PO	: ----	Issue Date	: 05-Jun-2026 09:35	
C-O-C number	: ----			
Sampler	: ----			
Site	: ----			
Quote number	: Atlantic Canada 2024-2026 SOA			
No. of samples received	: 1			
No. of samples analysed	: 1			

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and/or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence												
Amber glass total (sulfuric acid)												
DW-6006	001	2525831	E298	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC												
HDPE												
DW-6006	001	2523496	E235.Cl	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)												
HDPE												
DW-6006	001	2523502	E378-U	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	07-Apr-2026	3 days	8 days	× EHT
Anions and Nutrients : Fluoride in Water by IC												
HDPE												
DW-6006	001	2523493	E235.F	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Nitrate in Water by IC												
HDPE												
DW-6006	001	2523494	E235.NO3	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC												
HDPE												
DW-6006	001	2523495	E235.NO2	30-Mar-2026	02-Apr-2026	3 days	3 days	✓	06-Apr-2026	3 days	7 days	× EHT
Anions and Nutrients : Sulfate in Water by IC												
HDPE												
DW-6006	001	2523497	E235.SO4	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	06-Apr-2026	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)												
Amber glass total (sulfuric acid)												
DW-6006	001	2525832	E355-L	30-Mar-2026	06-Apr-2026	28 days	7 days	✓	07-Apr-2026	28 days	8 days	✓
Physical Tests : Alkalinity Species by Titration												
HDPE												
DW-6006	001	2523499	E290	30-Mar-2026	02-Apr-2026	14 days	3 days	✓	05-Apr-2026	14 days	6 days	✓
Physical Tests : Colour (Apparent) by Spectrometer												
HDPE												
DW-6006	001	2523610	E330	30-Mar-2026	----	----	----		02-Apr-2026	48 hrs	79 hrs	× EHT
Physical Tests : Conductivity in Water												
HDPE												
DW-6006	001	2523498	E100	30-Mar-2026	02-Apr-2026	28 days	3 days	✓	05-Apr-2026	28 days	6 days	✓
Physical Tests : pH by Meter												
HDPE												
DW-6006	001	2527209	E108	30-Mar-2026	07-Apr-2026	0.25 hrs	190 hrs	× EHTR-FM	07-Apr-2026	0.25 hrs	197 hrs	× EHTR-FM

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry												
HDPE												
DW-6006	001	2526075	E162	30-Mar-2026	----	----	----		06-Apr-2026	7 days	7 days	✓
Physical Tests : Turbidity by Nephelometry												
HDPE												
DW-6006	001	2523434	E121	30-Mar-2026	----	----	----		02-Apr-2026	3 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS												
HDPE total (nitric acid)												
DW-6006	001	2523557	E420	30-Mar-2026	03-Apr-2026	180 days	4 days	✓	03-Apr-2026	180 days	4 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method / Lab	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Conductivity in Water	E100 / WT	2523498	1	20	5.0	5.0	✓
pH by Meter	E108 / HA	2527209	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121 / WT	2523434	1	19	5.3	5.0	✓
TDS by Gravimetry	E162 / WT	2526075	1	19	5.3	5.0	✓
Chloride in Water by IC	E235.Cl / WT	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F / WT	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2 / WT	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3 / WT	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4 / WT	2523497	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290 / WT	2523499	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298 / WT	2525831	1	20	5.0	5.0	✓
Colour (Apparent) by Spectrometer	E330 / WT	2523610	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WT	2525832	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U / WT	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420 / WT	2523557	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100 / WT	2523498	1	20	5.0	5.0	✓
pH by Meter	E108 / HA	2527209	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121 / WT	2523434	1	19	5.3	5.0	✓
TDS by Gravimetry	E162 / WT	2526075	1	19	5.3	5.0	✓
Chloride in Water by IC	E235.Cl / WT	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F / WT	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2 / WT	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3 / WT	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4 / WT	2523497	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290 / WT	2523499	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298 / WT	2525831	1	20	5.0	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method / Lab	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
Colour (Apparent) by Spectrometer	E330 / WT	2523610	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WT	2525832	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U / WT	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420 / WT	2523557	1	20	5.0	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100 / WT	2523498	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121 / WT	2523434	1	19	5.3	5.0	✓
TDS by Gravimetry	E162 / WT	2526075	1	19	5.3	5.0	✓
Chloride in Water by IC	E235.Cl / WT	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F / WT	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2 / WT	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3 / WT	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4 / WT	2523497	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290 / WT	2523499	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298 / WT	2525831	1	20	5.0	5.0	✓
Colour (Apparent) by Spectrometer	E330 / WT	2523610	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WT	2525832	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U / WT	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420 / WT	2523557	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Chloride in Water by IC	E235.Cl / WT	2523496	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F / WT	2523493	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2 / WT	2523495	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3 / WT	2523494	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4 / WT	2523497	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298 / WT	2525831	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WT	2525832	1	20	5.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U / WT	2523502	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420 / WT	2523557	1	20	5.0	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Chloride in Water by IC	E235.Cl ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Colour (Apparent) by Spectrometer	E330 ALS Environmental - Waterloo	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Conductivity in Water	E100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
Conductivity Screen (Internal Use Only)	ES100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Waterloo	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Waterloo	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed as CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because hardness is a property of water due to dissolved divalent cations. In non-turbid waters, Hardness from total Ca/Mg is normally comparable to Dissolved Hardness, but may be biased high if particulate forms of Ca or Mg are present.
Ion Balance using Total Metals	EC101A ALS Environmental - Waterloo	Water	APHA 1030E	Cation Sum (using total metals), Anion Sum, and Ion Balance are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Minor ions are included where data is present. Ion Balance cannot be calculated accurately for waters with very low electrical conductivity (EC).
Nitrate and Nitrite (as N) (Calculation)	EC235.N+N ALS Environmental - Waterloo	Water	EPA 300.0	Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).

Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
pH by Meter	E108 ALS Environmental - Halifax	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Saturation Index using Laboratory pH (Ca-T)	EC105A ALS Environmental - Waterloo	Water	APHA 2330B	Langelier Index provides an indication of scale formation potential at a given pH and temperature, and is calculated as per APHA 2330B Saturation Index. Positive values indicate oversaturation with respect to CaCO3. Negative values indicate undersaturation of CaCO3. This calculation uses laboratory pH measurements and provides estimates of Langelier Index at temperatures of 4, 15, 20, 25, 66, and 77°C. Ryznar Stability Index is an alternative index used for scale formation and corrosion potential.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
TDS by Gravimetry	E162 ALS Environmental - Waterloo	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Waterloo	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove carbonate-based Inorganic Carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. Forms of carbon associated with inorganic or organic molecules (e.g. SCN and CN) are included in NPOC if they are not removed by purging under acidic conditions. Notably, NPOC excludes most volatile organic compounds and free cyanide. For samples where the majority of Total Carbon is inorganic, this method provides greater accuracy and reliability versus the TOC by subtraction method (TC minus TIC).
Total Silicon as Silica (Calculation)	EC420.SiO2 ALS Environmental - Waterloo	Water	N/A	Total Silicon (as SiO2) is a calculated parameter. Total Silicon (as SiO2 mg/L) = 2.139 x Total Silicon (mg/L).
Turbidity by Nephelometry	E121 ALS Environmental - Waterloo	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
Preparation Methods	***Method / Lab***	***Matrix***	***Method Reference***	***Method Descriptions***
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Autotitrator	EP108-TITR ALS Environmental - Waterloo	Water		Sample preparation for parameters analysed by Autotitrator
Preparation for Ion Chromatography	EP235-IC ALS Environmental - Waterloo	Water		Sample preparation for ion chromatography

Preparation for Orthophosphate	EP378-PO4 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod)	Sample preparation for orthophosphate analysis
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Waterloo	Water		Preparation for Total Organic Carbon by Combustion
Total Metals Water Digestion	EP420 ALS Environmental - Waterloo	Water	EPA 200.2 (mod)	Water samples are digested with HNO3 and HCl to liberate "total recoverable" metals.

CERTIFICATE OF ANALYSIS

Work Order	: **HA2602201-AH**		
Amendment	: **3**		
Client	: **Dillon Consulting Limited**	Laboratory	: ALS Environmental - Halifax
Contact	: Penny Allen	Account Manager	: Marie Muise
Address	: 137 Chain Lake Drive Suite 100 Halifax Nova Scotia Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	: 902.450.5015 ext. 5001	E-mail	: marie.muise@alsglobal.com
Project	: 22-5099	Telephone	: +1 902 707 4888
PO	: ----	Date Samples Received	: 29-Apr-2026 09:00
C-O-C number	: ----	Date Analysis Commenced	: 30-Apr-2026
Sampler	: ----	Issue Date	: 03-Jun-2026 16:05
Site	: ----		
Quote number	: Atlantic Canada 2024-2026 SOA		
No. of samples received	: 7		
No. of samples analysed	: 7		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Jiaxi Wang	Supervisor - Water Chemistry	Inorganics, Dartmouth, Nova Scotia
John Tang	Lab Analyst	Inorganics, Waterloo, Ontario
Jon Fisher	Laboratory Manager - Environmental	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

Amendment (07/05/2026): This report has been amended as a result of a request to display select samples/analytes which have been isolated from the original submission report. All analysis results are as per the previous report.
Amendment (03/06/2026): This report has been amended as a result of a request to change sample identification numbers (IDs) received by ALS from Penny Allen on June 3, 2026.. All analysis results are as per the previous report.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	DW-3003 ----	DW-4006 ----	DW-5000 ----	DW-8001 ----	DW-8000 ----
					Client sampling date / time	28-Apr-2026 11:10	28-Apr-2026 11:30	28-Apr-2026 12:10	28-Apr-2026 13:30	28-Apr-2026 15:05
						HA2602201-001	HA2602201-002	HA2602201-003	HA2602201-004	HA2602201-005
						Result	Result	Result	Result	Result
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		9.8	18.1	6.6	12.0	63.3
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	<0.6	<0.6	<0.6
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		8.0	14.8	5.4	9.8	51.9
Colour, apparent	----	E330/WT	2.0	CU		<2.0	<2.0	95.3	4.1	<2.0
Conductivity	----	E100/WT	1.0	µS/cm		116	79.1	86.5	124	354
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WT	0.50	mg/L		16.5	16.8	16.1	15.1	69.7
Langelier index (@ 20°C)	----	EC105A/WT	0.010	-		-3.20	-3.19	-3.89	-3.69	-1.68
Langelier index (@ 4°C)	----	EC105A/WT	0.010	-		-3.45	-3.44	-4.15	-3.94	-1.93
pH	----	E108/HA	0.10	pH units		6.50	6.53	6.11	6.00	6.62
pH, saturation (@ 20°C)	----	EC105A/WT	0.010	pH units		9.70	9.72	10.00	9.69	8.30
pH, saturation (@ 4°C)	----	EC105A/WT	0.010	pH units		9.95	9.97	10.26	9.94	8.55
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L		77 DLDS	64 DLDS	73 DLDS	78 DLDS	222 DLDS
Turbidity	----	E121/WT	0.10	NTU		<0.10	0.13	15.7	0.24	0.20
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		<0.0050	0.0210	0.0264	0.0067	0.0113
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		26.4	6.29	6.41	26.1	67.5
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		<0.020	0.063	0.103	<0.020	0.021
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.029	0.206	<0.020	0.687	3.59
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L		0.0290	0.206	<0.022	0.687	3.59
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	DW-3003 ----	DW-4006 ----	DW-5000 ----	DW-8001 ----	DW-8000 ----
Client sampling date / time					28-Apr-2026 11:10	28-Apr-2026 11:30	28-Apr-2026 12:10	28-Apr-2026 13:30	28-Apr-2026 15:05
					HA2602201-001	HA2602201-002	HA2602201-003	HA2602201-004	HA2602201-005
					Result	Result	Result	Result	Result
Anions and Nutrients									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L	<0.0010	0.0331	<0.0010	<0.0010	0.0014
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	2.33	10.4	20.2	2.83	5.85
Organic / Inorganic Carbon									
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L	0.77	<0.50	<0.50	1.12	1.11
Ion Balance									
Anion sum	----	EC101A/WT	0.10	meq/L	0.96	0.71	0.71	1.04	3.32
Cation sum (total)	----	EC101A/WT	0.10	meq/L	0.94	0.67	0.74	1.03	3.19
Ion balance (cations/anions)	----	EC101A/WT	0.01	%	97.9	94.4	104	99.0	96.1
Total Metals									
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L	0.0742	0.0070	0.0048	0.0265	0.0136
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L	<0.00010	0.00021	0.00049	0.00013	0.00010
Barium, total	7440-39-3	E420/WT	0.00010	mg/L	0.0111	0.00317	0.00891	0.0176	0.0318
Beryllium, total	7440-41-7	E420/WT	0.000020	mg/L	0.000027	<0.000020	0.000237	<0.000020	0.000021
Bismuth, total	7440-69-9	E420/WT	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/WT	0.010	mg/L	<0.010	0.014	<0.010	0.010	<0.010
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L	0.0000266	<0.0000050	<0.0000050	0.0000309	0.000379
Calcium, total	7440-70-2	E420/WT	0.100	mg/L	5.35	2.72	3.86	4.42	24.2
Cesium, total	7440-46-2	E420/WT	0.000010	mg/L	0.000056	0.000031	0.000154	0.000027	0.000114
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L	<0.00010	0.00014	0.00095	0.00019	0.00030

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	DW-3003 ----	DW-4006 ----	DW-5000 ----	DW-8001 ----	DW-8000 ----
					Client sampling date / time	28-Apr-2026 11:10	28-Apr-2026 11:30	28-Apr-2026 12:10	28-Apr-2026 13:30	28-Apr-2026 15:05
						HA2602201-001	HA2602201-002	HA2602201-003	HA2602201-004	HA2602201-005
						Result	Result	Result	Result	Result
Total Metals										
Copper, total	7440-50-8	E420/WT	0.00050	mg/L		0.00081	0.0115	0.0256	0.414	0.348
Iron, total	7439-89-6	E420/WT	0.010	mg/L		0.036	0.024	1.56	0.063	0.033
Lead, total	7439-92-1	E420/WT	0.000050	mg/L		0.000360	0.000425	0.000507	0.000991	0.000313
Lithium, total	7439-93-2	E420/WT	0.0010	mg/L		<0.0010	0.0044	0.0084	<0.0010	0.0016
Magnesium, total	7439-95-4	E420/WT	0.0050	mg/L		0.764	2.42	1.56	0.994	2.25
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L		0.00373	0.00855	0.169	0.00777	0.0785
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L		<0.000050	0.000062	0.000051	<0.000050	0.000059
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L		<0.00050	0.00135	0.00361	0.00084	0.00265
Phosphorus, total	7723-14-0	E420/WT	0.050	mg/L		<0.050	<0.050	0.072	<0.050	<0.050
Potassium, total	7440-09-7	E420/WT	0.050	mg/L		1.18	1.16	1.42	2.15	4.47
Rubidium, total	7440-17-7	E420/WT	0.00020	mg/L		0.00328	0.00056	0.00331	0.00445	0.0108
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L		<0.000050	0.000077	<0.000050	0.000077	0.000088
Silicon (as SiO2), total	7631-86-9	EC420.SiO2/WT	0.25	mg/L		4.02	15.2	20.2	5.20	9.52
Silicon, total	7440-21-3	E420/WT	0.10	mg/L		1.88	7.12	9.46	2.43	4.45
Silver, total	7440-22-4	E420/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420/WT	0.050	mg/L		13.0	7.01	7.26	14.7	38.3
Strontium, total	7440-24-6	E420/WT	0.00020	mg/L		0.0309	0.0307	0.0517	0.0332	0.0979
Sulfur, total	7704-34-9	E420/WT	0.50	mg/L		0.74	3.41	6.58	0.90	2.07
Tellurium, total	13494-80-9	E420/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, total	7440-28-0	E420/WT	0.000010	mg/L		0.000012	<0.000010	<0.000010	0.000013	0.000032
Thorium, total	7440-29-1	E420/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	DW-3003 ----	DW-4006 ----	DW-5000 ----	DW-8001 ----	DW-8000 ----
					Client sampling date / time	28-Apr-2026 11:10	28-Apr-2026 11:30	28-Apr-2026 12:10	28-Apr-2026 13:30	28-Apr-2026 15:05
						HA2602201-001	HA2602201-002	HA2602201-003	HA2602201-004	HA2602201-005
						Result	Result	Result	Result	Result
Total Metals										
Tin, total	7440-31-5	E420/WT	0.00010	mg/L		0.00108	<0.00010	0.00025	<0.00010	<0.00010
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L		0.00267	<0.00030	<0.00030	<0.00030	<0.00030
Tungsten, total	7440-33-7	E420/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420/WT	0.000010	mg/L		0.000024	<0.000010	<0.000010	0.000038	0.00135
Vanadium, total	7440-62-2	E420/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L		<0.0030	0.0262	0.0158	0.283	0.0695
Zirconium, total	7440-67-7	E420/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	DW-5006 ----	DW-4009 ----	----	----	----
					Client sampling date / time	28-Apr-2026 16:10	28-Apr-2026 18:00	----	----	----
						HA2602201-006	HA2602201-007	----	----	----
						Result	Result	----	----	----
Physical Tests										
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WT	1.2	mg/L		7.4	3.2	----	----	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WT	1.0	mg/L		<0.6	<0.6	----	----	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WT	1.0	mg/L		<0.3	<0.3	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	1.0	mg/L		6.1	2.6	----	----	----
Colour, apparent	----	E330/WT	2.0	CU		8.7	<2.0	----	----	----
Conductivity	----	E100/WT	1.0	µS/cm		64.4	493	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WT	0.50	mg/L		13.7	25.1	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: DW-5006 ----	DW-4009 ----	----	----	----
					Client sampling date / time: 28-Apr-2026 16:10	28-Apr-2026 18:00	----	----	----
					HA2602201-006	HA2602201-007	----	----	----
					Result	Result	----	----	----
Physical Tests									
Langelier index (@ 20°C)	----	EC105A/WT	0.010	-	-4.34	-4.47	----	----	----
Langelier index (@ 4°C)	----	EC105A/WT	0.010	-	-4.59	-4.72	----	----	----
pH	----	E108/HA	0.10	pH units	5.62	5.62	----	----	----
pH, saturation (@ 20°C)	----	EC105A/WT	0.010	pH units	9.96	10.09	----	----	----
pH, saturation (@ 4°C)	----	EC105A/WT	0.010	pH units	10.21	10.34	----	----	----
Solids, total dissolved [TDS]	----	E162/WT	10	mg/L	45 DLDS	262 DLDS	----	----	----
Turbidity	----	E121/WT	0.10	NTU	<0.10	<0.10	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L	<0.0050	0.0067	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L	9.25	139	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L	<0.020	0.022	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L	0.685	0.137	----	----	----
Nitrate + Nitrite (as N)	----	EC235.N+N/WT	0.0032	mg/L	0.685	0.137	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L	<0.010	<0.010	----	----	----
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U/WT	0.0010	mg/L	0.0010	<0.0010	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	4.48	5.70	----	----	----
Organic / Inorganic Carbon									
Carbon, total organic [TOC]	----	E355-L/WT	0.50	mg/L	1.93	<0.50	----	----	----
Ion Balance									
Anion sum	----	EC101A/WT	0.10	meq/L	0.53	4.10	----	----	----
Cation sum (total)	----	EC101A/WT	0.10	meq/L	0.52	4.07	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	DW-5006 ----	DW-4009 ----	----	----	----
					Client sampling date / time	28-Apr-2026 16:10	28-Apr-2026 18:00	----	----	----
						HA2602201-006	HA2602201-007	----	----	----
						Result	Result	----	----	----
Ion Balance										
Ion balance (cations/anions)	----	EC101A/WT	0.01	%		98.1	99.3	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L		0.108	0.108	----	----	----
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L		0.00012	<0.00010	----	----	----
Barium, total	7440-39-3	E420/WT	0.00010	mg/L		0.0105	0.0818	----	----	----
Beryllium, total	7440-41-7	E420/WT	0.000020	mg/L		0.000063	0.000084	----	----	----
Bismuth, total	7440-69-9	E420/WT	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/WT	0.010	mg/L		<0.010	<0.010	----	----	----
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L		0.0000413	0.0000844	----	----	----
Calcium, total	7440-70-2	E420/WT	0.100	mg/L		3.58	7.52	----	----	----
Cesium, total	7440-46-2	E420/WT	0.000010	mg/L		0.000051	0.000073	----	----	----
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L		0.00045	0.00015	----	----	----
Copper, total	7440-50-8	E420/WT	0.00050	mg/L		0.0226	0.0197	----	----	----
Iron, total	7439-89-6	E420/WT	0.010	mg/L		<0.010	<0.010	----	----	----
Lead, total	7439-92-1	E420/WT	0.000050	mg/L		0.000544	0.000308	----	----	----
Lithium, total	7439-93-2	E420/WT	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, total	7439-95-4	E420/WT	0.0050	mg/L		1.15	1.54	----	----	----
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L		0.00828	0.0155	----	----	----
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L		<0.000050	<0.000050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	DW-5006 ----	DW-4009 ----	----	----	----
					Client sampling date / time	28-Apr-2026 16:10	28-Apr-2026 18:00	----	----	----
						HA2602201-006	HA2602201-007	----	----	----
						Result	Result	----	----	----
Total Metals										
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L		0.00102	<0.00050	----	----	----
Phosphorus, total	7723-14-0	E420/WT	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, total	7440-09-7	E420/WT	0.050	mg/L		1.46	1.90	----	----	----
Rubidium, total	7440-17-7	E420/WT	0.00020	mg/L		0.00408	0.00571	----	----	----
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L		0.000143	<0.000050	----	----	----
Silicon (as SiO2), total	7631-86-9	EC420.SiO2/WT	0.25	mg/L		6.29	5.58	----	----	----
Silicon, total	7440-21-3	E420/WT	0.10	mg/L		2.94	2.61	----	----	----
Silver, total	7440-22-4	E420/WT	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, total	7440-23-5	E420/WT	0.050	mg/L		4.54	80.5	----	----	----
Strontium, total	7440-24-6	E420/WT	0.00020	mg/L		0.0270	0.0682	----	----	----
Sulfur, total	7704-34-9	E420/WT	0.50	mg/L		1.48	2.01	----	----	----
Tellurium, total	13494-80-9	E420/WT	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, total	7440-28-0	E420/WT	0.000010	mg/L		0.000016	0.000019	----	----	----
Thorium, total	7440-29-1	E420/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, total	7440-31-5	E420/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, total	7440-33-7	E420/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, total	7440-61-1	E420/WT	0.000010	mg/L		0.000123	0.000019	----	----	----
Vanadium, total	7440-62-2	E420/WT	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L		0.0108	0.0394	----	----	----
Zirconium, total	7440-67-7	E420/WT	0.00020	mg/L		<0.00020	<0.00020	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

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QUALITY CONTROL REPORT

Work Order	: **HA2602201-AH**		
Amendment	: **3**		
Client	: Dillon Consulting Limited	Laboratory	: ALS Environmental - Halifax
Contact	: Penny Allen	Account Manager	: Marie Muise
Address	: 137 Chain Lake Drive Suite 100 Halifax NS Canada B3S 1B3	Address	: 13-100 Wright Ave Dartmouth NS Canada B3B 1L2
Telephone	: 902.450.5015 ext. 5001	Telephone	: +1 902 707 4888
Project	: 22-5099	Date Samples Received	: 29-Apr-2026 09:00
PO	: ----	Date Analysis Commenced	: 30-Apr-2026
C-O-C number	: ----	Issue Date	: 03-Jun-2026 16:05
Sampler	: ----		
Site	: ----		
Quote number	: Atlantic Canada 2024-2026 SOA		
No. of samples received	: 7		
No. of samples analysed	: 7		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Jiaxi Wang	Supervisor - Water Chemistry	Halifax Inorganics, Dartmouth, Nova Scotia
John Tang	Lab Analyst	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Laboratory Manager - Environmental	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:

Anonymous=Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number=Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO=Data Quality Objective.
LOR=Limit of Reporting (detection limit).
RPD=Relative Percent Difference
# =Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Sub-Matrix: Wastewater

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients(QC Lot: 2565700)											
HA2601555-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	0.0017	0.0017	0.00002	Diff <2x LOR	---

Sub-Matrix: Water

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2565711)											
HA2602085-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	0	Diff <2x LOR	---
Physical Tests(QC Lot: 2565712)											
HA2602085-001	Anonymous	Conductivity	----	E100	2.0	µS/cm	21.8	21.7	0.1	Diff <2x LOR	---
Physical Tests(QC Lot: 2566955)											
HA2602201-001	DW-3003	Solids, total dissolved [TDS]	----	E162	13	mg/L	77	74	2	Diff <2x LOR	---
Physical Tests(QC Lot: 2567412)											
HA2602201-001	DW-3003	Turbidity	----	E121	0.10	NTU	<0.10	<0.10	0	Diff <2x LOR	---
Physical Tests(QC Lot: 2568935)											
WT2610678-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	1690	1700	0.648 %	20%	---
Physical Tests(QC Lot: 2568964)											
HA2602201-001	DW-3003	pH	----	E108	0.10	pH units	6.50	6.42	1.30 %	4%	---
Physical Tests(QC Lot: 2569640)											
HA2602201-001	DW-3003	Colour, apparent	----	E330	2.0	CU	<2.0	2.3	0.3	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2565714)											
WT2610129-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2565715)											
WT2610129-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2565716)											
WT2610129-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	9.50	9.48	0.190 %	20%	---
Anions and Nutrients(QC Lot: 2565717)											
WT2610129-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	122	122	0.253 %	20%	---
Anions and Nutrients(QC Lot: 2565718)											
WT2610129-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	1.63	1.62	0.517 %	20%	---
Anions and Nutrients(QC Lot: 2568100)											
HA2602201-001	DW-3003	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	---
Organic / Inorganic Carbon(QC Lot: 2568101)											
HA2602201-002	DW-4006	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals(QC Lot: 2566300)											
HA2602201-001	DW-3003	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0742	0.0695	6.63 %	20%	---
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0111	0.0110	0.680 %	20%	---
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000027	0.000027	0.0000004	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000266	0.0000250	0.0000016	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.100	mg/L	5.35	5.32	0.551 %	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000056	0.000052	0.000004	Diff <2x LOR	---
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00081	0.00080	0.00001	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	0.036	0.032	0.005	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000360	0.000354	0.000006	Diff <2x LOR	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.764	0.756	0.993 %	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00373	0.00385	3.15 %	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.18	1.19	1.53 %	20%	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00328	0.00326	0.422 %	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.88	1.85	1.58 %	20%	---
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Sodium, total	7440-23-5	E420	0.050	mg/L	13.0	13.1	0.498 %	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0309	0.0308	0.587 %	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	0.74	0.69	0.05	Diff <2x LOR	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000012	0.000012	0.0000003	Diff <2x LOR	---
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	0.00108	0.00110	1.81 %	20%	---
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00267	0.00247	0.00020	Diff <2x LOR	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000024	0.000024	0.0000001	Diff <2x LOR	---

Sub-Matrix: Water

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals(QC Lot: 2566300)											
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	---
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	*CAS Number*	*Method*	*LOR*	*Unit*	*Result*	*Qualifier*
Physical Tests(QC Lot: 2565711)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.3	----
Physical Tests(QC Lot: 2565712)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests(QC Lot: 2566955)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests(QC Lot: 2567412)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests(QC Lot: 2568935)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests(QC Lot: 2568964)						
pH	----	E108	----	pH units	----	----
Physical Tests(QC Lot: 2569640)						
Colour, apparent	----	E330	2	CU	<2.0	----
Anions and Nutrients(QC Lot: 2565700)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2565714)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2565715)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients(QC Lot: 2565716)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients(QC Lot: 2565717)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2565718)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2568100)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon(QC Lot: 2568101)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals(QC Lot: 2566300)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals(QC Lot: 2566300)						
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests(QC Lot: 2565711)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	111	85.0	115	----
Physical Tests(QC Lot: 2565712)									
Conductivity	----	E100	1	µS/cm	1409 µS/cm	100	90.0	110	----
Physical Tests(QC Lot: 2566955)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	102	85.0	115	----
Physical Tests(QC Lot: 2567412)									
Turbidity	----	E121	0.1	NTU	200 NTU	100	85.0	115	----
Physical Tests(QC Lot: 2568935)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Physical Tests(QC Lot: 2568964)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests(QC Lot: 2569640)									
Colour, apparent	----	E330	2	CU	25 CU	98.9	85.0	115	----
Anions and Nutrients(QC Lot: 2565700)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.05 mg/L	98.2	80.0	120	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients(QC Lot: 2565714)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2565715)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	100	90.0	110	----
Anions and Nutrients(QC Lot: 2565716)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2565717)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients(QC Lot: 2565718)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients(QC Lot: 2568100)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	104	85.0	115	----
Organic / Inorganic Carbon(QC Lot: 2568101)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	104	80.0	120	----
Total Metals(QC Lot: 2566300)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	0.1 mg/L	108	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	0.05 mg/L	109	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.0125 mg/L	105	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.005 mg/L	104	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	0.05 mg/L	105	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	0.05 mg/L	95.0	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.005 mg/L	98.5	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	2.5 mg/L	101	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.0025 mg/L	106	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.0125 mg/L	103	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.0125 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.0125 mg/L	99.1	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	0.05 mg/L	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.025 mg/L	104	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.0125 mg/L	102	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	2.5 mg/L	105	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.0125 mg/L	106	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.0125 mg/L	101	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.025 mg/L	100	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	0.5 mg/L	114	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	2.5 mg/L	111	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.005 mg/L	114	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	0.05 mg/L	97.9	80.0	120	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Metals(QC Lot: 2566300)									
Silicon, total	7440-21-3	E420	0.1	mg/L	0.5 mg/L	103	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	2.5 mg/L	105	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.0125 mg/L	107	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	2.5 mg/L	104	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.005 mg/L	99.5	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	0.05 mg/L	106	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.005 mg/L	98.9	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.025 mg/L	99.8	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.0125 mg/L	103	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.005 mg/L	100	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.0002 mg/L	104	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.025 mg/L	104	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.025 mg/L	101	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.005 mg/L	99.9	80.0	120	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for

Sub-Matrix: Wastewater

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
					Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2565700)										
HA2601555-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0181 mg/L	0.0196 mg/L	92.4	70.0	130	---
Anions and Nutrients(QC Lot: 2565714)										
WT2610129-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.45 mg/L	2.5 mg/L	98.1	75.0	125	---
Anions and Nutrients(QC Lot: 2565715)										
WT2610129-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.512 mg/L	0.5 mg/L	102	75.0	125	---
Anions and Nutrients(QC Lot: 2565716)										
WT2610129-001	Anonymous	Chloride	16887-00-6	E235.Cl	101 mg/L	100 mg/L	101	75.0	125	---
Anions and Nutrients(QC Lot: 2565717)										
WT2610129-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND	----	ND	75.0	125	---

Sub-Matrix: Wastewater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2565718)										
WT2610129-001	Anonymous	Fluoride	16984-48-8	E235.F	ND	----	ND	75.0	125	---
Anions and Nutrients(QC Lot: 2568100)										
HA2602201-001	DW-3003	Ammonia, total (as N)	7664-41-7	E298	0.106 mg/L	0.1 mg/L	106	75.0	125	---
Organic / Inorganic Carbon(QC Lot: 2568101)										
HA2602201-002	DW-4006	Carbon, total organic [TOC]	----	E355-L	5.54 mg/L	5 mg/L	111	70.0	130	---
Total Metals(QC Lot: 2566300)										
HA2602201-002	DW-4006	Aluminum, total	7429-90-5	E420	0.103 mg/L	0.1 mg/L	103	70.0	130	---
		Antimony, total	7440-36-0	E420	0.0523 mg/L	0.05 mg/L	105	70.0	130	---
		Arsenic, total	7440-38-2	E420	0.0553 mg/L	0.05 mg/L	111	70.0	130	---
		Barium, total	7440-39-3	E420	0.0130 mg/L	0.0125 mg/L	104	70.0	130	---
		Beryllium, total	7440-41-7	E420	0.00500 mg/L	0.005 mg/L	99.9	70.0	130	---
		Bismuth, total	7440-69-9	E420	0.0526 mg/L	0.05 mg/L	105	70.0	130	---
		Boron, total	7440-42-8	E420	0.045 mg/L	0.05 mg/L	90.3	70.0	130	---
		Cadmium, total	7440-43-9	E420	0.00503 mg/L	0.005 mg/L	101	70.0	130	---
		Calcium, total	7440-70-2	E420	ND	----	ND	70.0	130	---
		Cesium, total	7440-46-2	E420	0.00270 mg/L	0.0025 mg/L	108	70.0	130	---
		Chromium, total	7440-47-3	E420	0.0126 mg/L	0.0125 mg/L	101	70.0	130	---
		Cobalt, total	7440-48-4	E420	0.0126 mg/L	0.0125 mg/L	101	70.0	130	---
		Copper, total	7440-50-8	E420	0.0120 mg/L	0.0125 mg/L	96.1	70.0	130	---
		Iron, total	7439-89-6	E420	0.048 mg/L	0.05 mg/L	95.8	70.0	130	---
		Lead, total	7439-92-1	E420	0.0259 mg/L	0.025 mg/L	104	70.0	130	---
		Lithium, total	7439-93-2	E420	0.0118 mg/L	0.0125 mg/L	94.2	70.0	130	---
		Magnesium, total	7439-95-4	E420	2.44 mg/L	2.5 mg/L	97.8	70.0	130	---
		Manganese, total	7439-96-5	E420	0.0125 mg/L	0.0125 mg/L	99.6	70.0	130	---
		Molybdenum, total	7439-98-7	E420	0.0128 mg/L	0.0125 mg/L	102	70.0	130	---
		Nickel, total	7440-02-0	E420	0.0248 mg/L	0.025 mg/L	99.1	70.0	130	---
		Phosphorus, total	7723-14-0	E420	0.521 mg/L	0.5 mg/L	104	70.0	130	---
		Potassium, total	7440-09-7	E420	2.68 mg/L	2.5 mg/L	107	70.0	130	---
		Rubidium, total	7440-17-7	E420	0.00565 mg/L	0.005 mg/L	113	70.0	130	---
		Selenium, total	7782-49-2	E420	0.0524 mg/L	0.05 mg/L	105	70.0	130	---
		Silicon, total	7440-21-3	E420	ND	----	ND	70.0	130	---
		Silver, total	7440-22-4	E420	0.00513 mg/L	0.005 mg/L	103	70.0	130	---
		Sodium, total	7440-23-5	E420	ND	----	ND	70.0	130	---
		Strontium, total	7440-24-6	E420	ND	----	ND	70.0	130	---
		Sulfur, total	7704-34-9	E420	ND	----	ND	70.0	130	---
		Tellurium, total	13494-80-9	E420	0.00528 mg/L	0.005 mg/L	106	70.0	130	---
		Thallium, total	7440-28-0	E420	0.0527 mg/L	0.05 mg/L	105	70.0	130	---

Sub-Matrix: Wastewater

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Total Metals(QC Lot: 2566300)										
		Thorium, total	7440-29-1	E420	0.00500 mg/L	0.005 mg/L	100.0	70.0	130	---
		Tin, total	7440-31-5	E420	0.0254 mg/L	0.025 mg/L	102	70.0	130	---
		Titanium, total	7440-32-6	E420	0.0127 mg/L	0.0125 mg/L	101	70.0	130	---
		Tungsten, total	7440-33-7	E420	0.00504 mg/L	0.005 mg/L	101	70.0	130	---
		Uranium, total	7440-61-1	E420	0.000260 mg/L	0.0002 mg/L	104	70.0	130	---
		Vanadium, total	7440-62-2	E420	0.0257 mg/L	0.025 mg/L	103	70.0	130	---
		Zinc, total	7440-66-6	E420	ND	----	ND	70.0	130	---
		Zirconium, total	7440-67-7	E420	0.00503 mg/L	0.005 mg/L	101	70.0	130	---

Appendix D

Hydraulic Conductivity Tests

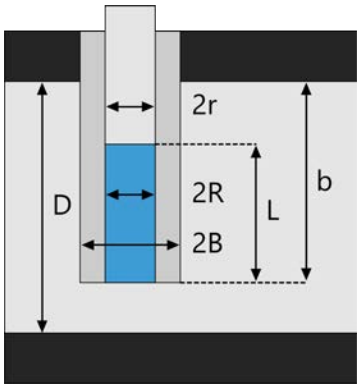
Wells

Project: Shelburne Landfill

Number: 22-5099

Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS



	Name	Penetration	R [m]	L [m]	r [m]	B [m]	b [m]
1	25-MW1S	Fully	0.025	3.05	0.025	0.076	3.86
2	25-MW2D	Fully	0.025	10	0.025	0.076	8.56
3	25-MW3S	Fully	0.025	3.05	0.025	0.076	3.43
4	25-MW3D	Fully	0.025	3.05	0.025	0.076	10.43

Slug Test - Water Level Data

Project: Shelburne Landfill

Number: 22-5099

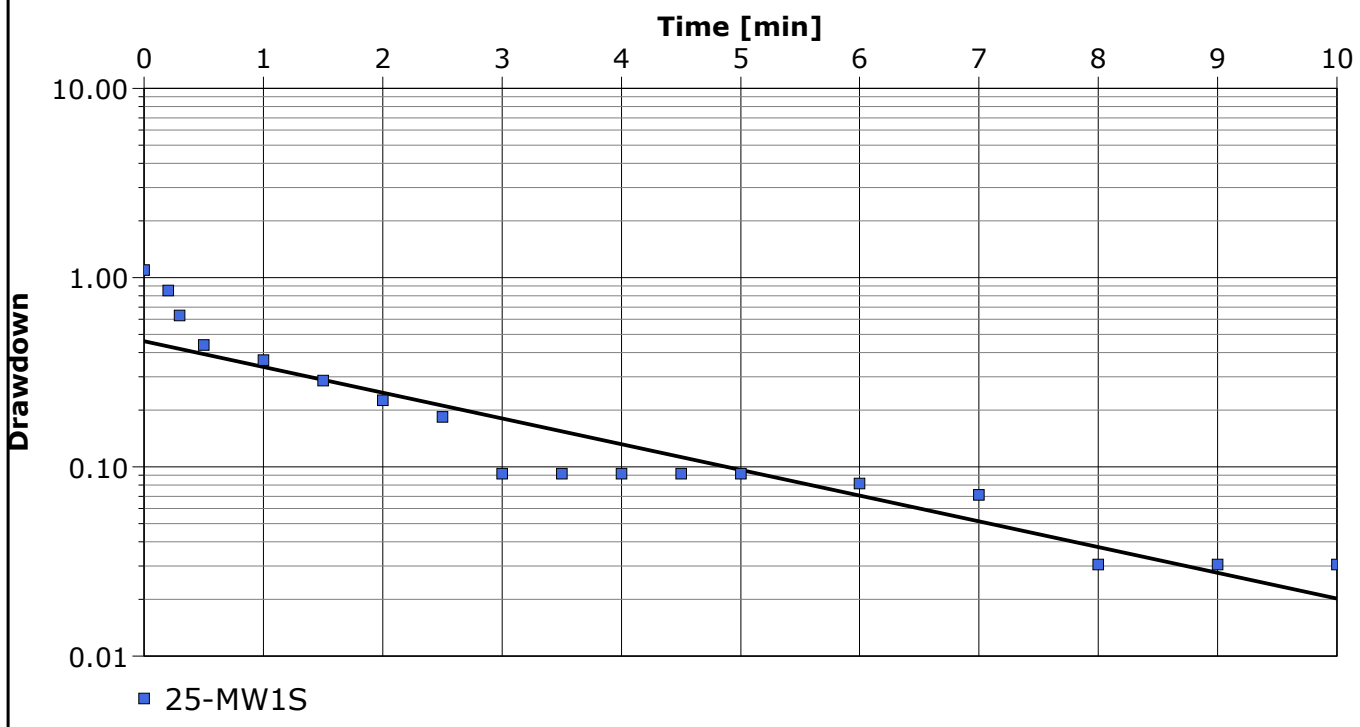
Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW1S	Test Well: 25-MW1S
Test Conducted by: BM	Test Date: 2026-05-01	
Water level at t=0 [m]: 2.45	Static Water Level [m]: 1.47	Water level change at t=0 [m]: 0.98

	Time [min]	Water Level [m]	WL Change [m]
1	0	2.54	1.07
2	0.2	2.31	0.84
3	0.3	2.09	0.62
4	0.5	1.90	0.43
5	1	1.83	0.36
6	1.5	1.75	0.28
7	2	1.69	0.22
8	2.5	1.65	0.18
9	3	1.56	0.09
10	3.5	1.56	0.09
11	4	1.56	0.09
12	4.5	1.56	0.09
13	5	1.56	0.09
14	6	1.55	0.08
15	7	1.54	0.07
16	8	1.50	0.03
17	9	1.50	0.03
18	10	1.50	0.03

	Slug Test Analysis Report
	Project: Shelburne Landfill
	Number: 22-5099
	Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW1S	Test Well: 25-MW1S
Test Conducted by: BM		Test Date: 2026-05-01
Analysis Performed by: BCC	24-MW1S	Analysis Date: 2026-05-01
Aquifer Thickness:		



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
25-MW1S	2.59×10^{-6}	

Slug Test - Water Level Data

Project: Shelburne Landfill

Number: 22-5099

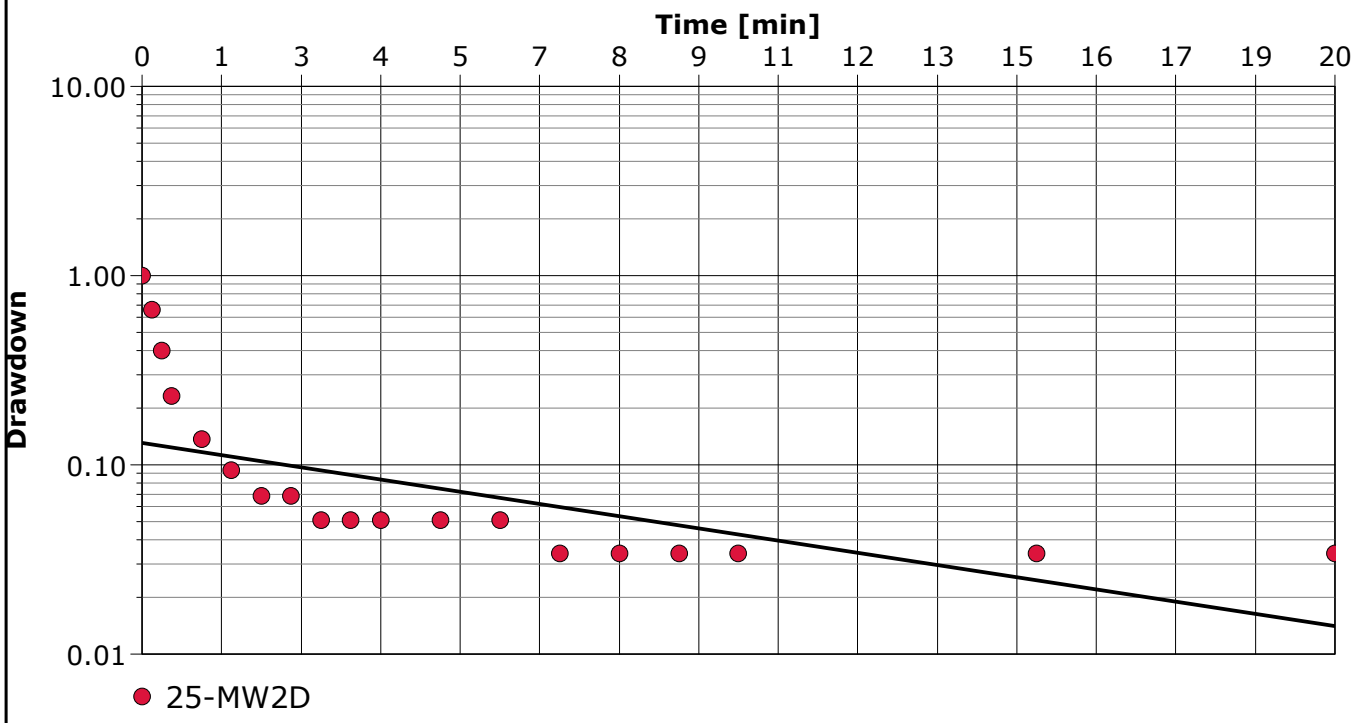
Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW2D	Test Well: 25-MW2D
Test Conducted by: BM	Test Date: 2026-05-01	
Water level at t=0 [m]: 2.49	Static Water Level [m]: 1.32	Water level change at t=0 [m]: 1.17

	Time [min]	Water Level [m]	WL Change [m]
1	0	2.49	1.17
2	0.17	2.09	0.77
3	0.33	1.79	0.47
4	0.5	1.59	0.27
5	1	1.48	0.16
6	1.5	1.43	0.11
7	2	1.40	0.08
8	2.5	1.40	0.08
9	3	1.38	0.06
10	3.5	1.38	0.06
11	4	1.38	0.06
12	5	1.38	0.06
13	6	1.38	0.06
14	7	1.36	0.04
15	8	1.36	0.04
16	9	1.36	0.04
17	10	1.36	0.04
18	15	1.36	0.04
19	20	1.36	0.04

	Slug Test Analysis Report
	Project: Shelburne Landfill
	Number: 22-5099
	Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW2D	Test Well: 25-MW2D
Test Conducted by: BM		Test Date: 2026-05-01
Analysis Performed by: BCC	25-MW2D	Analysis Date: 2026-05-01
Aquifer Thickness:		



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
25-MW2D	9.21×10^{-7}	

Slug Test - Water Level Data

Project: Shelburne Landfill

Number: 22-5099

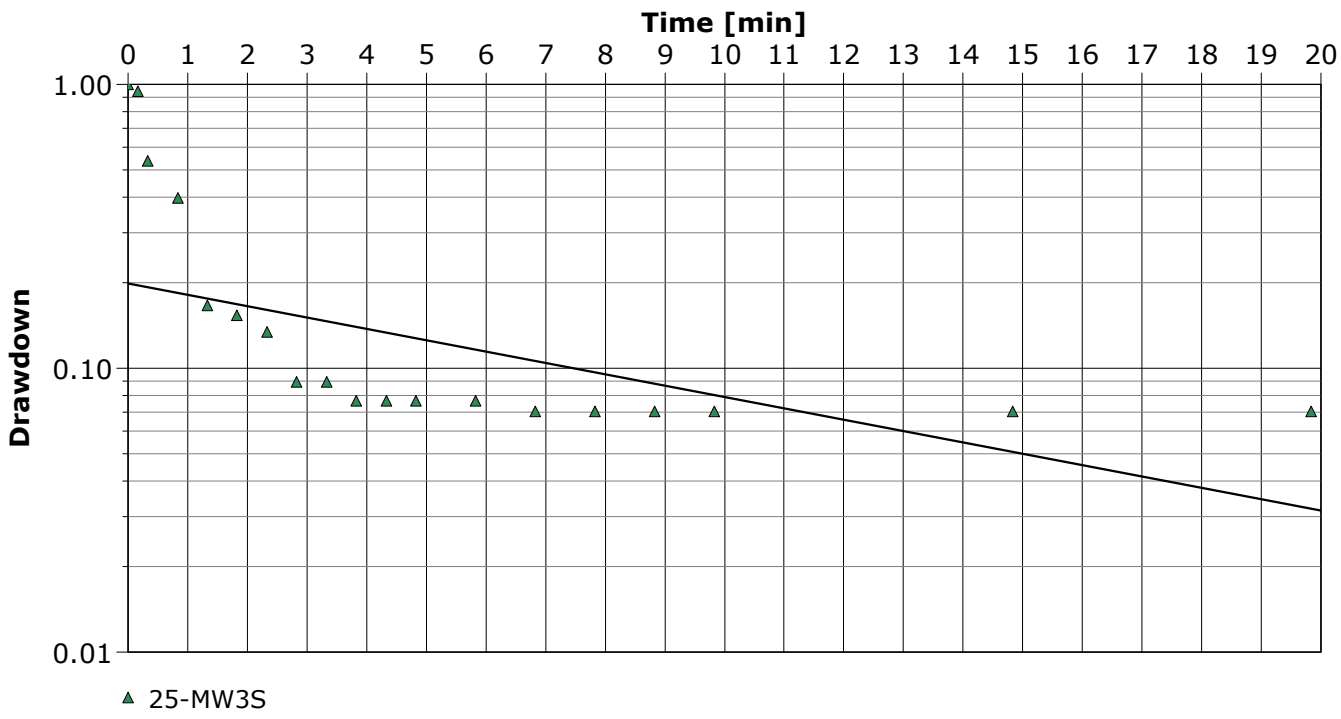
Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW3S	Test Well: 25-MW3S
Test Conducted by: BM	Test Date: 2026-05-01	
Water level at t=0 [m]: 2.67	Static Water Level [m]: 1.89	Water level change at t=0 [m]: 0.78

	Time [min]	Water Level [m]	WL Change [m]
1	0	2.67	0.78
2	0.17	2.63	0.74
3	0.33	2.31	0.42
4	0.83	2.20	0.31
5	1.33	2.02	0.13
6	1.83	2.01	0.12
7	2.33	1.995	0.105
8	2.83	1.96	0.07
9	3.33	1.96	0.07
10	3.83	1.95	0.06
11	4.33	1.95	0.06
12	4.83	1.95	0.06
13	5.83	1.95	0.06
14	6.83	1.945	0.055
15	7.83	1.945	0.055
16	8.83	1.945	0.055
17	9.83	1.945	0.055
18	14.83	1.945	0.055
19	19.83	1.945	0.055

	Slug Test Analysis Report
	Project: Shelburne Landfill
	Number: 22-5099
	Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW3S	Test Well: 25-MW3S
Test Conducted by: BM		Test Date: 2026-05-01
Analysis Performed by: BCC	25-MW3S	Analysis Date: 2026-05-01
Aquifer Thickness:		



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
25-MW3S	7.61×10^{-7}	

Slug Test - Water Level Data

Project: Shelburne Landfill

Number: 22-5099

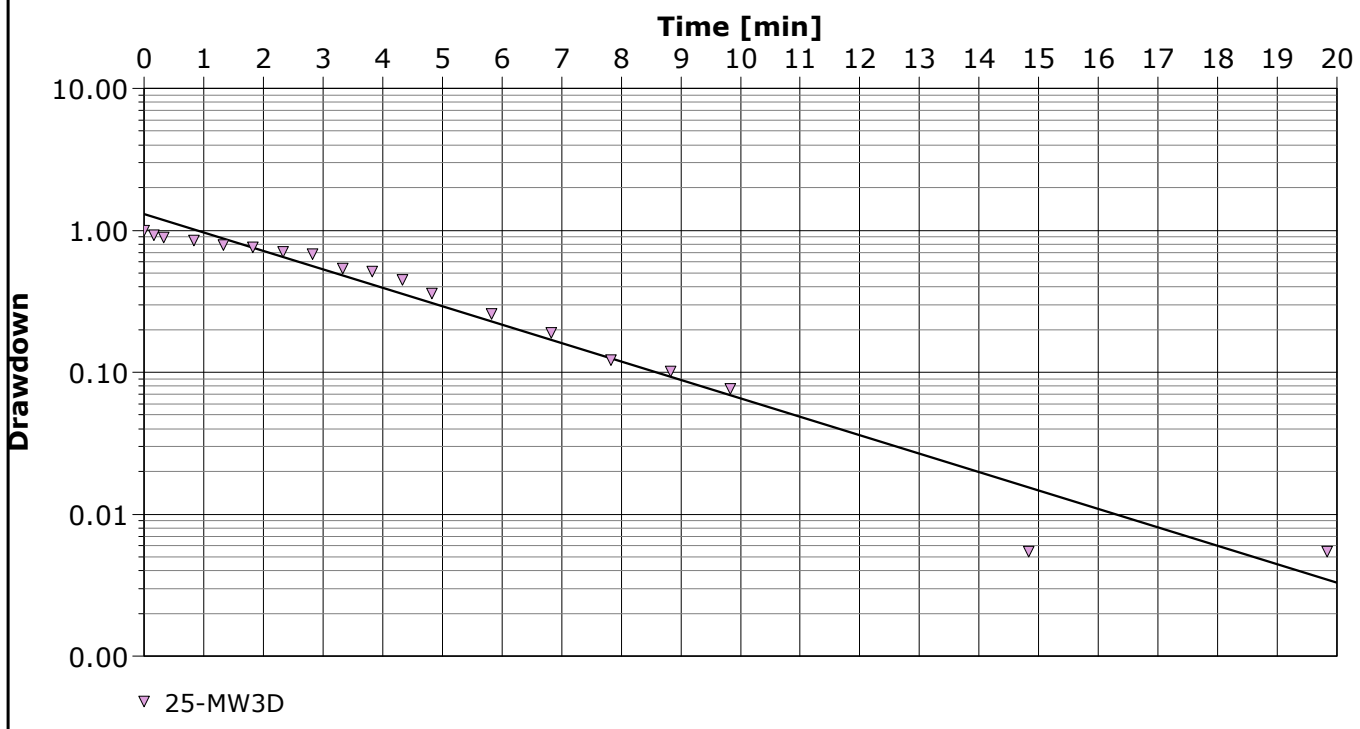
Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW3D	Test Well: 25-MW3D
Test Conducted by: BM	Test Date: 2026-05-01	
Water level at t=0 [m]: 6.82	Static Water Level [m]: 1.32	Water level change at t=0 [m]: 5.50

	Time [min]	Water Level [m]	WL Change [m]
1	0	6.82	5.50
2	0.17	6.40	5.08
3	0.33	6.21	4.89
4	0.83	5.99	4.67
5	1.33	5.67	4.35
6	1.83	5.48	4.16
7	2.33	5.21	3.89
8	2.83	5.05	3.73
9	3.33	4.29	2.97
10	3.83	4.14	2.82
11	4.33	3.78	2.46
12	4.83	3.29	1.97
13	5.83	2.74	1.42
14	6.83	2.36	1.04
15	7.83	1.99	0.67
16	8.83	1.88	0.56
17	9.83	1.74	0.42
18	14.83	1.35	0.03
19	19.83	1.35	0.03

	Slug Test Analysis Report
	Project: Shelburne Landfill
	Number: 22-5099
	Client: Town of Shelburne

Location: 31 Morvan Rd, Shelburne, NS	Slug Test: 25-MW3D	Test Well: 25-MW3D
Test Conducted by: BM		Test Date: 2026-05-01
Analysis Performed by: BCC	25-MW3D	Analysis Date: 2026-05-01
Aquifer Thickness:		



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
25-MW3D	2.46×10^{-6}	

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