Appendix 21A

Marine Water and Sediment Quality Baseline Report

Grays Bay Road and Port Project
Marine Water and Sediment Quality Baseline Report

Prepared for:

West Kitikmeot Resources Corp

Prepared by:

Nunami Stantec Limited

March 2026

Project No.: 123514868

Sign-off

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Abbreviations

ADCP ..... Acoustic Doppler Current Profiler
ALS ..... ALS Environmental Limited
BC ..... British Columbia
BC ENV ..... British Columbia Ministry of the Environment and Climate Change Strategy
BH ..... borehole
BTEX ..... benzene, ethylbenzene, toluene, xylene
CCME ..... Canadian Council of Ministers of the Environment
CTD ..... conductivity, temperature, and depth
DL ..... detection limit
DO ..... dissolved oxygen
DQO ..... data quality objectives
E ..... east
GBEEC ..... Grays Bay Engineering and Environmental Consultants
GIS ..... Geographical Information System
GN ..... Government of Nunavut
Hs ..... significant wave height
IAG ..... Inuit Advisory Group
IS ..... Impact Statement
ISQG ..... Interim Sediment Quality Guidelines
LAA ..... Local Assessment Area
LGL ..... LGL Limited
MAL ..... marine aquatic life
MMG ..... Minerals and Metals Group
N ..... north
NTKP ..... Naonaiyaotit Traditional Knowledge Project
NU ..... Nunavut
PAH ..... polycyclic aromatic hydrocarbons
PCB ..... polychlorinated biphenyls

PDA ..... project development area
PEL ..... probable effects level
POP ..... persistent organic pollutants
QA/QC ..... quality assurance and quality control
RPD ..... relative percent difference
RAA ..... Regional Assessment Area
S ..... south
TCWR ..... Tibbitt to Contwoyto Winter Road
TOC ..... total organic carbon
TSS ..... total suspended solids
VOC ..... volatile organic compounds
W ..... west
WKR ..... West Kitikmeot Resources Corp.
WQG-MAL ..... Water Quality Guidelines for Marine Aquatic Life

Symbols and Units of Measure

..... number
% ..... percent
< ..... less than
> ..... more than
± ..... plus or minus
≤ ..... less than or equal to
≥ ..... greater than or equal to
° ..... degree
µS/cm ..... microsiemens per centimetre
^{2} ..... squared
^{3} ..... cubed
C ..... Celsius
g ..... gram
kg ..... kilogram

km..... kilometre

m .....metre

m/s..... metres per second

mg .....milligram

mL ..... millilitres

ph ..... potential of hydrogen

psu.....practical salinity unit

1 Introduction

West Kitikmeot Resources Corp. (WKR) is an Inuit-owned, Inuit-led company focused on the advancement of the Grays Bay Road and Port Project (the "Project") in the Kitikmeot Region of Nunavut. WKR's largest shareholder is a wholly-owned subsidiary of the Kitikmeot Inuit Association. The Project is proposed as a multi-user, multi-use transportation infrastructure to be located on a combination of Inuit Owned Land and Crown land in the Kitikmeot Region of western Nunavut. Subject to approval, the Project would result in the establishment of the first deep-water port in the Canadian Central Arctic at Grays Bay, as well as a 230 kilometre (km) all-season access road between Grays Bay and Jericho station near Contwoyto Lake. The Project will connect to the already approved Tibbitt to Contwoyto Winter Road (TCWR). The multi-user, multi-use Project would allow for the establishment of shared infrastructure with many potential users, including the federal and territorial governments, communities, community members, resource companies, and defence agencies.

The Project's location and current design are based on siting studies and designs previously conducted by Minerals and Metals Group (MMG; now MMG Limited) for their Izok Corridor Project, the Government of Nunavut (GN), and Kitikmeot Inuit Association's previous proponents of the Project.

WKR benefits from designs, studies, and data previously undertaken by MMG, Kitikmeot Inuit Association, and the GN. To support the preparation of an Impact Statement (IS), some of the environmental studies have been supplemented with more recent data.

1.1 Inuit Knowledge, Traditional Knowledge, and Community Knowledge

A considerable amount of Inuit Knowledge has been documented for the Project, which has substantially informed WKR's understanding of baseline environmental and socio-economic conditions in the PDA. For the purposes of the IS, focus is placed on Inuit of the Kitikmeot Region, or Kitikmiut. The Project is located wholly within the Kitikmeot Region; as such, the region and its people are where key Project interactions and effects are most likely to occur.

Verified Inuit Knowledge and perspectives considered and integrated in the IS were shared through two primary Project-specific sources.

1. **Naonaiyaotit Traditional Knowledge Project (NTKP):** The Kitikmeot Inuit Association maintains a repository of Inuit Knowledge for the Kitikmeot Region within a Geographic Information System (GIS)-based database called the NTKP. The NTKP contains the collective body of documented and verified Inuit Knowledge of the Kitikmeot Region, including but not limited to knowledge of birds, fish, terrestrial and marine mammals, water quality, travel routes, gathering places, and heritage. The Kitikmeot Inuit Association compiled a Project-specific report called *Kitikmiut Knowledge of the Proposed Kogloktoakyok (Grays Bay) Port and Road Project* (Banci and Spicker 2024), which provides the majority of the Inuit Knowledge shared and integrated in the IS.

2. **Inuit Advisory Group (IAG)**: Initiated in 2018 by the previous Project proponent, WKR re-initiated the IAG in 2025. Through a series of IAG workshops, WKR and Inuit land users, Elders, and Knowledge Holders have met to discuss and document feedback and advice about the Project, including but not limited to dialogue about wildlife, fisheries, land use, archaeology, water, air quality, and access management. Through the IAG, multiple perspectives have been shared, allowing for the integration of knowledge systems (both Inuit Knowledge and Western science), resulting in a more informed and sustainable Project. At the time of filing, four IAG workshops had occurred (Grays Bay Engineering and Environmental Consultants (GBEEC) 2018a, 2018b; IAG 2025a, 2025b), with additional workshops planned for the future.

Pertinent baseline information from these sources of Inuit Knowledge is not presented further here; rather, this information is provided in the above-noted reports themselves, the ‘Baseline Conditions’ sections of each assessment section, and integrated in the Marine Water and Sediment Quality section (Volume 8, Section 21 of the IS), where appropriate. The same process was applied when integrating baseline information associated with applicable Traditional Knowledge and Community Knowledge shared in publicly available literature and through the Project-specific engagement program.

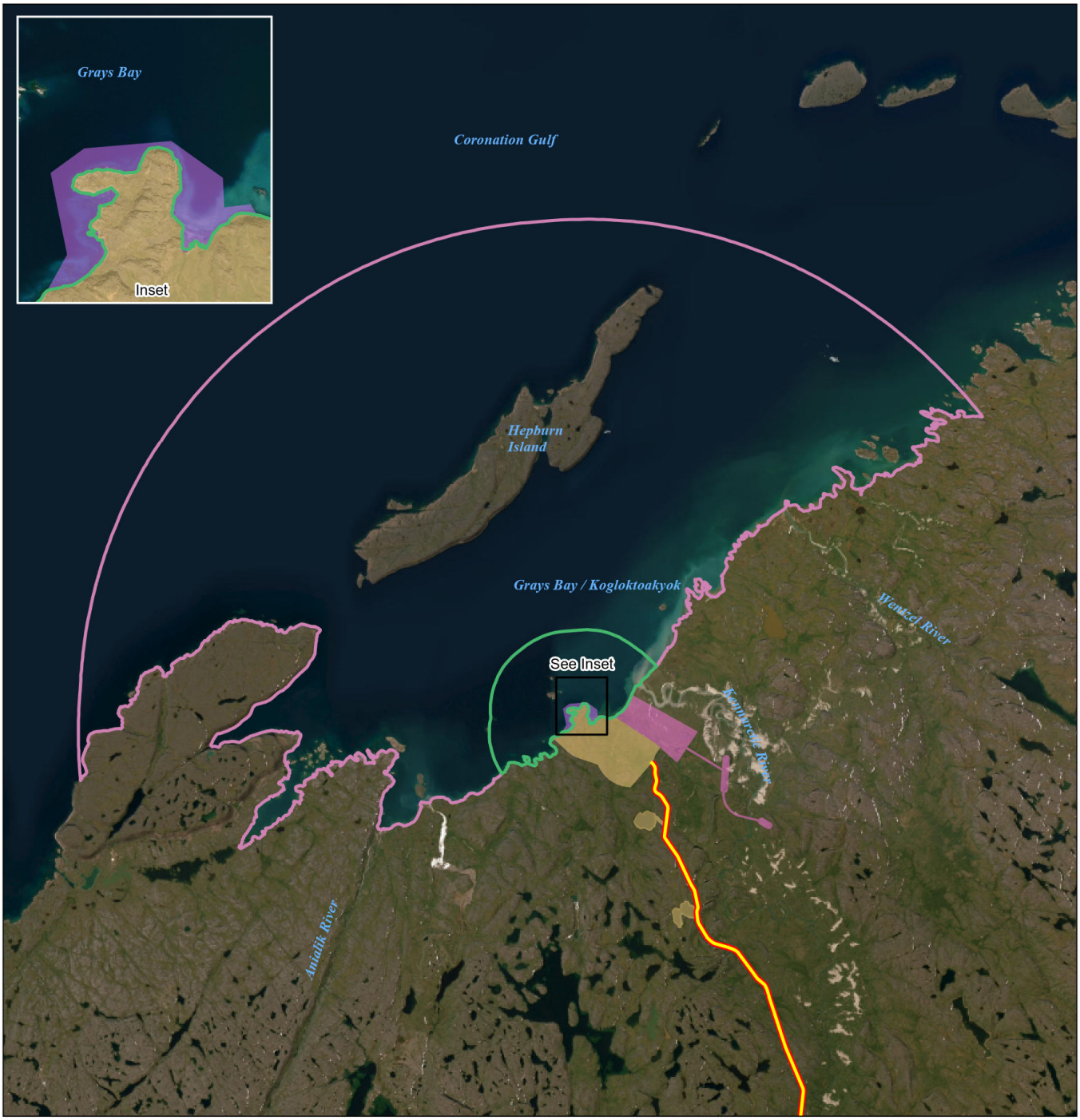
2 Scope and Objectives

The objectives of the Marine Water and Sediment Quality Baseline Report (Report) are to provide an overview of the existing physical and chemical characteristics of marine water and sediments, zooplankton species composition, and the benthic invertebrate communities present at the Port Project Development Area (PDA) in Grays Bay, Nunavut (NU). The information compiled within this Report includes a summary of historical sampling at Grays Bay, publicly available information, as well as the results from an August 2024 and July and August 2025 field programs completed by Nunami Stantec Limited (Stantec). The information presented in this Report will support the environmental assessment process for the Project, and the preparation of the IS.

3 Description of the Assessment Areas

The local and regional assessment areas (LAA and RAA) encompass the areas where data was collected to provide an understanding of the existing marine environment so that potential Project-specific effects and potential cumulative effects of the Project on the Marine Resources Valued Component can be assessed. The Project location and assessment areas are shown in Figure 3.1.

- The **Project Development Area (PDA):** has been delineated to encompass the physical footprint of all Project components, including both permanent and temporary disturbances (e.g., extent of Project infrastructure, planned clearing and laydown areas). The PDA includes six sub-areas based on the types of components to be developed: the Port (which is further divided into marine and landside infrastructure), Road, Aerodrome, Jericho Station and Winter Road PDAs. The boundary of the PDAs were created by applying buffers around where the Project components will be sited, and varies by each of the sub-areas depending on necessary flexibility for final siting of certain Project components based on conditions on the ground. For the Port PDA, the areas were subdivided based on the conceptual Project component locations and then buffered approximately 1,000 m for the landside Port PDA, approximately 300 m for the marine Port PDA. For the purposes of the impact assessment, the PDA is the same as the Site Study Area identified in the IS Guidelines.
- The **Local Assessment Area (LAA)**: Includes the area in which project-related effects can be predicted or measured with a level of confidence that allows for the assessment wherein there is a reasonable expectation that those effects could be of concern. The preliminary LAA for marine water and sediment quality includes a one km buffer around the Port PDA.
- The **Regional Assessment Area (RAA)**: This area establishes the context for determining the significance of project-related effects in the LAA and encompasses the area within which project-specific effects overlap with effects of other past, present, and reasonably foreseeable future projects. The RAA includes the LAA and a 20 km buffer around the PDA.





Grays Bay Road
Local Assessment Area (LAA)
Regional Assessment Area (RAA)

Project Development Area (PDA)

Aerodrome
Port (Landside Infrastructure)
Port (Marine-based Infrastructure)

0 2.5 5 Kilometres
(At original document size of 8.5x11)1:250,000

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Notes

1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2025-12-09
TR by BT on 2025-12-09

Client/Project 123514868_036

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
3.1

Title
Marine Water and Sediment Assessment Areas

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4 Review of Existing Information

4.1 Desktop Assessment

Prior to the 2024 field program, a desktop review of existing background information was completed to identify potential gaps in the marine water and sediment quality datasets. A review of available relevant information, including reports, documents, and data, was used to refine the field workplan for marine water and sediment quality. Documents reviewed included:

- High Lake Project (Wolfden 2006)
- Izok Corridor Project (MMG 2012; LGL 2013)
- Izok Corridor Project: Baseline Marine Water and Sediment Quality Field Report (Lorax 2013)
- Grays Bay Road and Port Project (Elliot and Cross 2013)
- Grays Bay Engineering and Environmental Consultants (GBEEC) Environmental Baseline Studies Review and Gap Analysis (GBEEC 2017)
- Canadian Science Advisory Secretariat Publications
- Scientific peer-reviewed literature
- Publicly available online information on Grays Bay and the Coronation Gulf

4.2 Field Sampling Program

The 2024 marine water and sediment quality field program was completed between August 22 to 27, 2024. The team consisted of three Stantec aquatic biologists, a representative from Biologica Environmental Services Ltd. (Biologica), and a local Inuit community member from Kugluktuk, NU. For safety, a wildlife monitor from Cambridge Bay, NU, was also present with staff while onshore. The 2024 field program included water and sediment collection and zooplankton sampling from within the PDA, LAA, and RAA. Benthic invertebrate sampling was completed through the collection of sediment grabs and onsite screening and preservation.

The 2025 marine water quality field program was completed between July 24-25 and August 26, 2025. Sediment quality sampling and zooplankton sampling were not conducted in 2025. The team during the July and August sampling events consisted of two and four Stantec aquatic biologists, respectively. The 2025 field program included water collection from within the PDA, LAA, and RAA.

Additional water quality sampling was conducted in May 2025 as part of the Geotechnical Drilling program. The program was designed to evaluate water quality conditions before and after marine borehole drilling activities in the wharf and small craft harbour areas.

4.2.1 Oceanography

The oceanography field program consisted of collecting temporal (time-series) data at a fixed location and spatial current data in the port area of Grays Bay. These two methods are described below.

4.2.1.1 ADCP Time-Series Data Collection

To characterize site-specific hydrodynamics in the vicinity of the Grays Bay Port, Nunami Stantec deployed an oceanographic instrument to measure time-series current velocity, tidal elevation, wave, and temperature parameters. An Acoustic Doppler Current Profiler (ADCP) was deployed at Station 1 (ADCP Station; Figure 4.1) on July 24, 2025, using the 18.4 m (60 ft) R/V *Martin Bergmann* operated by Arctic Research Foundation.

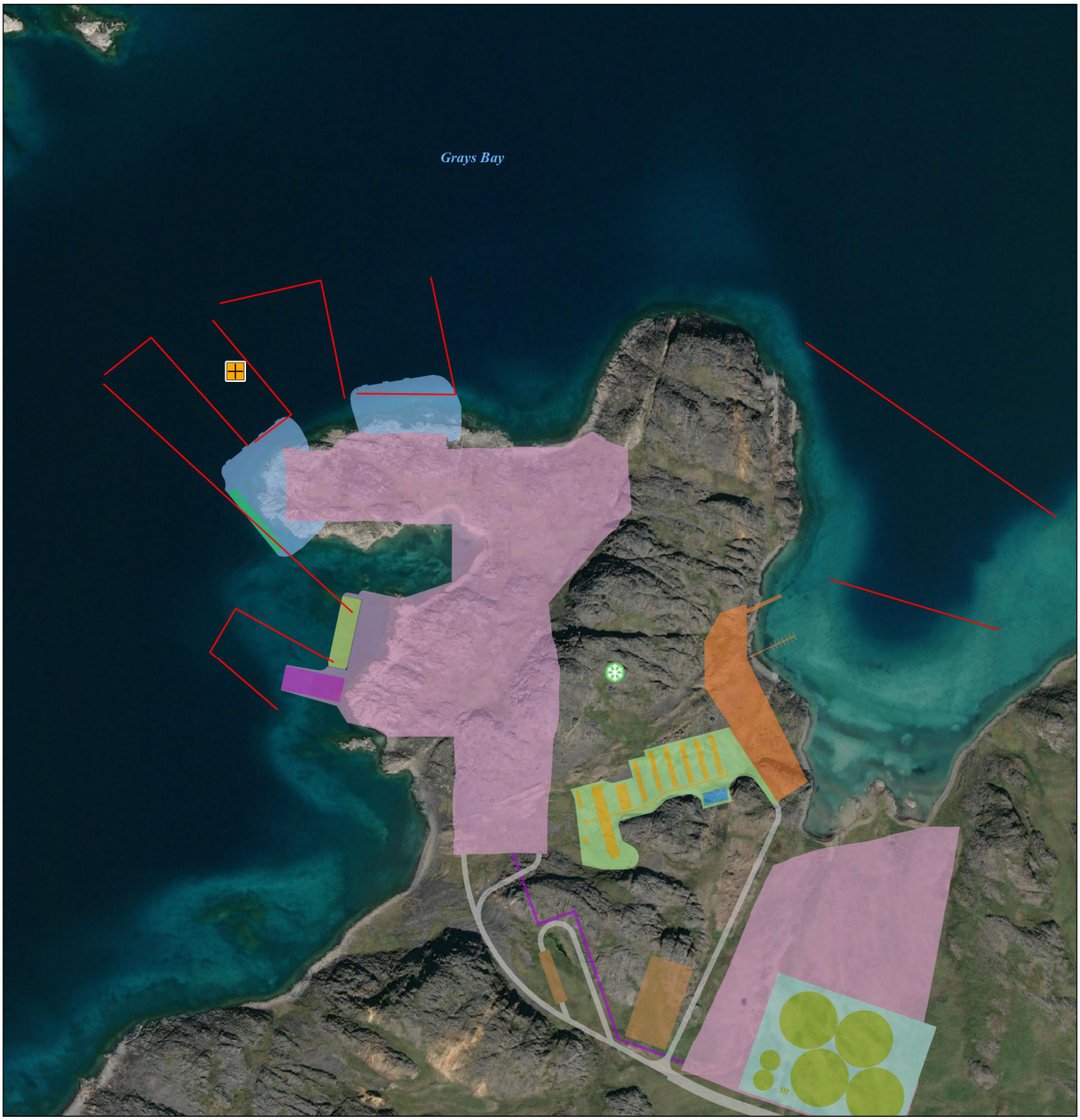
The instrument used was a Teledyne RDI Workhorse 600 kHz Sentinel ADCP, configured for bottom-mounted deployment within a trawl-resistant seabed frame to minimize the risk of gear damage and ensure instrument stability during the monitoring period (Photo 4.1). The deployment site, chosen for its bathymetric and navigational suitability, was at a water depth of about 29 m.

The ADCP was programmed to measure current speed and direction throughout the water column, beginning at 2.10 m above the seabed and extending upward to the surface in 1 m vertical bins. This configuration allowed for a high-resolution current profile, capturing both near-bottom and near-surface currents (instrument functional limitations from side lobe interference of return acoustic signal does not permit current measurements at the surface or at the very bottom). In addition to current profiling, the ADCP was equipped to collect:

- Wave parameters — including significant wave height (Hs), peak wave period, and mean wave direction
- Tidal elevation — using the instrument's pressure sensor to record water level fluctuations throughout the deployment period
- Temperature — using the instrument's temperature sensor at the transducer head, approximately 0.5 m above the seabed, to record bottom water temperature throughout the deployment period

A collection of currents, water elevation, and bottom temperature data was programmed at 15-minute sampling intervals. Directional wave spectrum data were collected every hour with 20-minute burst sampling at a frequency of 2 Hz (0.5 seconds) and containing 2400 samples in each burst. This sampling regime provided sufficient temporal resolution to resolve tidal cycles, wind-driven events, and wave–current interactions at the site.

Instrument diagnostics were conducted prior to deployment to confirm proper instrument function, battery voltage, memory capacity, and compass calibration, which was carried out on land to avoid magnetic interference from the vessel. The ADCP and bottom frame were lowered to the seabed using the vessel's crane and winch system on July 24, 2025.





Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

- ADCP Station
- Meteorological Station
- ADCP Transect Survey (Ebb and Flood Tides)

Port Footprint

- Admin Office and Accommodation Area
- Admin Office and Accommodation Buildings
- Ancillary Support Area
- Barge Ramp
- Barge Wharf
- Fuel Pipeline
- Fuel Storage
- Landside Port
- Large Vessel Wharf
- Medium Vessel Wharf
- Public Use Area
- Road
- Secondary Containment Area
- Service Vehicle Garage

0 100 200 Metres

(At original document size of 8.5x11) 1:10,000

N

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Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2025-12-09
TR by DS on 2025-12-09

Client/Project
123514868_151
West Kitikmeot Resources Corp
Grays Bay Road and Port

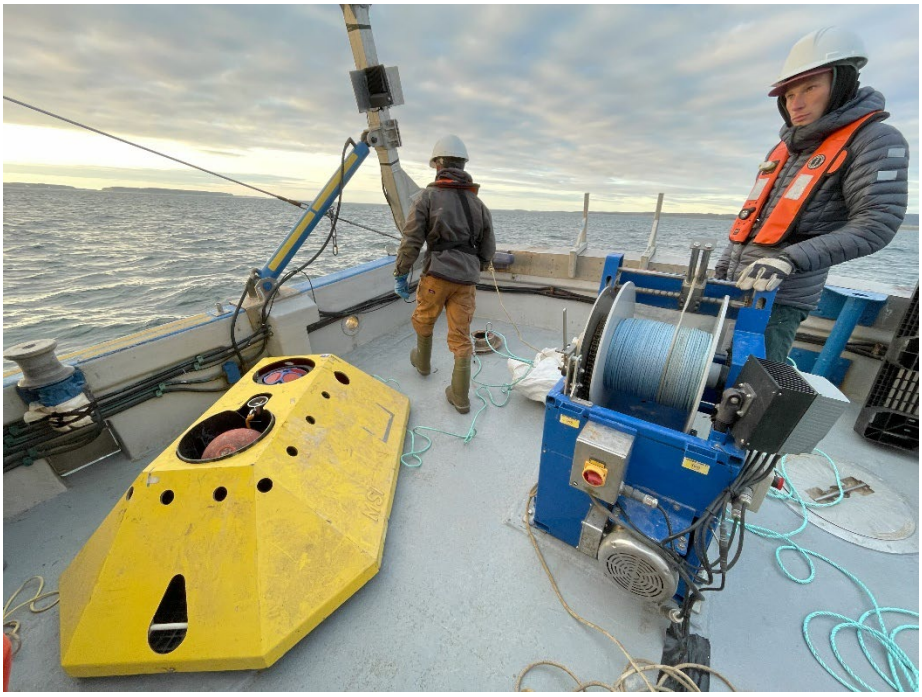
Figure No.
4.1

Title
ADCP Deployment Station and Vessel-Based ADCP Transects in the Marine Port Area

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Photo 4.1 ADCP in a Bottom Frame Prior To Deployment on the Seabed in July 2025



The ADCP was retrieved as planned using an acoustic release for the pop-up buoy on August 23, 2025. The ADCP operated autonomously for 30 days during the deployment, logging raw binary data internally. The time-series data from the deployment are used to describe currents, tides, and waves to illustrate vertical current structure, temporal variability, and wave climate at the stationary ADCP location.

4.2.1.2 ADCP Spatial Transects Data Collection

To characterize nearshore circulation patterns and flow variability in the vicinity of the proposed Grays Bay port site, Nunami Stantec conducted vessel-based ADCP transects during both flooding and ebbing tidal phases (Figure 4.1). These measurements were carried out using a Teledyne RDI Workhorse Sentinel ADCP from a small vessel launched off the R/V *Martin Bergmann*, operated by Arctic Research Foundation.

The vessel platform consisted of a 15 ft aluminum workboat launched from the R/V *Martin Bergmann,* equipped specifically for current profiling surveys. The ADCP in this configuration was mounted over the side of the vessel with the transducers in a downward-facing orientation using a rigid pole mount to ensure instrument stability and proper alignment during transect runs. Key configuration details included:

- Frequency: 600 kHz (suitable for high-resolution profiling in shallow to moderate depth conditions)
- Bin (depth cell) size: 0.5 m

- Blanking distance: optimized to minimize near-surface interference
- Ensemble (ping) sampling rate: 1 Hz, averaged into 5 ensembles during post-processing.

The vessel navigated at a steady low speed (1–2 m/s) to ensure adequate along-track data resolution. Transects were oriented perpendicular and parallel to the shoreline and port structures to capture cross-channel and longitudinal flow variability. The ADCP was operated in bottom-tracking mode, allowing real-time measurement of vessel speed over the seabed. This enabled accurate calculation of absolute water velocity by subtracting vessel motion from measured water Doppler shifts among the four transducers on the ADCP. Real-time ADCP diagnostic data were monitored to verify beam performance and ensure optimal data quality. Start and end waypoints were logged for each transect, and vessel track lines were recorded continuously.

4.2.2 Water Quality Sampling

4.2.2.1 Methods

2024 Field Program

For the 2024 field program, ten water quality locations were selected and distributed within the PDA, LAA, and RAA (Figure 4.2; Table 4.1). At each location, in-situ conductivity, temperature, and depth (CTD) profiles were collected using a YSI EXO sonde. The probe was lowered to within 1m of the seabed, data recording was initiated, and then the probe was slowly raised to the surface at approximately 1 m/s while continuously logging data. Parameters recorded included depth (m), temperature (ºC), dissolved oxygen (mg/L and %), conductivity (µS/cm), turbidity (nephelometric turbidity unit [NTU]), salinity (practical salinity unit [psu]), and pH. The CTD profile was used to confirm the presence of a pycnocline (area of rapid density change) and establish the depth at which the water quality samples were collected for laboratory analysis.

Water quality samples were collected at nine locations using a line-mounted 12.06 Van Dorn water sampler (10x10x30 cm, 2,200 mL; Photo 4.2). The following criteria were used to determine sample numbers/depths at a given location:

- If a pycnocline was present, samples were collected from the surface (0.5 m below the surface) and below the pycnocline.
- If no pycnocline was present, samples were collected from the surface (0.5 m below the surface) and the bottom (0.5 m above the seafloor).
- If water depths were less than 5 m deep, only one sample was collected at the surface.





Water Quality Sampling Location
Grays Bay Road
Local Assessment Area (LAA)
Regional Assessment Area (RAA)

0 250 500 Metres
(At original document size of 11x17)1:30,000

N

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Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2025-12-09
TR by DS on 2025-12-09

Client/Project
123514868_141

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
4.2

Title
Marine Water Quality Locations, August 2024

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Table 4.1 Summary of Water Quality Sampling Locations, August 2024

Station ID	Station Depth (m)	CTD Profile	Water Quality		Description
			Pycnocline Present	Location of Water Samples	
WQ1	15	✓	No	Surface (0.5 m); Bottom (13 m)	RAA, shallow site approximately 2 km southwest of the proposed port site.
WQ2	28	✓	Yes	N/A[1]	LAA, <500 m southwest of the proposed port site.
WQ3	40	✓	Yes	Surface (0.5m) Below pycnocline (28 m)	LAA, <500 m northwest of the proposed port site.
WQ4	14	✓	No	Surface (0.5m) Bottom (14 m)	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
WQ5	11	✓	No	Surface (0.5m) Bottom (10 m)	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
WQ6	34	✓	Yes	Surface (0.5m) Below pycnocline (27 m)	LAA, deep site approximately 500 m off the peninsula of the proposed port.
WQ7	18	✓	Yes	Surface (0.5m) Below pycnocline (13 m)	LAA, approximately 1 km southeast of the proposed port site, near the proposed small craft harbour.
WQ8	31	✓	Yes	Surface (0.5m) Below pycnocline (26 m)	RAA, shallow site approximately 2 km west of the proposed port site.
WQ9	1.7	✓	No	Surface (0.5 m)	RAA, approximately 500 m offshore from the mouth of the Kennarctic River.
WQ10	32	✓	Yes	Surface (0.5m) Below pycnocline (25 m)	LAA, approximately 1 km northeast of the proposed port site.

Notes:

[1] Water quality sample was not collected due to safety concerns from inclement weather.

N/A: not applicable

CTD: conductivity, temperature, and depth

LAA: Local Assessment Area

RAA: Regional Assessment Area

Photo 4.2 Water Quality Samples Collected Using a Van Dorn Water Sampler (2024)



Prior to use at each station, the sampler was cleaned with Alconox® and then rinsed with marine water to reduce the likelihood of cross-contamination between locations. The sampler was lowered to the required depth, triggered to collect a sample, retrieved to the surface, and used to fill sample bottles. Water samples were stored in coolers with ice packs and shipped to ALS Environmental Limited (ALS) in Yellowknife, North West Territories, a Canadian Association for Laboratory Accreditation, for analysis. Samples were shipped as soon as practical after sample collection and taking into consideration the holding time constraints prescribed by the laboratory for each specific parameter being analyzed. Samples were submitted for analysis of total and dissolved metals, anions, nutrients, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and petroleum hydrocarbons.

A list of parameters analyzed, and their associated laboratory detection limits, is presented in Appendix A.1.

2025 Field Program

Field sampling for the 2025 program followed the same methods and used the same sampling locations as the 2024 program. Ten water quality sampling stations were selected and distributed within the PDA, LAA, and RAA (Figure 4.3; Table 4.2). Water quality sampling was conducted during two separate events, in July and August 2025. Due to safety concerns from inclement weather, not all stations were sampled as planned. In-situ conductivity, temperature, and depth (CTD) profiles were collected using a YSI EXO sonde; however, CTD data were only collected during the July event due to technical issues with field equipment encountered in August. At each sampled location in July 2025, CTD profiles were collected using the same methods as in the 2024 field program.





- Borehole Location
- Water Quality Sampling Location
- Grays Bay Road
- Local Assessment Area (LAA)
- Regional Assessment Area (RAA)

0 250 500 Metres

(At original document size of 11x17)1:30,000

N

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WEST KITIKMEOT RESOURCES CORP

Notes

1. Coordinate System: WGS 1984 UTM Zone 12N

2. Data Sources: Government of Canada, Stantec, Vantor

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2025-12-09
TR by DS on 2025-12-09

Client/Project
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West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
4.3

Title
Marine Water Quality Sampling Locations, 2025

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_142_Water_Quality_Sampling_Sites_2025.pagx Revised: 2026-02-06 By: slemay

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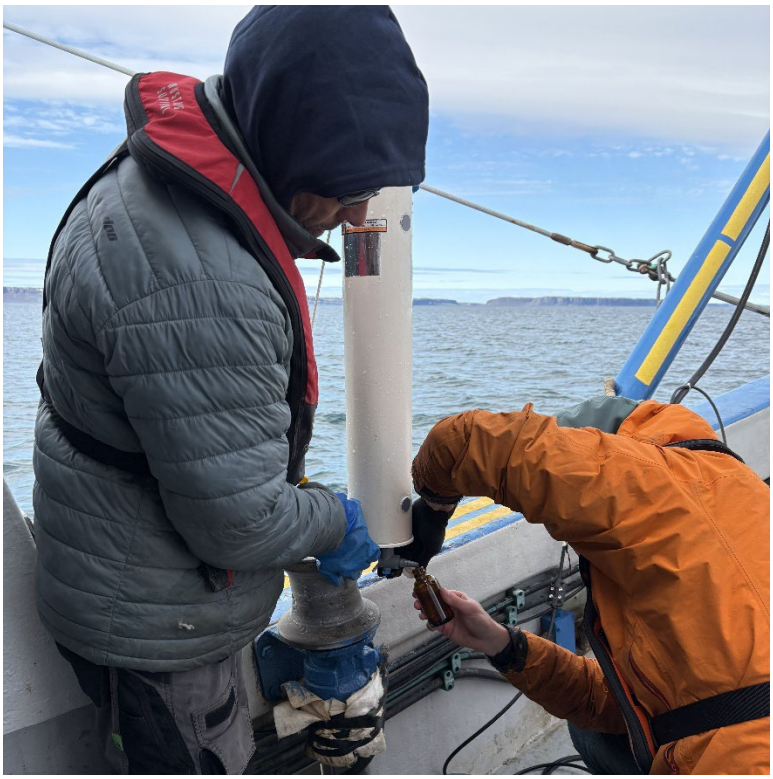
Table 4.2 Summary of Water Quality Sampling Locations, July and August 2025

Station ID	Station Depth (m)	CTD Profile (July)	Water Quality (July)		Water Quality (August)		Description
			Pycnocline Present	Location of Water Samples	Pycnocline Present	Location of Water Samples	
WQ1	15	✓	Yes	Surface (1 m); Bottom (9 m)	N/A[2]	Surface[2]	RAA, shallow site approximately 2 km southwest of the proposed port site.
WQ2	29	✓	Yes	Surface (1 m); Bottom (22 m)	N/A[2]	Surface[2]	LAA, <500 m southwest of the proposed port site.
WQ3	42	✓	Yes	Surface (11 m); Bottom (30 m)	N/A[2]	Surface[2]	LAA, <500 m northwest of the proposed port site.
WQ4	15	✓	No	No Surface Bottom (7 m)	N/A[2]	Surface[2]	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
WQ5	6	✓	No	No Surface Bottom (6 m)	N/A[2]	Surface[2]	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
WQ6	32	✓	Yes	Surface (1 m); Bottom (25 m)	N/A[2]	Surface[2]	LAA, deep site approximately 500 m off the peninsula of the proposed port.
WQ7	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[2]	Surface[2]	LAA, approximately 1 km southeast of the proposed port site, near the proposed small craft harbour.
WQ8	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[2]	Surface[2]	RAA, shallow site approximately 2km west of the proposed port site.
WQ9	2	✓	No	Surface (1 m)	N/A[2]	Surface[2]	RAA, approximately 500 m offshore from the mouth of the Kennarctic River.
WQ10	35	✓	Yes	Surface (1 m); Bottom (25 m)	N/A[2]	Surface[2]	LAA, approximately 1 km northeast of the proposed port site.

Notes:
[1] Water quality sample/CTD profile was not collected due to safety concerns from inclement weather.
[2] CTD profile not collected due to technical issues with field equipment encountered; no depth available.
N/A: not applicable
CTD: conductivity, temperature, and depth
LAA: Local Assessment Area
RAA: Regional Assessment Area

Water quality samples were collected at 8 locations in July using a Kemmerer water sampler (4.2 L; Photo 4.3) and at 10 locations in August using a Kemmerer water sampler (2.2 L). Sampling followed the same protocol used in the 2024 field program. However, because depth measurements were unavailable during the August sampling event, samples were only collected near the surface.

Photo 4.3 Water Quality Samples Collected Using a Kemmerer Water Sampler (2025)



A list of parameters analyzed, and their associated laboratory detection limits, is presented in Appendix A.1.

Geotech Drilling Program

In April/May 2025, grab samples were collected twice at both the large vessel wharves and small craft harbour areas, once prior to the start of drilling and once after the final borehole was completed. This resulted in a total of four sampling events: two in the large vessel wharves area and two in the small craft harbour area. Samples were taken just beneath the ice surface using a weighted bailer, and field staff followed strict protocols to prevent contamination, including the use of nitrile gloves and pre-labelled sample bottles. Some bottles contained preservatives for specific analytes such as total metals and mercury. Immediately after collection, samples were stored in coolers at temperatures between 4–10°C and shipped to a certified laboratory for analysis. Ice depth was recorded at each site, and care was taken to maintain clean sampling conditions. Sample identifiers included borehole location and timing (e.g., “BH-4-before”) to distinguish between pre- and post-drilling events. CTD data were also collected at

each borehole station before, during and after investigative marine drilling at maximum depth. Parameters measured included temperature, pH, dissolved oxygen, specific conductivity, and turbidity. Salinity data were not available.

Location of the water sampling sites is described in Table 4.3 and illustrated in Figure 4.3. Water quality station depths in Table 4.3 are based on the pre-drilling depth measurement.

Table 4.3 Water Sampling Locations for Geotech Drilling Program (April/May)

Station ID	Station Depth (m)	CTD Profile	Water Quality		Description
			Pycnocline Present	Location of Water Samples	
SCH-BH-05	7.29	✓[1]	NA[1]	Bottom	LAA, approximately 200 m northeast of the proposed port site, near the proposed small craft harbour.
SCH-BH-07	25.38	✓[1]	NA[1]	No sample collected	LAA, approximately 200 m northeast of the proposed port site, near the proposed small craft harbour.
SCH-BH-09	26.57	✓[1]	NA[1]	Bottom	LAA, approximately 300 m east of the proposed port site, near the proposed small craft harbour.
WRF-BH-01	12.30	✓[1]	NA[1]	Bottom	LAA, intersecting with the large vessel wharf area.
WRF-BH-04	15.15	✓[1]	NA[1]	Bottom	LAA, intersecting with the large vessel wharf area.

Notes:
[1] CTD data was collected at station depth only.
N/A: not applicable
CTD: conductivity, temperature, and depth
LAA: Local Assessment Area

4.2.2.2 Data Analysis

Descriptive statistics were calculated for water quality samples and included sample size, arithmetic mean, and standard deviation. When calculating descriptive statistics for chemistry parameters, values below the analytical detection limit (DL) were calculated using the DL.

Laboratory results for the water quality samples were compared to the Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for Marine Aquatic Life (WQG-MAL) (CCME 2024).

4.2.2.3 Quality Assurance and Quality Control

Quality assurance and quality control (QA/QC) procedures were applied during field sampling as well as during laboratory analyses. Field equipment was calibrated throughout the program following manufacturer guidelines, sampling devices were cleaned between stations, and the work was completed by experienced and trained personnel. Quality assurance and quality control samples (QA/QC) were

collected and consisted of two duplicate samples and one field blank. Chain of custody forms were used to track shipment and receipt of samples.

Once at the lab, water quality samples were subject to industry-standard QC analyses (i.e., method blanks, method spikes, laboratory control samples, and laboratory duplicates) to assess the precision and accuracy of analytical methods. The QC report of the laboratory certificate of analysis was reviewed upon receipt to confirm that the appropriate QA/QC information had been reported and that the laboratory data quality objectives (DQO) had been met.

4.2.3 Zooplankton Sampling

4.2.3.1 Methods

Zooplankton samples were collected concurrently with the water quality samples at nine locations (Table 4.4; Figure 4.4). Samples were collected using a 336-micron mesh conical net with a 0.5 m diameter opening (Photo 4.4). A vertical tow was completed at each site, with the net lowered to just above the seabed and then raised slowly to the surface. Samples were initially screened and preserved onsite by Biologica staff and then packaged for transport and fully processed (taxonomic identification and enumeration) in their lab.

Table 4.4 Summary of Zooplankton Sampling Locations, August 2024

Station ID	Station Depth (m)	Zooplankton	Description
ZP1	15	✓	RAA, shallow site approximately 2 km southwest of the proposed port site.
ZP2	28	N/A[1]	LAA, <500 m southwest of the proposed port site.
ZP3	40	✓	LAA, <500 m northwest of the proposed port site.
ZP4	14	✓	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
ZP5	11	✓	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
ZP6	34	✓	LAA, deep site approximately 500 m off the peninsula of the proposed port.
ZP7	18	✓	LAA, approximately 1 km southeast of the proposed port site, near the proposed small craft harbour.
ZP8	31	✓	RAA, shallow site approximately 2km west of the proposed port site.
ZP9	1.7	✓	RAA, approximately 500 m offshore from the mouth of the Kennarctic River.
ZP10	32	✓	LAA, approximately 1 km northeast of the proposed port site.

Notes:

[1] Zooplankton sample was not completed due to safety concerns from inclement weather.

LAA: Local Assessment Area

RAA: Regional Assessment Area





Zooplankton Sampling Location
Local Assessment Area (LAA)
Regional Assessment Area (RAA)
Grays Bay Road

0 250 500 Metres
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N

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Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Government of Canada, Stantec, Vantor

Project Location
West Kitikmeot Region
Nunavut

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Figure No.
4.4

Title
Zooplankton Sampling Locations, August 2024

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_143_Zooplankton_Sampling_Sites_2024.pagx Revised: 2026-02-06 By: slemay

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Photo 4.4 Field Crew Completing a Vertical Tow for the Collection of Zooplankton



4.2.3.2 Laboratory Analysis

Marine zooplankton samples were analyzed in one to two fractions by Biologica using a Folsom Splitter to obtain subsamples (Table 4.5):

1. A unique, large, and rare fraction: The whole sample was scanned, and these organisms were removed for identification. Ichthyoplankton are included in this fraction unless they have very high abundances.
2. One fraction comprised of all remaining organisms in the sample: The number of fractions is determined by the size distribution and abundance of organisms in the sample. Counts are included in the fraction to capture the per-taxon abundances. All taxa and stages are identified in only one fraction.

Table 4.5 Summary of Zooplankton Samples Processed by Biologica, 2024

Sample ID	Date Sampled	Fraction	Split	Specimens Counted
ZP1	26-Aug-24	Fraction 1	9/16	352
		Whole	Whole	1
ZP3	26-Aug-24	Fraction 1	3/16	319
		Whole	Whole	46
ZP4	27-Aug-24	Whole	Whole	302
ZP5	27-Aug-24	Whole	Whole	79
ZP6	26-Aug-24	Fraction 1	3/16	270
		Whole	Whole	49
ZP7	24-Aug-24	Fraction 1	3/8	310
		Whole	Whole	4
ZP8	24-Aug-24	Fraction 1	3/32	259
		Whole	Whole	66
ZP9	24-Aug-24	Whole	Whole	78
ZP10	26-Aug-24	Fraction 1	1/4	325
		Whole	Whole	32

Note:
Specimens counted do not include memo organisms such as copepods, nematodes, or terrestrial insects.

The Coarse fraction was completed using a stereo microscope (10-40x magnification). All organisms were identified by taxonomic experts to the lowest taxonomic level using a compound microscope (100-400x magnification), appropriate dissection tools, and standard taxonomic references. For copepods, the stage of development was also recorded (copepodite stages I–V), as was the sex for mature individuals (copepod stage VI). Non-copepod taxa for which typical life staging is not appropriate taxa were assigned a size stage consistent with the sizing of the Zooplankton Taxonomy Laboratory at the Institute of Ocean Sciences (Sidney, British Columbia (BC)). These size stages are s0 (<1.0mm not contributing significantly to biomass), s1 (1-5 mm), s2 (5-10 mm), s3 (10-15 mm), s4 (15-20 mm) and s5 (20-25 mm).

Zooplankton were identified to species wherever possible, although immature copepods lack the differentiating features required for identification beyond order (e.g., Calanoida, Cyclopoida, or Harpacticoida). All identifications were performed using taxonomic references and collaborations with external experts, where necessary.

4.2.3.3 Quality Assurance Quality Control

Biologica reanalyzed ten percent of samples to assess subsampling accuracy and consistency of enumeration. The sample was chosen at random and processed at different times to reduce counting and identification bias. The percent agreement between the QA/QC sample was calculated using the formula:

$$Percent\ Agreement = 100 - [\left(\frac{Difference\ in\ Density\ Between\ Samples}{Total\ Density\ of\ Original\ Sample}\right) x\ 100]$$

4.2.3.4 Data Analysis

Whole sample wet weight biomass was calculated for each sample using the direct weight of the major taxonomic groups as practical (i.e., Chaetognatha, Cnidaria, Cladocera, Polychaeta) using an AND analytical balance to the nearest 0.01mg. All remaining taxonomic groups were weighed collectively.

Densities were calculated using the net diameter (0.5 m) and tow depth (Table 4.5).

4.2.4 Sediment Quality Sampling

4.2.4.1 Methods

Sediment samples were collected from 19 locations (Table 4.6; Figure 4.5) using a line-mounted Wildco standard Ponar grab (8.2 L) (Photo 4.5). Two samples were collected from each location: one for lab analysis (physical and chemical parameters) and one for benthic invertebrate analysis.

Prior to use, the equipment in contact with sediment (i.e., grab sampler, tubs, spoons) was cleaned with Alconox® and then rinsed with marine waters to reduce the likelihood of cross-contamination between stations. The contents of each grab were inspected to confirm that adequate substrate was present (minimum 10% of the sampler). Physical descriptions of the sediment samples, such as texture, colour, odour, presence of biota, presence of detritus, depth of sediment horizon sampled, and grab penetration depth, were recorded on the field datasheet and photographs of samples were taken to provide visual documentation. Sediment from each grab was homogenized using a stainless-steel spoon and transferred into pre-labelled sediment collection containers provided by the laboratory. Samples were placed in a cooler with ice packs as soon as they were collected to keep them cool during shipping.

Samples were shipped by air to ALS Yellowknife as soon as practical after sample collection and taking into consideration the holding time constraints prescribed by the laboratory for each specific parameter analyzed. Samples were submitted to ALS for the analysis of particle size, moisture, total metals, PAHs, polychlorinated biphenyls (PCBs), Benzene, Ethylbenzene, Toluene, Xylene (BTEX), total organic carbon (TOC), and paste salinity. A list of parameters and their associated laboratory detection limits is presented in Appendix C.1.

Table 4.6 Summary of Sediment and Benthic Invertebrate Sampling Locations, August 2024

Site ID	Station Depth (m)	Sediment Quality	Benthic Invertebrate Sample	Description
SED1	15.8	✓	✓	RAA, shallow site approximately 2 km southwest of the proposed port site.
SED2	~~N~~/A[1]	~~N~~/A[1]	~~N~~/A[1]	LAA, shallow site <1km southwest of the proposed port site, at the potential beach landing.
SED3	24.9	✓	✓	LAA, deep site approximately 500 m off the peninsula of the proposed port.
SED4	26.5	✓	✓	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
SED5	13.6	✓	✓	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
SED6	20.4	✓	✓	LAA, deep site approximately 500 m off the peninsula of the proposed port.
SED7	9.0	✓	✓	LAA, approximately 1 km southeast of the proposed port site, near the proposed small craft harbour.
SED8	23.0	✓	✓	RAA, shallow site approximately 2km west of the proposed port site.
SED9	2.0	✓	✓	RAA, approximately 500 m offshore from the mouth of the Kennarctic River.
SED10	36.0	✓	✓	LAA, deep site approximately 200 m off the peninsula of the proposed port
SED11	20.0	✓	✓	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
SED12	1.6	✓	✓	LAA, approximately 300 m south of the proposed port site, near the proposed site for the proposed fuel storage area.
SED13	25.6	✓	✓	Near-field, shallow site approximately 50 m off the peninsula of the proposed port.
SED14	22.0	✓	✓	LAA, shallow site approximately 50 m off the peninsula of the proposed port.
SED15	17.5	✓	✓	LAA, shallow site <200 m E and approximately 50 m off the peninsula of the proposed port.
SED16	6.0	✓	✓	LAA, shallow site off the peninsula of the proposed port, approximately 300 m east of Site WQ5/GB1W.
SED17	41.2	✓	✓	LAA, deep site approximately 200 m off the peninsula of the proposed port.
SED18	2.0	✓	✓	LAA, approximately 1 km southeast of the proposed port site, near the proposed small craft harbour.
SED19	26.0	✓	✓	LAA, shallow site, <1 km southeast of the proposed port site, near the proposed small craft harbour.
SED20	2.0	✓	✓	RAA, Mouth of the Kennarctic River.

Notes:
[1] Sediment quality sample was not collected
N/A: not applicable
LAA: Local Assessment Area
RAA: Regional Assessment Area





Sediment Quality and Benthic Invertebrate Sampling Location

Grays Bay Road

Local Assessment Area (LAA)

Regional Assessment Area (RAA)

0 250 500 Metres

(At original document size of 11x17)1:30,000

N

Notes

1. Coordinate System: WGS 1984 UTM Zone 12N

2. Data Sources: Government of Canada, Stantec, Earthstar Geographics

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WEST KITIKMEOT RESOURCES CORP

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2025-12-09
TR by DS on 2025-12-09

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Grays Bay Road and Port

Figure No.
4.5

Title
Marine Sediment Quality Sampling Locations, August 2024

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Photo 4.5 Sediment Samples Collected Using a Standard Ponar Grab Sampler



4.2.4.2 Data Analysis

Descriptive statistics were calculated for sediment quality samples and included sample size, arithmetic mean and standard deviation. When calculating descriptive statistics for chemistry parameters, values below the analytical DL were calculated using the DL.

Laboratory results for the sediment quality samples were compared to the Canadian Council of Ministers of the Environment (CCME) Sediment Quality Guidelines for Marine Aquatic Life (SQG-MAL) (CCME 2024).

4.2.4.3 Quality Assurance and Quality Control

As described in Section 4.2.2.3, QA/QC procedures were applied to all aspects of the field program, laboratory analysis, data entry and analysis, and report preparation. Two duplicate sediment samples were collected and “field split” for 10% of the total number of sediment samples submitted to laboratory analysis.

Sediment samples were subject to industry-standard QC analyses (i.e., method blanks, method spikes, laboratory control sample, reference material, and laboratory duplicates) in the lab to assess the precision and accuracy of analytical methods. The QC report of the laboratory certificate of analysis was reviewed upon receipt to confirm that the appropriate QA/QC information had been reported and that the laboratory DQO had been met.

4.2.5 Benthic Invertebrate Sampling

4.2.5.1 Methods

Benthic invertebrate sampling was completed concurrently with the sediment quality sampling at the same 19 stations (Table 4.6; Figure 4.5). Sediment samples collected for benthic invertebrate analysis were brought to shore for initial screening and preservation on-site prior to being packaged for shipment. Biologica then fully processed the samples (taxonomic identification and enumeration) back in their lab.

4.2.5.2 Laboratory Analysis

All samples were sorted using dissecting microscopes (10-40x magnification) by trained personnel. All debris (e.g., leaves, gravel) was checked microscopically. To minimize potential sorting bias, samples were distributed among technicians and sorted whole.

All organisms were identified using dissecting (10-40x magnification) and compound (100-1000x magnification) microscopes by taxonomic experts to the lowest practical level. All specimens were archived in air-tight glass vials with glycerin and 70% ethanol for long-term storage. Any species new to Biologica's verified reference collections was confirmed by one of Biologica's secondary-trained taxonomists.

4.2.5.3 Quality Assurance Quality Control

To confirm that sorting efficiency was >95%, whole and/or partial sub-samples were re-sorted. Sorting efficiency was calculated using the following equation:

$$Sorting\ Efficency = 1 - [\left(\frac{\#\ of\ Organisms\ in\ Re-sort}{Total\ \#\ of\ Organisms\ in\ Original\ Count}\right) x\ 100]$$

All samples checked must meet or exceed 95% sorting efficiency. Any samples falling below the DQO are re-sorted in their entirety, and additional checks are completed as necessary.

4.2.5.4 Data Analysis

Whole sample wet weight biomass for each sample was calculated by direct weight of the major taxonomic groups identified using an AND analytical balance to the nearest 0.01 mg. For damaged and/or unavailable specimens, estimates from Biologica's biomass database were used.

Densities were calculated using the Standard Ponar dimensions (0.0523 m^2).

5 Summary of Results

5.1 Oceanography

The Project is located in Grays Bay in the Coronation Gulf, approximately 180 km east of Kugluktuk, Nunavut. The Kitikmeot Sea, which includes Grays Bay and the Coronation Gulf, connects to the Arctic Ocean via the Dolphin and Union Strait to the west and the Victoria Strait to the east. Both straits have shallow sills that are less than 30 m deep, which restrict water mass and nutrient exchange with the broader Arctic Ocean (Afsharipour et al. 2023). The Coronation Gulf is a long, deep (~400 m) basin (Carmack and McLaughlin 2011) and is the deepest region of the Kitikmeot Sea (Afsharipour et al. 2023).

Seasonal changes strongly influence the Arctic marine environment in terms of air temperature and sunlight. For much of the year, there is landfast ice (ice that is fastened to the coast) throughout, reaching a depth of 2 m or more (Afsharipour et al. 2023; MMG 2012; Wolfden 2006). The water under the ice is at the freezing point, and the water's salinity increases as salt is removed from the ice. Although inter-annual variations exist, the ice-free period in the Kitikmeot Sea typically occurs from July to September (Afsharipour et al. 2023) and between mid-July and early November in Grays Bay (MMG 2012). As the landfast ice begins to break up and melt, salinity rapidly decreases to 20 ppm or less, and temperature increases to 5ºC or more, causing intense stratification with warmer, less saline water forming a layer on the surface (Afsharipour et al. 2023; Wolfden 2006). The Kitikmeot Sea is one of the most nitrogen-depleted water bodies in the Arctic Ocean due to intense summer stratification and limited inflow (Back et al. 2021). As a result, primary productivity is limited (Afsharipour et al. 2023).

Grays Bay is sheltered from the Coronation Gulf by Hepburn Island, which is located 8 km north of the Project. The high cliffs on Hepburn Island form a wind break for winds blowing from the north into Grays Bay and limit the fetch distance for wind-generated waves (MMG 2012). Stratification is determined by salinity during periods of ice cover and ice melt, and temperatures during the ice-free period (mid-July to early November [MMG 2012]). In addition, the Kennarctic River, approximately 3 km to the east of the proposed marine port site, heavily influences water quality and stratification within Grays Bay. Freshwater runoff from the river further decreases salinity at the surface and introduces suspended sediments into the marine environment (Wolfden 2006).

Tidal ranges within Grays Bay can be estimated through published tide tables at Kugluktuk and Cambridge Bay. Annual predicted tides for Kugluktuk in 2024 range from 0 to 0.6 m (Kugluktuk Station 06290) and 0.1 to 1.0 m in Cambridge Bay (Cambridge Bay Station 06240) (Government of Canada 2024). Tide ranges at Grays Bay are expected to be within similar ranges.

5.1.1 Historical Oceanography

In 2012, two Acoustic Doppler Current Profilers (ADCPs) were deployed in Grays Bay by ASL Environmental Sciences to obtain information on waves, currents and tidal heights in Grays Bay (Mudge et al. 2012). However, only the ADCP located northwest of the island in Grays Bay and approximately 1.5 km from the port site was recovered. The largest current recorded was in late July at 104.4 cm/s (2.1 knots [kt]t]). Currents were found to be statistically larger near the surface than at mid-depth or near the bottom; however, the currents were not always consistent throughout the water column (Mudge et al. 2012). Large current events in the near-surface are typically associated with larger events in the lower water column. Mudge et al. (2012) hypothesized that there was likely a freshwater layer near the surface due to local river inflow that was driving the observed shears.

Wave observations also indicated a complex environment. The longest-period waves arrived from the west, and shorter, locally generated waves or reflections came from the east, south, and northwest. The largest wave recorded during the ADCP deployment was from the west in August 2012 and had a height of 1.15 m and a peak period of 5 seconds (Mudge et al. 2012). The diurnal tidal constituents dominated the water levels in Grays Bay, and the maximum observed tidal range was 0.7 m (Mudge et al. 2012).

5.1.2 2025 Field Sampling Program

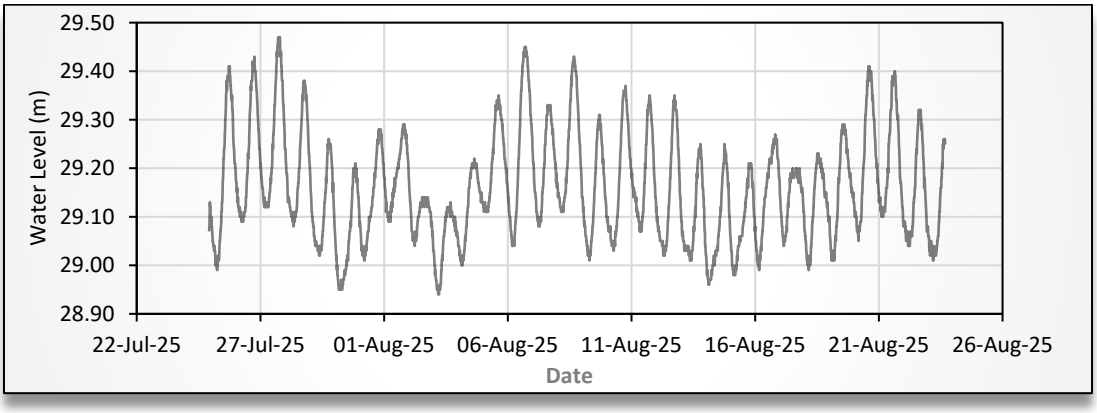
5.1.2.1 ADCP Time-Series Data

The ADCP deployed in 2025 near the large vessel wharf area of the Port PDA measured several parameters during the deployment period from July 24 to August 23 in a water depth of 29 m (see Figure 4.1). The time-series data for these parameters are provided below and include water level (tides), near-bottom temperature, current speed and direction, and waves.

Water Level

Measured water levels every 15 minutes by the pressure sensor of the ADCP instrument during the deployment period are provided in Figure 5.1. The relative water level from these measurements indicates the tides are diurnal for Grays Bay (one high and one low tide in 24 hours) with a maximum observed tidal range of 0.42 m measured on August 8.

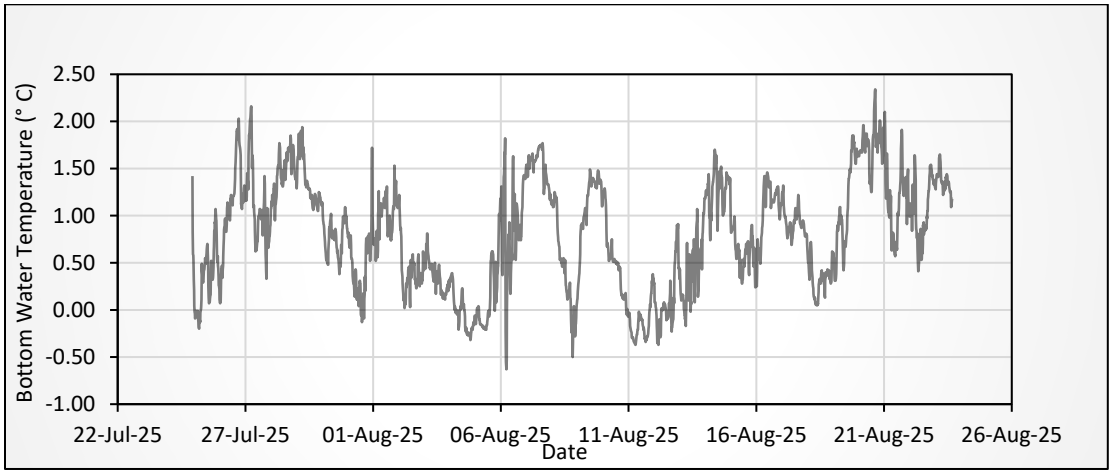
Figure 5.1 Relative Water Level Measurements by the ADCP Instrument from July 24 to August 23, 2025



Bottom Water Temperature

Time-series bottom water temperature measured every 15 minutes by the temperature sensor of the ADCP instrument during the deployment period is provided in Figure 5.2. The temperature ranged from a low of -0.63 °C on August 6 to a high of 2.34 °C on August 20.

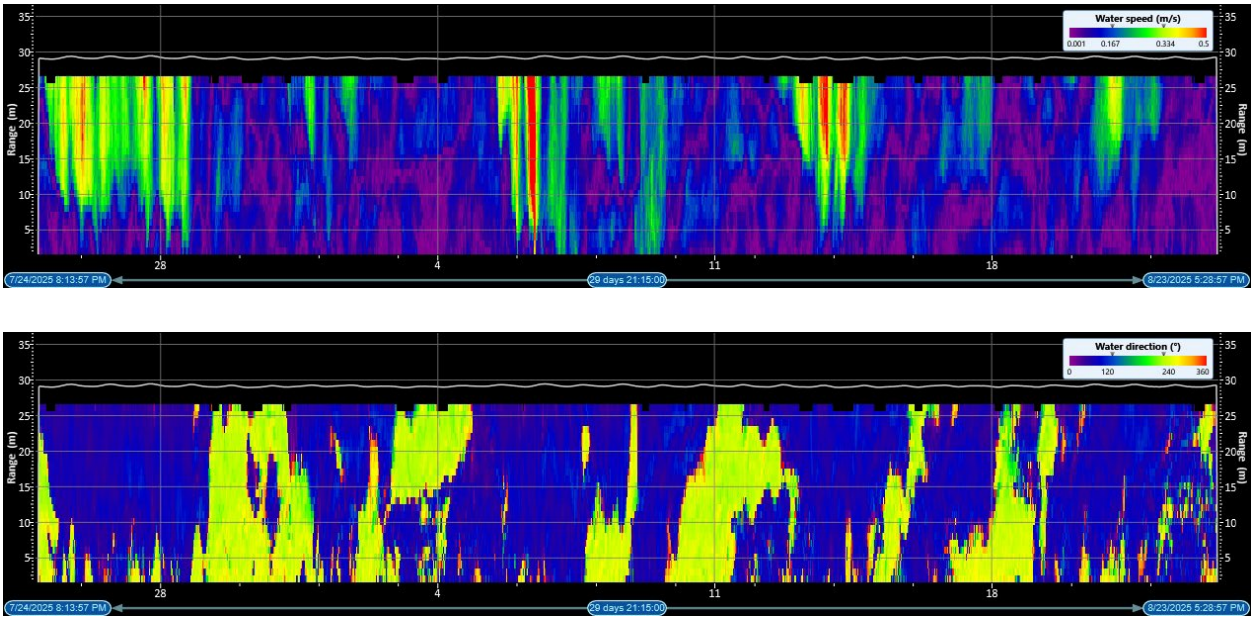
Figure 5.2 Bottom Water Temperature Measured 0.5 m Above the Seabed by the ADCP from July 24 to August 23, 2025



Current Speed and Direction

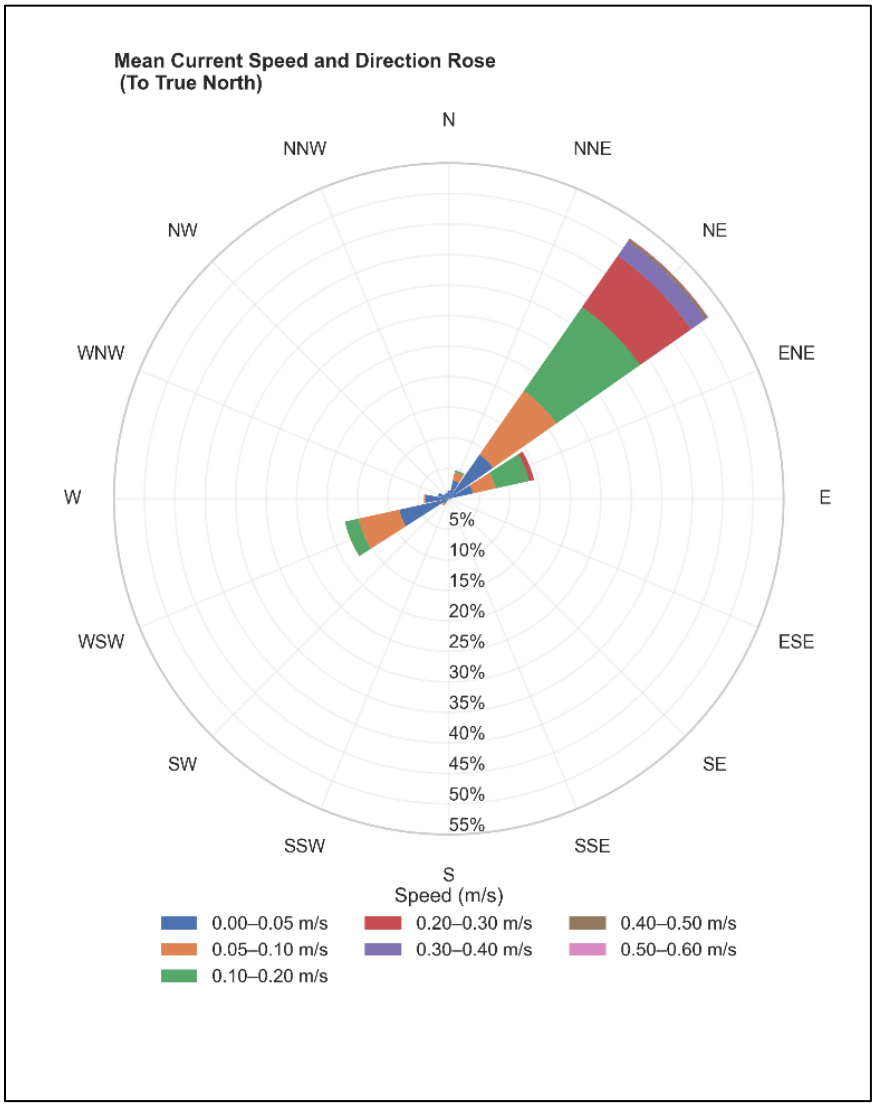
The time-series current speed and direction data collected at the ADCP station from July 24 to August 23 are shown in Figure 5.3. Generally, in the area of the large vessel wharves and location of the ADCP bottom frame, the near-surface currents to a water depth of approximately 19 m (7 to 26 m range from the seabed in Figure 5.3) were higher from about 0.2 m/s to 0.5 m/s flowing in an easterly direction. The maximum current speed measured during the deployment period was 0.58 m/s (1.1 kts) on August 6 and flowing towards the northeast (57° true North) at 20.1 m above the seabed (approximately 9 m below the surface water). When currents were flowing towards the west, they were generally at much lower speeds and up to 0.2 m/s. This correlation between stronger, eastward current circulation and weaker, westward circulation is noticeable in Figure 5.3.

Figure 5.3 ADCP Time-Series Data for Current Speeds in the Water Column (Top Panel) and Direction Towards (Bottom Panel) from July 24 to August 23, 2025 [Note: Range in Metres on the Y-Axis is from the ADCP Instrument on the Seabed].



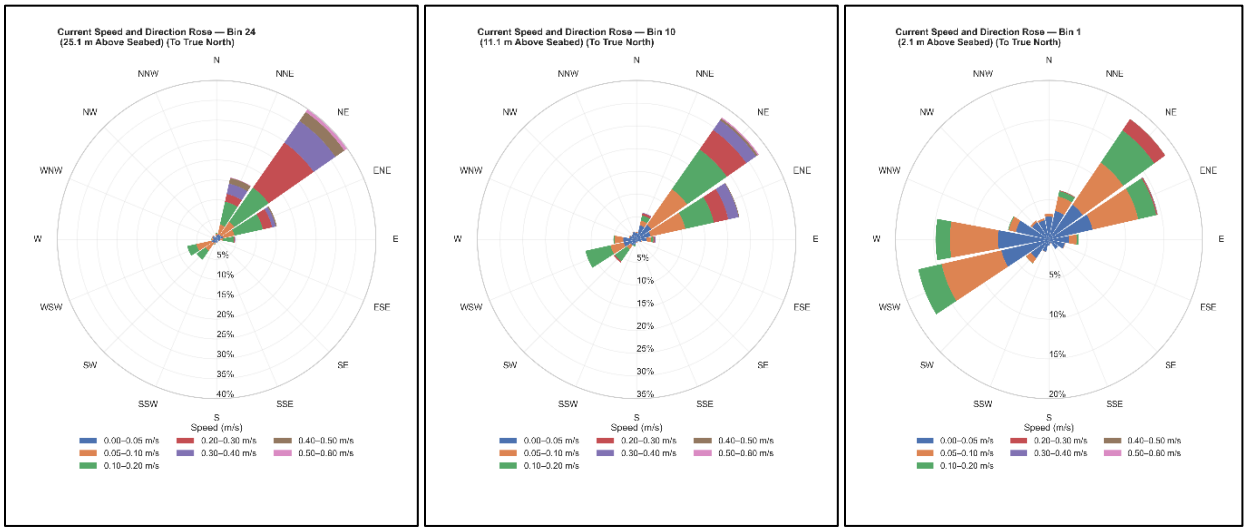
The depth-averaged current rose diagram for the ADCP station over the deployment period is shown in Figure 5.4. It can be seen that mean currents over the water column were generally more frequent and had higher speeds towards the northeast, with less than 20% of the time the currents were weaker and towards the west-southwest. The maximum depth-averaged current speed was 0.52 m/s (1 kt) towards the northeast (53° true North) on August 6, 2025.

Figure 5.4 Depth-Averaged Mean Current Flow Rose Diagram for the ADCP Time-Series Data from July 24 to August 23, 2025



The current data were also examined for specific one-metre depth layers (bins) in the water column and collected by the ADCP instrument. These water layers are shown in Figure 5.5 and where it can be observed that the dominant current flowed towards the northeast below the surface and at mid-depth, but the frequency for currents is relatively equally distributed in the flow between the NE-ENE direction and W-WSW direction at 2.1 m above the seabed (right panel, Figure 5.3). The maximum currents measured in these water layers during the ADCP deployment were 0.57 m/s, 0.56 m/s, and 0.44 m/s for the surface, mid-depth and bottom waters, respectively, and measured on August 6. The current direction was towards the NE for these water layers.

Figure 5.5 Current Flow Rose Diagram Near the Surface (Left), Mid-Depth (Centre), and Above the Bottom (Right) at the ADCP Station from July 24 to August 23, 2025



Waves

Waves data collected by the ADCP over the deployment period for significant wave heights (Hs) and wave direction (from) are summarized in Figure 5.6 and Table 5.1. The significant wave height (Hs), measured from wave trough to crest, is the average height of the highest one-third (33%) of all waves measured in a given area and period (very small wave heights (< 0.1 m Hs) were omitted from the analysis because of noise and unrealistic longer peak wave periods). In the area of the vessel wharf and location of the ADCP station (see Figure 4.1), the waves were normally smaller in the range from 0.1 to 0.5 m, and up to 0.8 m, but not as common, and generally from the eastern sector (NNE, NE and ESE). In contrast, the larger waves in the range from 0.8 m to 1.0 m were primarily from the western sector and specifically the WNW, though they were not as frequent (Table 5.1). The largest wave recorded was 0.9 m from 294°. The smaller waves from the ESE are likely reflected waves from the coastline. The waves from the NNE and NE are likely wind-driven waves and fetch for winds from the NE. The larger waves from the WNW are likely propagating from Coronation Gulf and through the channel to the west of Hepburn Island and the mainland. These waves have a longer fetch distance across open water to the port site compared to waves from the NE (Mudge et al. 2012). The Nunami Stantec GBRP meteorological station at Grays Bay was back in operation on August 19. Only four days of local wind speed and directional data were available that overlapped with the ADCP time-series data; the winds were light, averaging 4 m/s, and too short a record to provide any meaningful interpretation for physical oceanographic processes for the waves and currents measured at the port site.

The peak wave period (Tp) for the range of Hs wave heights recorded are provided in Table 5.2. Wave periods were generally 1 to 5 seconds and accounted for 94% of all wave heights, with 19.8 % for the largest category of wave heights in the 0.1 m to 0.2 m range and peak wave periods of 4 to 5 seconds (Table 5.2).

Figure 5.6 Wave Rose Diagram of Significant Wave Height (Hs) for the ADCP Time-Series Data from July 24 to August 23, 2025

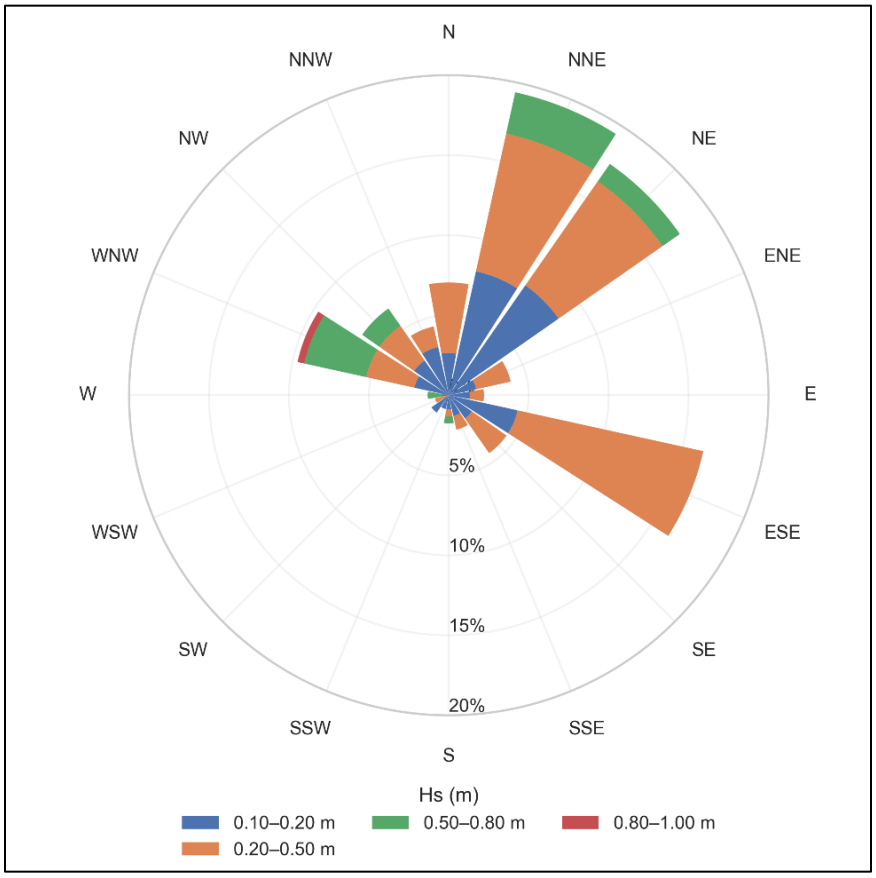


Table 5.1 Percent Significant Wave Height Versus Wave Direction

Significant Wave Height, Hs (m)	Wave Direction (From)																Total % by Hs Range
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0.1-0.2	3.5	14.1	11.5	2.6	1.3	6.6	1.8	1.3	0.9	0.9	1.3	0.4	0.4	2.3	2.6	3.5	**55.1**
0.2-0.5	3.5	2.6	4.9	1.3	0.9	9.7	2.6	0.9	0.4	0	0	0.4	0	3.1	2.6	0.9	**33.9**
0.5-0.8	0	2.6	1.3	0	0	0	0	0	0.4	0	0	0	0.4	3.5	1.3	0	**9.7**
0.8-1.0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9	0	0	**1.3**
Total % by Wind Direction	**7**	**19.4**	**17.6**	**4**	**2.2**	**16.3**	**4.4**	**2.2**	**1.8**	**0.9**	**1.3**	**0.9**	**1.3**	**9.8**	**6.6**	**4.4**	**100**

Table 5.2 Percent Significant Wave Height Versus Peak Wave Period

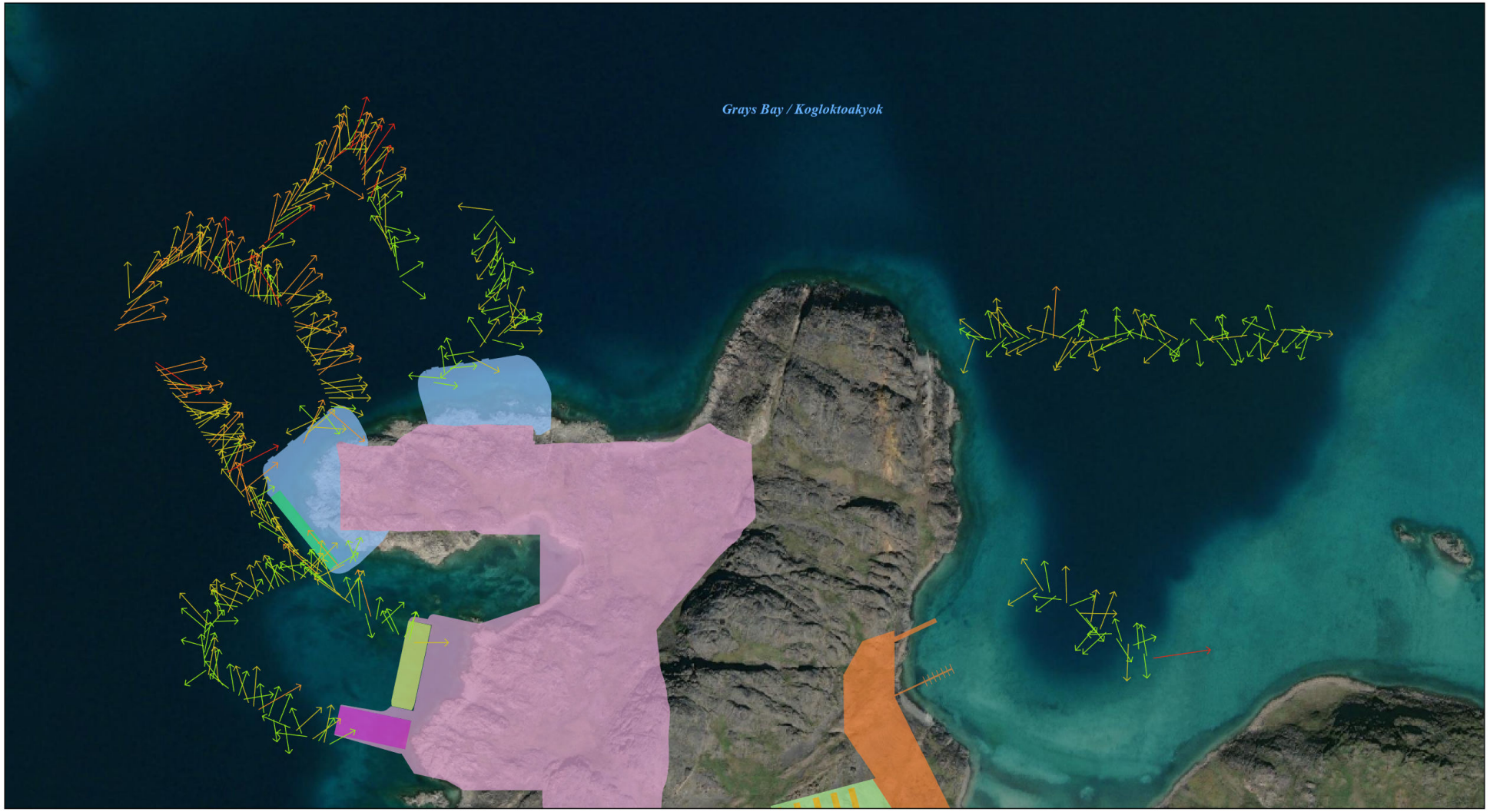
Significant Wave Height, Hs (m)	Peak Wave Period, Tp (s)											Total % by Hs Range
	1-3	3-4	4-5	5-6	6-7	7-8	8-10	10-12	12-16	16-20	20-26	
0.1-0.2	15.5	15.1	19.8	0.9	0.4	0	0.4	0	0	0.4	1.3	**53.9**
0.2-0.5	19	9.5	4.3	0	0	0	0	0	0	0.4	1.3	**34.5**
0.5-0.8	0	7.3	1.7	0.4	0	0	0	0	0	0.4	0	**9.9**
0.8-1.0	0	1.3	0	0	0	0	0	0	0.4	0	0	**1.7**
Total % by Tp Range	**34.5**	**33.2**	**25.9**	**1.3**	**0.4**	**0**	**0.4**	**0**	**0.4**	**1.3**	**2.6**	**100**

5.1.2.2 ADCP Spatial Transects Data

Nunami Stantec conducted further current measurements on August 24 and 25, at the location of the vessel and barge areas, including the proposed marine outfall location, to the west and north of the port area, and in the area of the public berths to the east of the port in the smaller bay. These current measurements were conducted along transects for the water column from near-surface to near-bottom to provide spatial current data in the PDA. Measurements were taken along pre-determined transects in the PDA during the flooding tide on August 24 and the ebbing tide on August 25. The local wind speed and direction during the transect surveys were available for Grays Bay and obtained from the Nunami Stantec GRRP meteorological station (Figure 4.1). The average wind speed and direction on August 24, prior to and during the flood tide survey, were 9.8 m/s and from 226° (true North), respectively. On August 25, the average wind speed was 8.9 m/s from 297° prior to and during the survey.

Overall, the results of the water current measurements suggest that the predominant water current directions around the PDA fluctuate during an ebb and flood tide. The predominant water current direction during the ebbing tide near the surface was to the north in the areas of the barge wharf and ramp, which then flowed towards the east in the vessel wharf area at higher speeds (0.15 to 0.45 m/s), and towards the coast further east of the wharf area and what appears to be a small gyre with weaker southwest flowing currents (Figure 5.7). The surface currents in the public wharf area were generally weaker with no coherent direction for the flow, which can be attributed to the small bay area being relatively shallow and sheltered from a westerly wind. The near-bottom currents and direction for an ebb tide were generally weaker (< 0.30 m/s) with no structured flow direction like for the surface currents, except in the barge area, where the bottom currents were generally flowing northward (Figure 5.8).

The currents measured for the surface and bottom currents during a flood tide are illustrated in Figure 5.9 and Figure 5.10, respectively. Current speeds for the sub-surface and bottom water layers were generally low (< 0.30 m/s) and similar to the bottom current speeds for the ebb tide, with no discernable direction to the flows because of the low speeds. In general, the currents for the sub-surface layer were larger than the bottom layer, where friction forces dominate, and likely the westerly wind direction contributed to the wind-driven, higher surface currents for the ebb tide. It is not clear why this was also not observed for the flood tide surface currents since the wind was of comparable speed and direction during that survey, and possibly attributed to other physical processes (e.g., tidal-induced currents).





Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Governments of Canada and Northwest Territories, Stantec Consulting Ltd
3. Service Layer Credits: Vantor

Current Speed (cm/s)
- 0-15
- 15-30
- 30-45
- >45

Port Footprint
- Admin Office and Accommodation Area
- Admin Office and Accommodation Buildings
- Barge Ramp
- Barge Wharf
- Landside Port
- Large Vessel Wharf
- Medium Vessel Wharf
- Public Use Area

0 100 200 Metres

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NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Project Location
Kitikmeot Region, Nunavut

Prepared by SL on 2026-02-09
TR by SC on 2026-02-09

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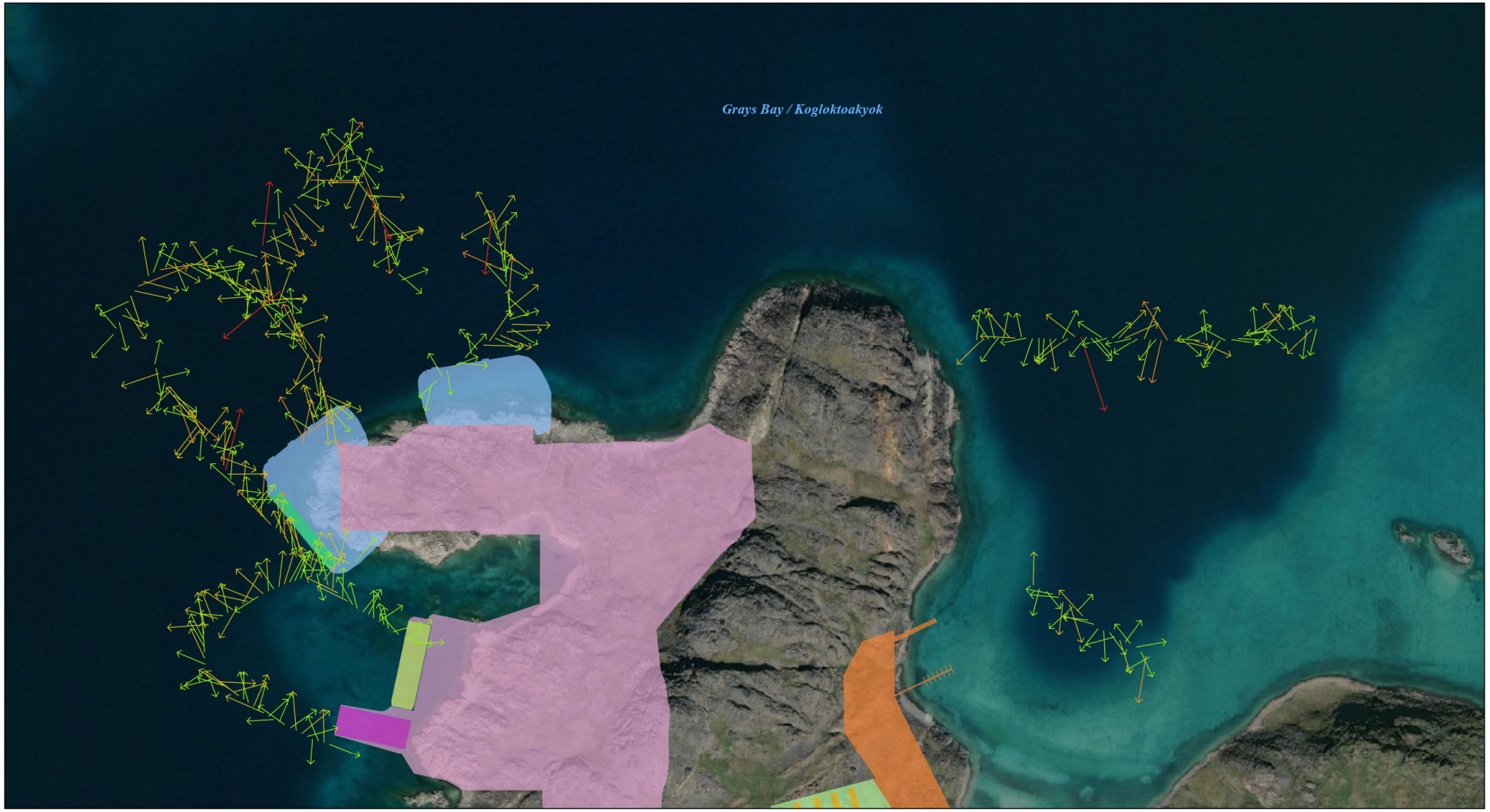
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Figure No.
5.7

Title
Surface Marine Currents Measured in the Port PDA in August 2025: Ebbing Tide

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_158_Surface_Ebbing.aprx Revised: 2026-02-12 By: slemay

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3. Service Layer Credits: Vantor

Current Speed (cm/s)
- 0-15
- 15-30
- 30-45
- >45

Port Footprint
- Admin Office and Accommodation Area
- Admin Office and Accommodation Buildings
- Barge Ramp
- Barge Wharf
- Landside Port
- Large Vessel Wharf
- Medium Vessel Wharf
- Public Use Area

0 100 200 Metres

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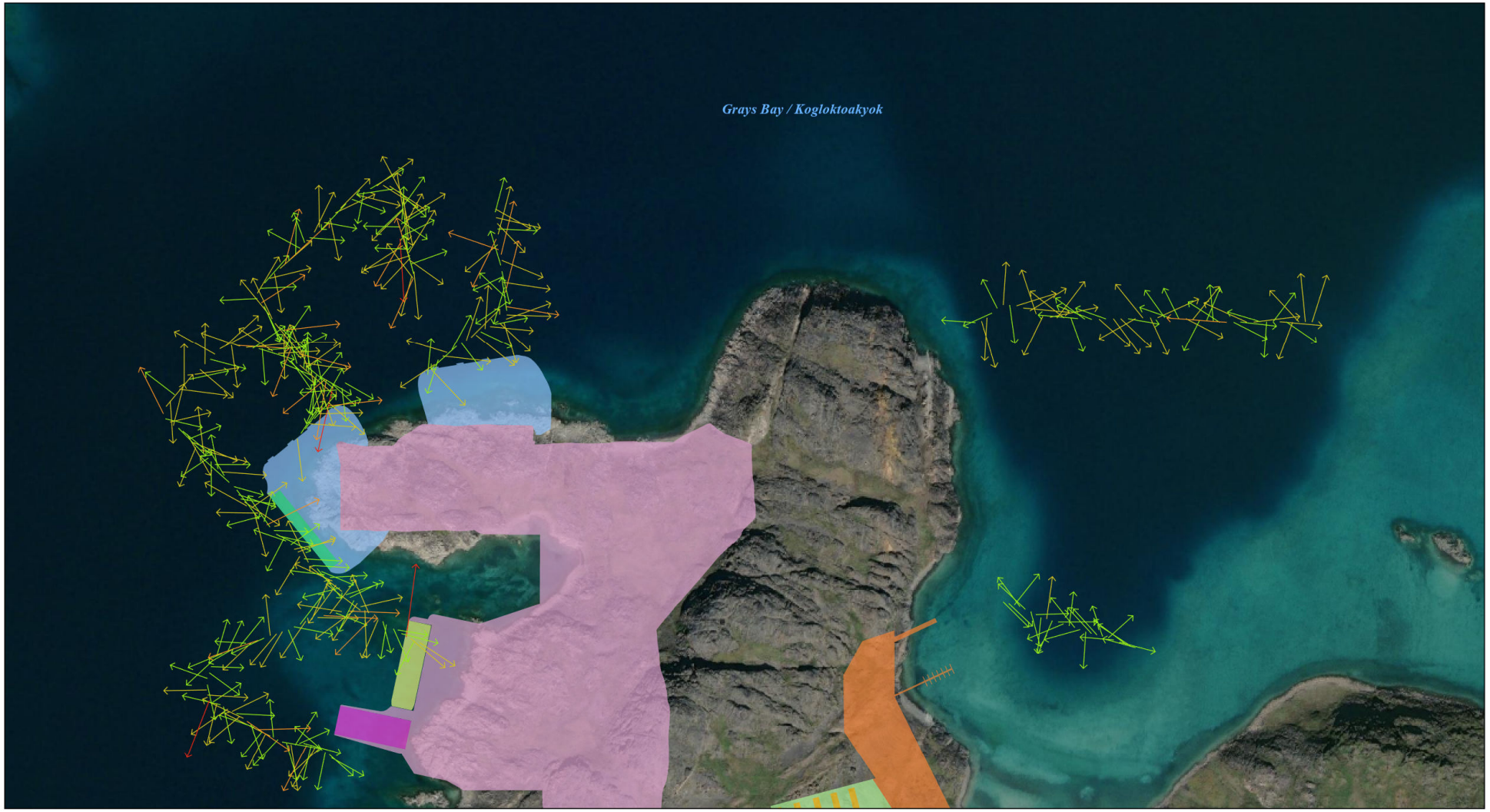
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Figure No.
5.8

Title
Bottom Marine Currents Measured in the Port PDA in August 2025: Ebbing Tide

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_159_Bottom_Ebbing.pagx Revised: 2026-02-12 By: alemay

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3. Service Layer Credits: Vantor

Current Speed (cm/s)
- 0-15
- 15-30
- 30-45
- >45

Port Footprint
- Admin Office and Accommodation Area
- Admin Office and Accommodation Buildings
- Barge Ramp
- Barge Wharf
- Landside Port
- Large Vessel Wharf
- Medium Vessel Wharf
- Public Use Area

0 100 200 Metres

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Figure No.
5.9

Title
Surface Marine Currents Measured in the Port PDA in August 2025: Flood Tide

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_160_Surface_Flood.pagx Revised: 2026-02-12 By: slemay

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Current Speed (cm/s)

- 0-15
- 15-30
- 30-45
- >45

Port Footprint

- Admin Office and Accommodation Area
- Admin Office and Accommodation Buildings
- Barge Ramp
- Barge Wharf
- Landside Port
- Large Vessel Wharf
- Medium Vessel Wharf
- Public Use Area

0 100 200 Metres

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Figure No.
5.10

Title
Bottom Marine Currents in the Port PDA in August 2025: Flood Tide

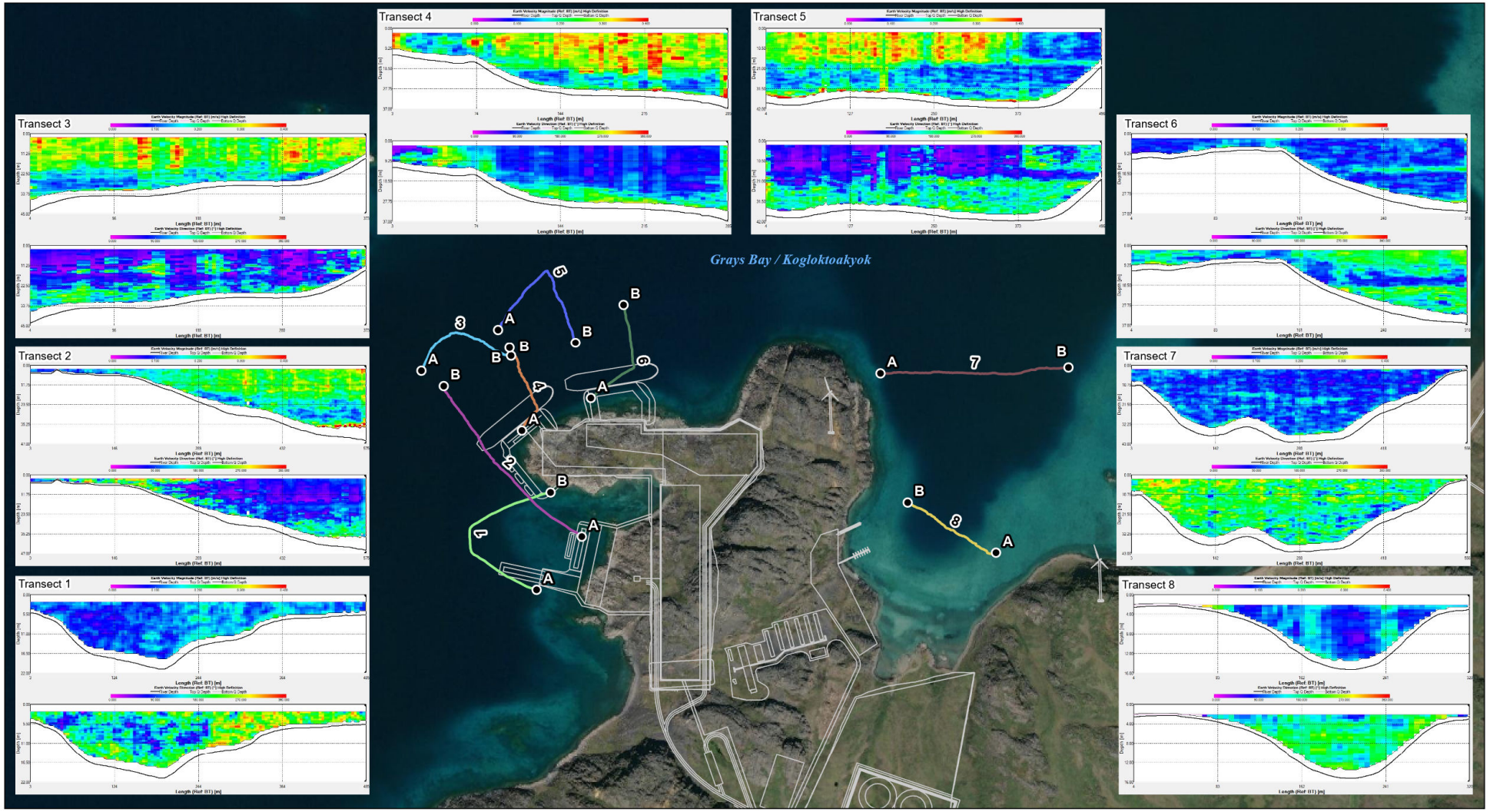
Notes
1. Coordinate System: WGS 1984 UTM Zone 12N
2. Data Sources: Governments of Canada and Northwest Territories, Stantec Consulting Ltd
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Selected marine current vertical profiles during the tidal measurements are also presented in Figure 5.11 (ebbing) and Figure 5.12 (flooding) in the PDA. It can be observed that the surface to mid-depth currents for the ebb tide were generally stronger (0.20 to 0.40 m/s) and towards the east in the vessel wharf area, compared to the weaker bottom currents (< 0.20 m/s) that were flowing in a different and general southwest direction. In the public berths area, currents for the ebb tide were also lower (< 0.20 m/s) throughout the water column and flowed towards the southwest. It is interesting to note that the ADCP spatial transect data for currents in the vessel wharf area are similar to some of the ADCP time-series data (see Section 5.1.2.1) where the instrument was deployed on the bottom near this area (i.e., stronger currents in the upper water column when flowing towards the east).

Current directions during the flood tide (Figure 5.12) were predominantly to the west-southwest with significantly lower current speeds than for the ebb tide and ranged from approximately 0.05 to 0.20 m/s in the PDA. The currents in the public berths area were the lowest and generally < 0.1 m/s and in the same southwest direction as for the ebb tide. The currents were also uniform over the water column, with slight vertical changes in speed and direction likely due to localized water circulation patterns.





- Transect Point
  (A, left end of vertical profile; B, right end of vertical profile)
- Transect 1
- Transect 2
- Transect 3
- Transect 4
- Transect 5
- Transect 6
- Transect 7
- Transect 8
- Port Infrastructure

0 100 200 Metres

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Notes

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Kitikmeot Region, Nunavut

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123514868_162

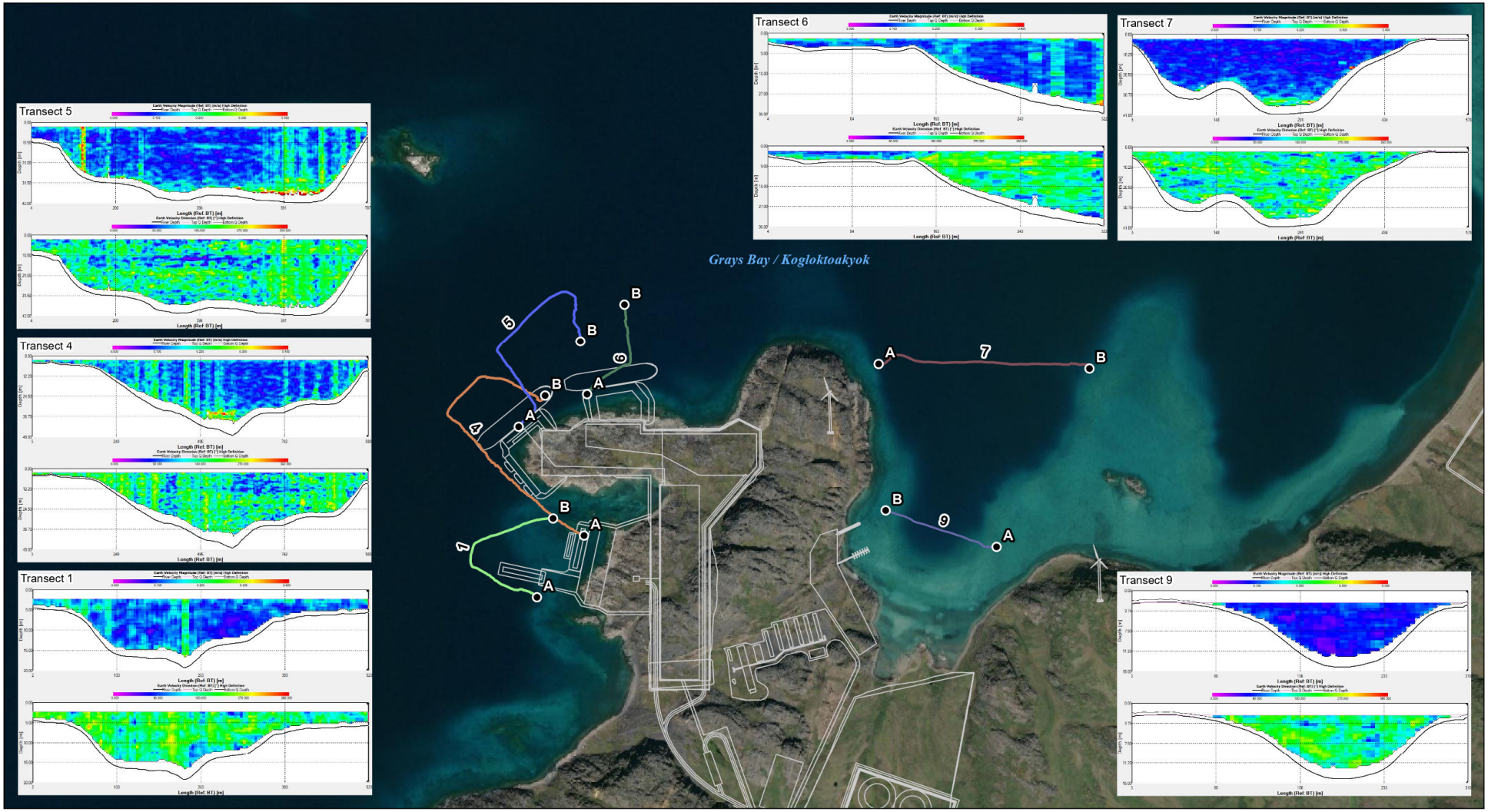
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Figure No.
5.11

Title
ADCP Vertical Profiles Measured in the Port PDA in August 2025: Ebbing Tide

\\Ca0002-ppfss05\geomatics\Clients\Nunami_Stantec\GBRP\Figures\123514868_162_SurveyPath_Ebb.pagx Revised: 2026-02-12 By: slemay

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- Transect Point (A, left end of vertical profile; B, right end of vertical profile)
- Transect 1
- Transect 4
- Transect 5
- Transect 6
- Transect 7
- Transect 9
- Port Infrastructure

0 100 200 Metres

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Figure No.
5.12

Title
ADCP Vertical Profiles Measured in the Port PDA in August 2025: Flooding Tide

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5.2 Water Quality

Grays Bay is located hundreds of kilometres from any known long-term anthropogenic point sources of contamination (e.g., industrial-level contamination); small or short-term anthropogenic sources may still have occurred (e.g., releases from boats or snow machines). However, long-range transportation of anthropogenic contamination (e.g., radionuclides, persistent organic pollutants [POP]) does occur, which results in the deposition of these contaminants into Arctic regions (Wolfden 2006; Indian and Northern Affairs Canada (INAC) 2003a, 2003b). Levels of PCBs and other POPs in marine water and sediments vary throughout the Canadian Arctic; however, all levels are very low and not a direct concern (Wolfden 2006; INAC 2003a, 2003b).

The largest influence on water quality in Grays Bay is the formation and melting of ice and the input of freshwater from the Kennarctic River and smaller streams. There is a high salinity surface layer present during ice formation and a low salinity surface layer during the ice melt. The freshwater input from the Kennarctic River contributes a high suspended sediment load that produces a plume of turbid water in the ocean (MMG 2012). The warmer temperature and lower salinity water from the river create a low-density surface layer over the high-density seawater, which is affected by wind and tide.

5.2.1 Historical Water Quality

Previous field investigations of marine water quality in Grays Bay were completed in 2004, 2005, 2008, and 2012 for potential port development at the same location and with a similar configuration to the Project (Wolfden 2006; MMG 2012; Lorax 2013) (Figure 5.13). In 2012, CTD profiles were measured under ice (June) and during ice-free conditions (September) (Lorax 2013). Temperature and salinity profiles showed similar vertical distribution throughout the nearshore and offshore sampling locations. In June, there were pronounced stratifications attributed to outflows from the Kennartic River and melting sea ice, resulting in a low-density (i.e., low-salinity) freshwater layer of about 1 to 2 m above the denser seawater (Lorax 2013). Towards the end of the open water season (September), stratification was less pronounced than under-ice conditions (June), and vertical change in temperature was the predominant driver of stratification, with a thermocline observed at approximately 20 m deep (Lorax 2013).

Total metal concentrations in water are highly dependent on levels of total suspended solids (TSS), as metals are often bound to fine particles suspended in the water column. Water quality samples collected at Grays Bay in 2005, 2008, and 2012 were analyzed for total metal concentrations, with all samples found to be below CCME WQG-MAL (Table 5.3), with the exception of mercury in three samples from 2005 (Wolfden 2006).





Historical Sediment Sampling Location / Historical Water Sampling Location

Grays Bay Road

0 250 500 Metres

(At original document size of 11x17)1:30,000

N

NUNAMI STANTEC LIMITED

WEST KITIKMEOT RESOURCES CORP

Notes

1. Coordinate System: WGS 1984 UTM Zone 12N

2. Data Sources: Government of Canada, Stantec, Vantor

Project Location
West Kitikmeot Region
Nunavut

Prepared by SL on 2025-10-03
TR by DS on 2025-10-03

Client/Project
123514868_145

West Kitikmeot Resources Corp
Grays Bay Road and Port

Figure No.
5.13

Title
Historical Water and Sediment Sampling Locations

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Table 5.3 Range of Historical Metal Concentrations in Baseline Water Quality Samples

Parameter	Units	CCME WQG-MAL	Range of Historical Concentrations		
			2005 (Wolfden 2006)	2008 (MMG 2012)	2012[1] (Lorax 2013)
Arsenic	mg/L	0.0125	0.00057 - <0.010	0.00054 - 0.0012	<0.0020
Cadmium	mg/L	0.00012	<0.000020 - 0.000031	<0.00002 - 0.000035	0.000061
Chromium	mg/L	0.0015	<0.050	–	0.00065
Copper	mg/L	–	0.00045 - 0.0019	0.00031 - 0.00060	<0.00050
Iron	mg/L	–	0.013 - 0.74	<0.010	<0.00030
Lead	mg/L	–	<0.000050 - 0.00027	<0.000050	–
Mercury	mg/L	0.000016	0.000012 - **0.000025**	<0.000010	<0.000010
Molybdenum	mg/L	–	<0.0050 - 0.0074	0.0060 - 0.0096	–
Nickel	mg/L	–	<0.00030 - 0.0015	0.000057 - 0.00056	0.0019
Selenium	mg/L	–	<0.00050	–	<0.0020
Silver	mg/L	–	<0.0010	–	<0.00010
Zinc	mg/L	–	<0.00050 - 0.0035	<0.00050 - 0.0011	<0.0030

Notes:

Bold denotes exceedance of the CCME WQG-MAL.

[1] Maximum concentration measured at any of the near-field or far-field stations in baseline samples collected between 2004 and 2012 (Lorax 2013).

5.2.2 Field Sampling Program

5.2.2.1 In-Situ Water Quality

Depth profiles and results from the CTD casts in 2024 and 2025 are presented in Appendix A.3. Minimum and maximum values for temperature, salinity, pH, dissolved oxygen, specific conductivity, and turbidity are presented in Table 5.4 and Table 5.5. Water quality parameters varied among the sampling locations in both 2024 and 2025 (Figure 4.2; Figure 4.3).

Table 5.4 Minimum and Maximum Values from the Field Program Water Quality Profiles, 2024-2025

Station	Max Depth (m)	Temperature (ºC)		Salinity (psu)		pH		Dissolved Oxygen (mg/L)		Specific Conductivity (µS/cm)		Turbidity (NTU)	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
CCME WQG-MAL		**N/A**		**N/A**		**7.0 – 8.7**		**≥8.0**		**N/A**		**N/A**	
August 2024													
WQ1	14.7	9.919	10.054	24.12	24.17	7.96	7.97	9.90	9.92	38128	38219	1.18	22.12
WQ2	27.8	0.486	9.961	24.21	27.98	7.95	8.00	10.04	13.35	38265	44577	1.08	2.68
WQ3	39.7	-0.563	9.961	24.21	28.04	7.93	8.01	10.12	13.21	38268	45246	1.38	8.86
WQ4	14.5	9.926	10.070	24.15	24.20	8.02	8.02	9.92	9.94	38176	38248	0.26	1.31
WQ5	11.0	10.044	10.155	24.15	24.26	8.02	8.02	9.94	9.97	38176	38320	0.33	4.98
WQ6	33.8	-0.281	10.019	24.19	28.05	7.97	8.02	10.10	13.02	38239	45159	0.50	10.96
WQ7	18.1	5.418	10.162	24.19	25.29	7.96	8.03	10.14	11.57	38279	40256	0.62	8.65
WQ8	31.4	-0.214	9.982	24.26	27.04	8.02	8.06	10.31	12.62	38331	43056	1.04	3.99
WQ9	1.7	10.147	10.269	10.75	24.17	8.10	8.43	9.85	10.87	18168	38194	3.27	6.49
WQ10	32.6	-0.304	9.919	24.22	26.94	7.96	8.01	10.14	12.68	38239	42868	1.19	2.25
July 2025													
WQ1	11.6	4.724	6.06	21.5	22.87	7.99	8.04	11.05	11.46	34644	36835	0.68	3.33
WQ2	28.3	0.144	5.411	22.25	26.18	7.96	8.06	10.55	11.97	35839	42648	0.46	2.16
WQ3	38.5	-0.819	5.18	22.53	26.53	7.93	8.05	11.52	12.19	36273	43457	0.71	8.65
WQ4	15.0	4.887	5.493	22.33	22.78	8.05	8.06	11.44	11.52	35934	36682	0.64	5.95
WQ5	9.9	4.895	5.408	22.31	22.69	8.05	8.07	10.90	11.49	35919	36539	0.74	9.12
WQ6	31.5	-0.342	5.694	21.97	26.35	7.96	8.03	10.94	12.76	35379	43041	0.55	5.28
WQ7[1]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WQ8[1]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Station	Max Depth (m)	Temperature (ºC)		Salinity (psu)		pH		Dissolved Oxygen (mg/L)		Specific Conductivity (µS/cm)		Turbidity (NTU)	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
CCME WQG-MAL		**N/A**		**N/A**		**7.0 – 8.7**		**≥8.0**		**N/A**		**N/A**	
WQ9	1.9	5.208	5.316	22.4	22.52	8.05	8.06	11.37	11.39	36053	36245	1.93	8.36
WQ10	35.8	-0.682	5.105	22.66	26.47	7.95	8.05	10.96	12.17	36464	43320	0.64	1.24

Notes:

[1] CTD profile was not collected due to safety concerns from inclement weather.

psu: practical salinity unit

NTU: Nephelometric Turbidity Unit

N/A: not applicable

ND: no data

Bold text indicates an exceedance of CCME WQG-MAL (CCME 2024)

Table 5.5 Values from the Geotech Drilling Program Water Quality Profiles, April/May 2025

Site	Date (MM/DD/YYYY)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	SpCond (µS/cm)	FTU	Drilling Status	Comment
CCME WQG-MAL	N/A	N/A	N/A	7.0 – 8.7	N/A	N/A	N/A	N/A	N/A
SCH-BH-05	4/27/2025	7.29	-0.884	7.83	95.3	45606	ND	Before	Before any activity
SCH-BH-05	4/27/2025	ND	ND	ND	ND	ND	ND	During	ND
SCH-BH-05	4/28/2025	ND	-0.824	7.76	107.6	45361	ND	After	Post casing in shell
SCH-BH-07	4/28/2025	25.38	-1.05	7.88	90.6	46055	-0.14	Before	Before casing
SCH-BH-07	4/28/2025	26	-1.113	7.92	90.5	46116	0.11	During	Halfway done drilling
SCH-BH-07	4/29/2025	ND	-1.155	7.93	93.3	46192	0.31	After	end of drilling
SCH-BH-09	4/30/2025	26.57	-1.126	7.97	88.2	46151	0.16	Before	Before casing
SCH-BH-09	4/30/2025	ND	-1.014	7.97	87.7	45973	0.37	During	As casing pulled post drilling
SCH-BH-09	5/1/2025	ND	-1.084	7.98	88.9	46066	0.02	After	End of site check
WRF-BH-01	5/4/2025	12.3	-0.713	7.9	87.8	45698	-0.4	Before	Pre drilling
WRF-BH-01	5/5/2025	12.4	-0.558	7.96	87.9	45627	-0.29	During	Coring
WRF-BH-01	5/5/2025	12.48	-0.925	7.97	88.1	45934	-0.18	After	Casing being pulled
WRF-BH-04	5/7/2025	15.15	-1.009	7.98	88.5	45997	-0.07	Before	Before drilling
WRF-BH-04	5/7/2025	ND	ND	ND	ND	ND	ND	During	ND
WRF-BH-04	5/7/2025	15.6	-0.875	8	88.4	45890	-0.28	After	After drilling

Notes:
DO: Dissolved Oxygen
SpCond: Specific Conductivity
FTU: Formazin Turbidity Unit
N/A: not applicable
ND: no data
Bold text indicates an exceedance of CCME WQG-MAL (CCME 2024)

In 2024, at the shallower stations (≤ 15 m; i.e., WQ1, WQ4, WQ5, and WQ9), temperature, salinity, pH, dissolved oxygen, and specific conductivity remained relatively constant throughout the water column (Table 5.4). Turbidity also remained relatively constant with depth, with the exception of WQ1, which had higher turbidity near the surface and decreased with depth. At the deeper stations (>15 m; i.e., WQ2, WQ3, WQ6, WQ7, WQ8, WQ10), water quality parameters varied with depth (Appendix A, Figure A.3-1) and exhibited the following trends:

- Temperature was highest at the surface and decreased with depth, and a clear thermocline was visible around 20 m.
- Salinity was lowest at the surface and increased slightly with depth. WQ9 had the lowest concentration of salinity at the surface (10.75 psu) of all sampling stations, a result of freshwater input from the Kennarctic River (Table 5.4).
- Measurements of pH were relatively constant with depth across all sampling stations and were within CCME WQG-MAL of 7.0 to 8.7 (CCME 2024).
- Dissolved oxygen decreased slightly with depth. However, dissolved oxygen at all sampling stations was above the CCME-recommended minimum concentrations of dissolved oxygen in marine and estuarine waters (8.0 mg/L) (CCME 2024).
- Specific conductivity and turbidity remained relatively constant with depth.

In April/May 2025, CTD data was collected at five borehole stations before, during and after investigative marine drilling at maximum depth (Table 5.4). Parameters measured included temperature, pH, dissolved oxygen, specific conductivity, and turbidity. Salinity data were not available. The pre-drilling dataset was selected for discussion as it represents the most accurate characterization of baseline groundwater conditions, collected prior to any potential influence from drilling activities.

At the shallower stations (≤15 m; i.e., SCH-BH-05, WRF-BH-01, WRF-BH-04), water quality parameters were relatively constant. At the deeper stations (>15 m; i.e., SCH-BH-07 and SCH-BH-09), minor variation was observed:

- Temperature ranged from (–1.126°C to –0.713°C), with the deepest stations (>25 m; i.e., SCH-BH-07 and SCH-BH-09) recording the lowest values, consistent with denser, colder bottom depths.
- pH values were generally stable, ranging from 7.83 to 7.98, with little variability across all stations and remained within the CCME WQG-MAL guideline range of 7.0–8.7 (CCME 2024).
- Dissolved Oxygen was high (87.8–95.3 %), indicating well-oxygenated conditions at all sites. Slightly lower DO at deeper stations (i.e., SCH-BH-07 and SCH-BH-09) is consistent with reduced mixing and oxygen diffusion at depth.
- Specific Conductivity (45,606–46,151 µS/cm) was consistent with normal marine salinity parameters.
- Turbidity was low across all samples (–0.40 to 0.16 FNU), indicating minimal disturbance from drilling activities.

In July 2025, at the shallower stations (≤15 m; i.e., WQ1, WQ4, WQ5, and WQ9), temperature, salinity, pH, dissolved oxygen, and specific conductivity remained relatively constant throughout the water column (Appendix A, Figure A.3-2). At the deeper stations (>15 m; i.e, WQ2, WQ3, WQ6, and WQ10), water quality parameters varied with depth and exhibited the following trends:

- Temperature was highest near the surface and decreased with depth, with a distinct thermocline observed at several stations.
- Salinity increased with depth, indicating the presence of denser, saltier water at greater depths.
- pH remained relatively stable with depth across all stations and was within the CCME WQG-MAL range of 7.0 to 8.7 (CCME 2024).
- Dissolved oxygen remained relatively constant with depth and at all sampling stations was above the CCME-recommended minimum concentration of 8.0 mg/L for marine and estuarine waters (CCME 2024).
- Specific conductivity increased with depth, consistent with the observed salinity trends and indicating higher concentrations of dissolved ions in deeper waters.
- Turbidity generally remained constant with depth across most water quality samples, with occasional spikes near the surface and at specific depths, indicating localized variations.

5.2.2.2 Analytical Results

Water quality samples collected in 2024 and 2025 (Figure 4.2; Figure 4.3) were compared to the CCME WQG-MAL and are summarized in Table 5.6. The complete water quality sampling results are included in Appendix A, Table A.4-1.

Hardness was the only physical parameter sent for lab analysis during the 2024 and 2025 field sampling period (others were captured during CTD casts). Total hardness ranged from 524 mg/L (WQ9-S; August 2024) to 5760 mg/L (WRF-BF-01; May 2025) and was generally higher at greater depths.

Twelve anions, nutrients, and carbon were analyzed. Of the twelve, only nitrate has a CCME WQG-MAL, and concentrations were below the guideline for all sampled locations (Table 5.6). Nitrite, nitrate and ammonia were below DLs at all sampling locations.

Table 5.6 Water Quality Results from the Sampling Locations in Grays Bay, 2024 - 2025

Parameter	Units	CCME WQG-MAL		August 2024				May 2025				July 2025				August 2025			
		ST	LT	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
General																			
Hardness	mg/L	-	-	524	5,480	4,741	1,102	3,690	5,760	5,110	955	4,310	5,110	4,568	276	4,490	4,670	4,575	60
Nitrate	mg/L	550	13	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	0.67	0.517	0.05
Total Metals																			
Arsenic	mg/L	-	0.0125	<0.0030	<0.0030	<0.0030	-	0.00099	0.00127	0.00117	0.00013	<0.0030	<0.0030	<0.0030	-	<0.0030	<0.0030	<0.0030	-
Cadmium	mg/L	-	0.00012	**<0.00020**	**<0.00020**	**<0.00020**	-	0.000042	0.000051	0.000045	0.000004	**<0.00020**	**<0.00020**	**<0.00020**	-	**<0.00020**	**<0.00020**	**<0.00020**	-
Chromium	mg/L	-	0.0015 (Cr(IV)); 0.056 (Cr(III))	**<0.0050**	**<0.0050**	**<0.0050**	-	<0.00050	<0.00050	<0.00050	-	**<0.0050**	**<0.0050**	**<0.0050**	-	**<0.0050**	**<0.0050**	**<0.0050**	-
Mercury	mg/L	-	0.000016	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050	-
Silver	mg/L	0.0075	-	<0.00025	<0.00025	<0.00025	-	<0.00010	<0.00010	<0.00010	-	<0.00025	<0.00025	<0.00025	-	<0.00025	<0.00025	<0.00025	-
Petroleum Hydrocarbon																			
Benzene	µg/L	-	110	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Ethylbenzene	µg/L	-	25	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
MTBE	µg/L	-	5000	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Styrene	µg/L	-	-	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Toluene	µg/L	-	215	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Xylenes	µg/L	-	-	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Polycyclic Aromatic Hydrocarbons																			
Naphthalene	µg/L	-	1.40	<0.050	<0.050	<0.050	-	-	-	-	-	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	-

Notes:
CCME WQG-MAL: CCME Water Quality Guideline for the Protection of Marine Aquatic Life; ST = short term; LT = long term; SD = standard deviation; MTBE = Methyl tert-butyl ether.
Bold denotes exceedance of the short-term CCME WQG-MAL.

Of the 40 metals analyzed, 16 had total and dissolved concentrations below DL at all sampling locations and both depths: antimony, beryllium, bismuth, cesium, chromium, mercury, phosphorus, selenium, silver, tellurium, thallium, thorium, tin, titanium, tungsten, and zirconium. Parameters with CCME WQG-MAL for total metals are arsenic, cadmium, chromium, mercury, and silver. Arsenic, mercury and silver were below guidelines in all water samples. The following CCME WQG-MAL for total metals were exceeded in samples from one or more of the sampling locations (Table 5.6):

- Cadmium was below the DL (<0.00020 mg/L) for all samples; however, the DL exceeded the long-term CCME WQG-MAL for cadmium in August 2024, July and August 2025 (0.00012 mg/L).
- Chromium was below the DL (<0.0050 mg/L) for all samples; concentrations were below the long-term CCME WQG-MAL for chromium III (0.056 mg/L), but DLs exceeded the WQG-MAL for chromium IV in August 2024, July and August 2025 (0.0015mg/L).

Six VOCs were analyzed at the sampling locations: benzene, ethylbenzene, toluene, xylene (collectively referred to as BTEX), styrene, and methyl-tert-butyl ether. Each of the VOCs was below its corresponding DL and CCME WQG-MAL (Table 5.6).

Polycyclic aromatic hydrocarbons and petroleum hydrocarbons were analyzed in samples collected at each of the nine locations. Measured concentrations of short- and long-chain petroleum hydrocarbons and PAHs were below DLs. Naphthalene was below the long-term CCME WQG-MAL of 1.4 µg/L in all samples analyzed (Table 5.6).

Water quality samples from Grays Bay did not exceed the short-term CCME WQG-MAL for any parameters with available WQG-MAL.

5.2.2.3 Quality Assurance Quality Control

The QA/QC results indicated that, overall, the water quality data collected was of good quality. Key outcomes included:

- The QC analyses met the laboratory DQO, with the exception of one method blank for total sodium and one matrix spike for total thorium from the May 2025 sampling event and two matrix spikes for total and dissolved thorium from the August 2025 sampling event
- Holding times recommended by the laboratory were exceeded for some parameters (i.e., nitrite, nitrate, and TSS) due to logistical constraints of the remoteness of the Project. Holding times exceedances should be taken into consideration during the interpretation of the results.
- The field blanks and travel blanks were below DL for all parameters.
- The relative percent difference (RPD) was calculated between parent and duplicate samples and compared to the DQO of less than 20% (British Columbia Ministry of the Environment and Climate Change Strategy (BC ENV) 2024). There were 11 instances out of a total number of 590 (1.9%) duplicates calculated where the RPD exceeded 20%.

5.3 Zooplankton

Zooplankton are responsible for much of the secondary production that occurs in arctic marine waters, forming a direct link between phytoplankton and higher vertebrate consumers (Nelson et al. 2019). Zooplankton are important in the diet of Arctic cod (*Boreogadus saida*), which is the prey for at least six marine mammal species and ten seabird species. They are also consumed directly by marine mammals, including bowhead whales (*Balaena mysticetus*) (GBEEC 2017).

Zooplankton species composition is generally homogenous throughout the Canadian Arctic; however, it is influenced by water depth, temperature and salinity (Grainger 1965; Griffiths et al. 1987; Griffiths and Thomson 2002). Grainger (1965) described two major groups of zooplankton based on vertical and horizontal distribution patterns and physical measurements. The first group characterizes the upper 100 m of the Arctic surface waters with widespread inshore and offshore distribution; species included cnidarians (*Aeginopsis laurentii* and *Aglantha digitale*), ctenophore (*Beroe cucumis*), and copepods (*Calanus hyperboreus*, *C. glacialis, Pseudocalanus minutus, Oithona similis*, and *Metridia longa*). The second group characterizes shallow inshore brackish waters and includes hydrozoans (*Euphysa flammea, Sarsia princeps,* and *Halitholus cirratus*), ctenophore (*Obelia* spp.), and copepods (*Limnocalanus macrurus, Acartia clausi, Derjuginia tolli,* and *Eurytemora herdmani*).

Zooplankton in the Coronation Gulf are less well characterized than many other areas, but limited published data found copepod species (*Calanus hyperboreus*, *C. glacialis, Pseudocalanus* spp., *Acartia longiremis, Paraeuchaeta glacialis, Microcalanus pygmaeus, Oithona similis, Triconia borealis,* and *Metridia longa*), cnidarians (*Aeginopsis laurentii* and *Aglantha digitale*), larvaceans (*Fritillaria borealis* and *Oikopleura vanhoeffeni*), chaetognath (*Parasgitta elegans*), and the pteropod *Limacina helicina* (Grainger 1965; Mohammed and Grainger 1974; Nelson et al. 2019). Copepods were found to dominate in terms of abundance and biomass within the Coronation Gulf, including the Arctic prey species (*Calanus hyperboreous* and *C. glacialis*), the cosmopolitan copepod taxa (*Oithonia similis* and *Pseudocalanus* spp.), and northern taxa (*Metridia longa, Triconia borealis* and *Microcalanus pygmaeus*) (Nelson et al. 2019).

5.3.1 Historical Zooplankton Density and Biomass

Zooplankton were sampled in Grays Bay in 2004 for the High Lake Project (LGL 2013). Mean zooplankton density and biomass in the pooled samples (12 samples and ~109.5 m³ water sampled) were 295/m³ and 25 mg/m³, respectively (Table 5.7). Copepods dominated the zooplankton numbers (90.5%) and biomass (44.9%) (Wolfden 2006). Copepods were dominated by calanoids, *Acartia longiremis* (46.8% of zooplankton numbers), *Pseudocalanus minutus* (35.6%), and *Calanus glacialis* (2.0%), and the cyclopoid *Oithona similis* (3.4%) (Table 5.8; Wolfden 2006). Larvaceans, mainly *Fritillaria borealis*, were the second highest in numbers (6%) but contributed little to biomass (1.2%) due to their small size. Other larger, but less numerous taxa that contributed to the total zooplankton biomass included chaetognath (*Sagitta elegans*; 31.4% of biomass and 0.4% of numbers), hydrozoans (*Aeginopsis laurentii* and *Aglantha digitale*) and ctenophores (20.5% biomass and 1.4% of numbers) (Table 5.7; Table 5.8). Barnacle and echinoderm larvae contributed very little to numbers and biomass (Table 5.8; LGL 2013).

Table 5.7 Density and biomass of major zooplankton groups sampled at 2 - 30 m depths in Grays Bay, 2004 (LGL 2013)

Taxon	Density (no./m³)			Biomass (mg/m³)		
	Mean	SD	%	Mean	SD	%
Hydrozoa/Ctenophora	4.12	3.14	1.40	5.11	3.23	20.48
Copepoda	267.09	130.81	90.52	11.21	4.42	44.87
Other Crustacea	2.55	4.53	0.86	0.43	0.69	1.74
Chaetognatha	1.15	0.90	0.39	7.85	5.51	31.42
Larvacea	17.22	11.49	5.84	0.31	0.17	1.24
Total	295.06	135.78	-	24.97	10.18	-

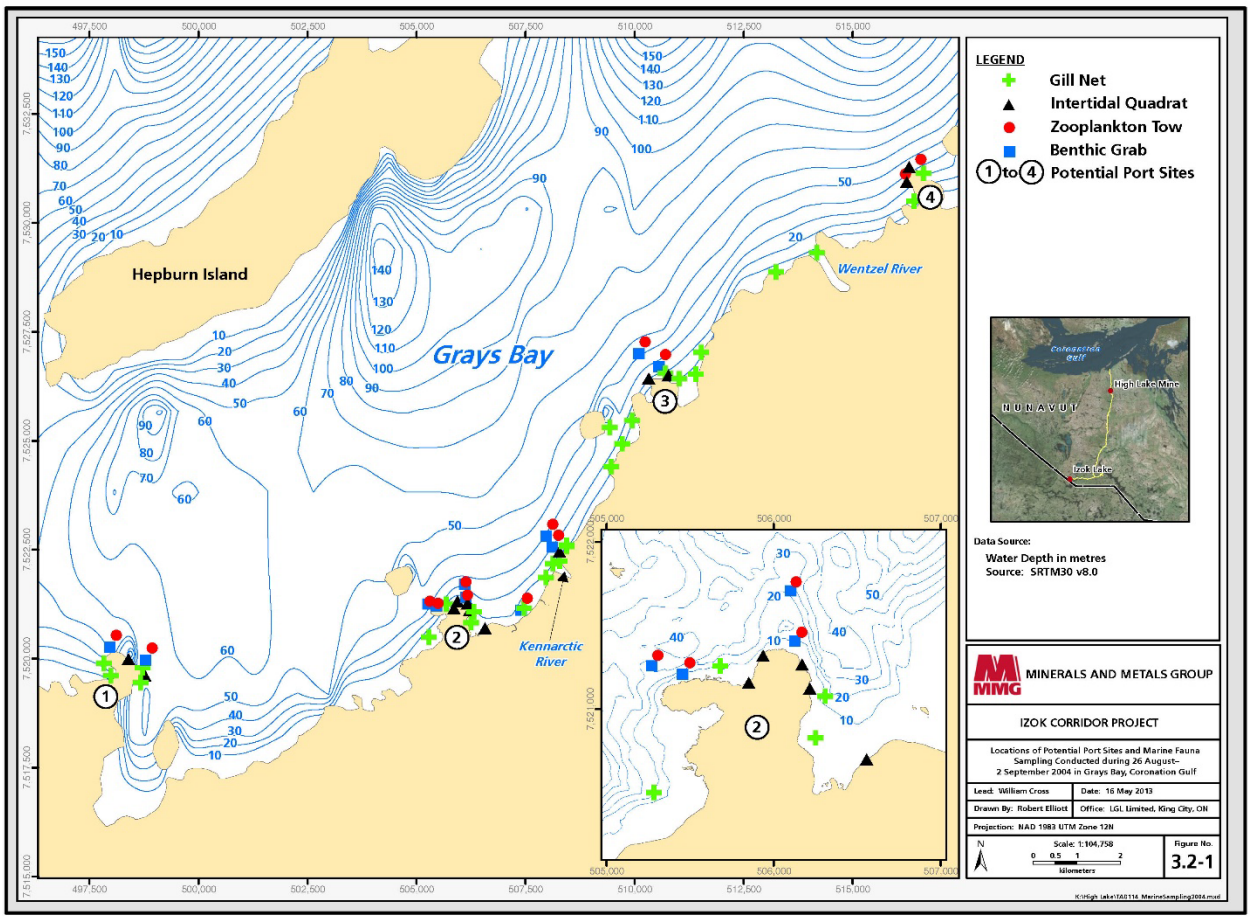
Table 5.8 Densities of the most common zooplankton taxa sampled at 2–30 m depths in Grays Bay, 2004 (LGL 2013)

Taxon	Species	Density (no/m³)		
		Mean	SD	% of total
Hydrozoa	*Aeginopsis laurentii*	2.79	3.11	0.95
	Aglantha digitale	1.30	1.12	0.44
Copepoda	*Acartia longiremis*	137.97	148.15	46.76
	Calanus glacialis	5.85	2.98	1.98
	Centropages abdominalis	1.33	1.33	0.45
	Pseudocalanus minutus	104.93	68.01	35.56
	Oithona similes	9.87	8.38	3.35
Cirripedia	*Cypris and nauplius larvae*	0.90	0.90	0.31
Chaetognatha	*Sagitta elegans*	1.15	0.90	0.39
Echinodermata	*Pluteus larvae*	1.57	2.45	0.53
Larvacea	*Fritillaria borealis*	16.79	11.63	5.69

Average zooplankton density was similar among the sampling locations, ranging from 119/ m^3 to 583/m^3, with the exception of one sample from 0-24 m depth, which contained only 3 copepods and 16 barnacle larvae. Zooplankton densities were higher at the eastern sites (450/m^3 off the Kennarctic River and 412/m^3 and 401/m^3 at Sites 3 and 4, respectively) than at the western sites (Sites 1 and 2; 178/m^3 and 279/m^3, respectively) (Figure 5.14; LGL 2013).

The zooplankton collected in Grays Bay had a similar species composition to zooplankton described by Grainger (1965) as characteristic of the upper 100 m of Arctic surface waters, with a widespread offshore and inshore distribution. Biomass and density were similar to those reported in other Arctic locations (Buchanan and Sekerak 1982).

Figure 5.14 Historical Zooplankton Sampling Locations (LGL 2013)



5.3.2 Field Sampling Program

Zooplankton samples were collected at nine sampling locations (Figure 5.14 and are summarized in Table 5.9 to Table 5.11. The complete zooplankton sampling results are included in Appendix B. A total of 9,313 organisms from 27 taxa were collected. The greatest number of taxa were observed at ZP4, with a total of 16 different taxa; ZP5 and ZP9 had the fewest number of taxa, with only 10 and 12, respectively.

The abundance of zooplankton and taxa collected varied among sampling areas, with the highest abundances observed at ZP8 (2,829 organisms) and the lowest at ZP9 and ZP5 (78 and 79 organisms, respectively) (Table 5.9). The most abundant taxa were arthropoda (84%), cnidaria (8%), chordata (4%), and chinodermata (2%), with all other phyla representing less than 1% of the total abundance (Table 5.10). Copepoda and branchiopoda were the most abundant classes; dominant species included *Calanoida* sp., *Pseudocalanus* sp. complex, *Evadne* sp., *Centropages* sp., and *Acartia longiremis* (Appendix B).

Table 5.9 Summary of Zooplankton Sampling Results from August 2024

Site ID	Total Abundance (#/sample)	Total Number of Taxa	Total Density (#/L)	Total Biomass (g)
ZP1	627	14	0.213	0.190
ZP3	1,747	14	0.297	0.610
ZP4	302	16	0.110	0.078
ZP5	79	10	0.037	0.041
ZP6	1,489	14	0.253	0.063
ZP7	831	13	0.235	0.233
ZP8	2,829	15	0.412	0.410
ZP9	78	12	0.284	0.005
ZP10	1,332	14	0.226	0.109

Table 5.10 Summary Statistics of Zooplankton Results from August 2024

Taxon		Abundance (#/sample)				Density (#/L)			
		Min	Max	Mean	% of Total	Min	Max	Mean	% of Total
Chaetognatha	Sagittoidea	1	29	8	0.7	0.0002	0.0109	0.0022	1.6
Cnidaria	Hydrozoa	1	208	37	8.0	0.0003	0.0353	0.0074	7.1
Arthropoda	Crustacea	1	789	52	84	0.0001	0.1149	0.0116	85
Echinodermata	Bivalvia/Gastropoda	1	43	10	1.9	0.0004	0.0109	0.0026	2.3
Mollusca	Echinozoa/Asterozoa	1	9	4	0.4	0.0004	0.0036	0.0015	0.6
Annelida	Polychaeta	1	1	1	0.01	0.0004	0.0004	0.0004	0.02
Chordata	Appendicularia	1	64	30	3.8	0.0004	0.0169	0.0066	3.9

Table 5.11 Summary Statistics of Zooplankton Biomass Results from August 2024

Taxon	Biomass (g)			
	Min	Max	Mean	% of Total
Chaetognatha	0.0003	0.0699	0.0155	6.2
Cnidaria	0.0002	0.0502	0.0150	7.8
Cladocera	0.0003	0.1912	0.0569	29.5
Polychaeta	0.0010	0.0010	0.0010	0.1
Remaining Organisms	0.0042	0.3619	0.1091	56.5

The overall total density from the nine sampling locations was 2.07/L, ranging from 0.037/L at ZP5 to 0.412/L at ZP8 (Table 5.9). Arthropoda (85%), cnidaria (7%), and chordata (4%) had the greatest densities of the sampled taxon (Table 5.10).

Total biomass ranged from 0.005 g at ZP9 to 0.610 g at ZP3, with a total biomass of 1.739 g from the nine sampling locations (Table 5.9). Cladocera (30%), cnidaria (8%), and chaetognatha (6%) had the greatest biomass of the identified sampled taxon (Table 5.11).

5.3.2.1 Quality Assurance Quality Control

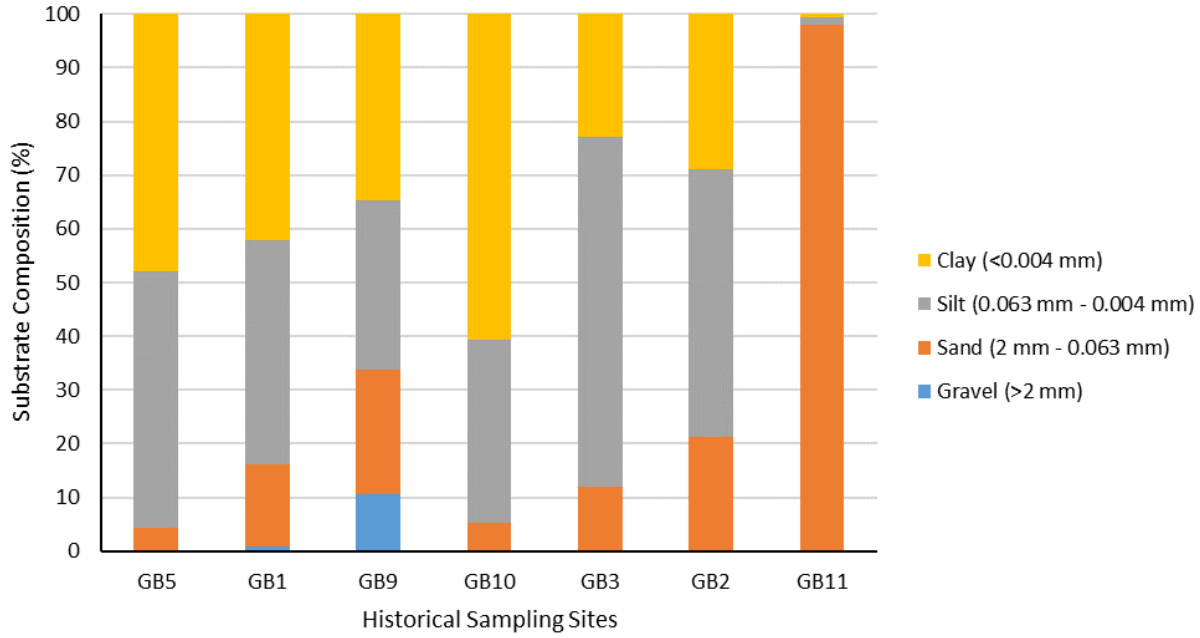
The percent agreement between QA samples indicated that the zooplankton accuracy and consistency of enumeration met the DQO with a 98.5% agreement between the total and QA density calculations.

5.4 Sediment Quality

5.4.1 Historical Sediment Quality

Marine sediment quality assessments within Grays Bay were conducted in 2004, 2005, 2008, and 2012 as part of baseline studies for the High Lake and Izok Lake Project (Wolfden 2006; MMG 2012; Lorax 2013) (Figure 5.1). Samples predominantly consisted of fine-grained sediments (silt and clay), with the exception of samples collected near the mouth of the Kennarctic River (Site GB11, which was dominated by coarse-grained sediments (sand) (MMG 2012; Lorax 2013) (Figure 5.15).

Figure 5.15 Substrate Composition of Sediment Samples Collected in September 2012 (Lorax 2013)



Sediment quality analyses of samples collected in 2004, 2005, 2008, and 2012 indicated arsenic, copper, and chromium were above the CCME Interim Sediment Quality Guidelines (ISQG) at sites in Grays Bay (Table 5.12). Arsenic was the only parameter above the CCME ISQG at sites near the mouth of the Kennarctic River (Wolfden 2006; Lorax 2013). All metal concentrations measured were below the CCME Probable Effects Level (PEL).

Sediment quality is influenced by particle size distribution; fine-grained sediments (silt and clay) have a higher surface area to volume ratio than coarse-grained sediments (sand and gravel) and, therefore, typically have higher concentrations of metals (Lorax 2013; GBEEC 2017). Lorax (2013) noted this may have been observed in the historical sediment samples, with sediment collected near the mouth of the Kennarctic River having lower concentrations of metals than the fine-grained sediments in Grays Bay (Table 5.12).

5.4.2 Field Sampling Program

Sediment quality results from the 19 locations sampled (Figure 4.3) are summarized in Appendix C, Table C.3-1. Substrate composition for each location sampled are presented in Figure 5.16 and discussed in Section 5.4.2.1. Analytical results of the sediment samples are discussed in Section 5.4.2.2.There were several exceedances of CCME ISQG-MAL for metals and PAHs (Table 5.13). However, sediment samples from Grays Bay did not exceed the CCME PEL for any parameters with available SQG-MAL.

Figure 5.16 Substrate Composition of Sediment Samples Collected at Grays Bay, August 2024

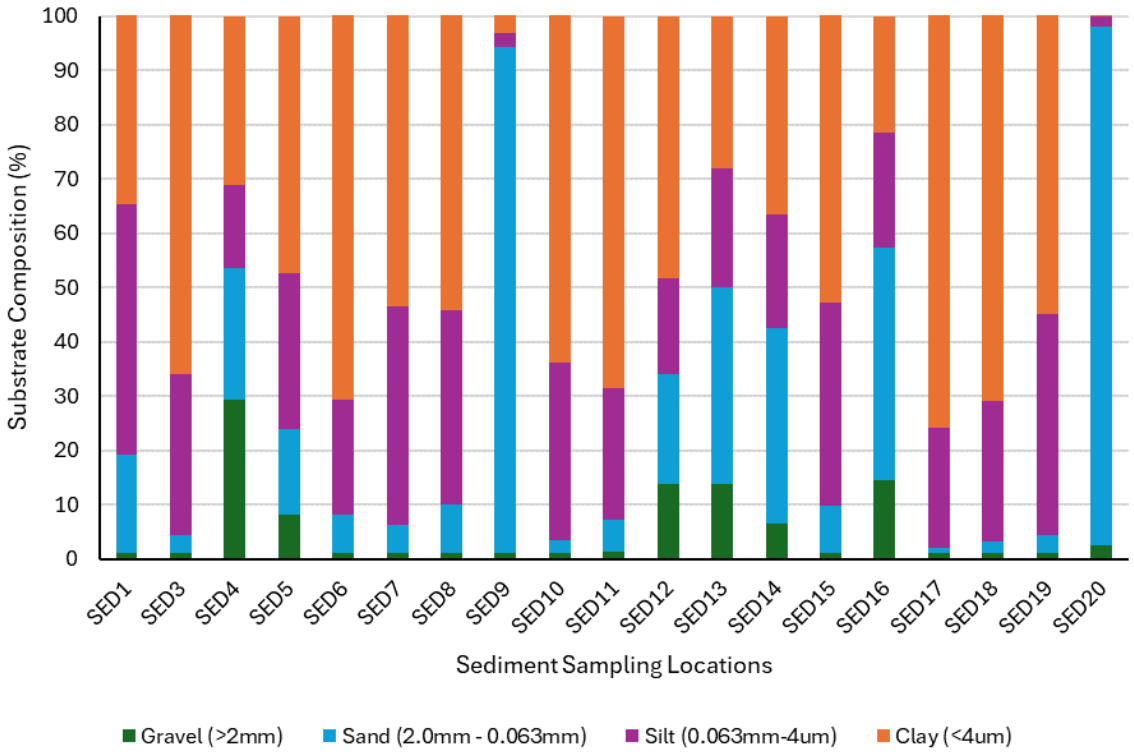


Table 5.12 Summary of Historical Metal Concentrations in Baseline Sediment Quality Samples

Parameter	Units	CCME SQG-MAL		2004 and 2005 (Wolfden 2006)									2008 and 2012[1] (Lorax 2013)	
				Kennarctic River	Grays Bay								Grays Bay	Kennarctic River
		ISQG	PEL	GB6[2]	GB1[2]	GB2	GB3	GB4	GB5	GB7[2]	GB8[2]	GBRef1		
Arsenic	mg/kg	7.24	41.6	**9.83**	**8.6**	<5.0	<5.0	<5.0	**7.3**	**10.5**	**17.2**	**14.7**	**15.1**	**8.0**
Cadmium	mg/kg	0.7	4.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.55	<0.05
Chromium	mg/kg	52.3	160	40.2	**59.1**	12.8	42.2	24	35.1	51.2	**68**	**56.2**	**82.5**	28.5
Copper	mg/kg	18.7	108	16.9	**32.7**	4.1	**26.3**	13.2	**19.5**	**28**	**37.4**	**43.5**	**41.8**	5.4
Lead	mg/kg	30.2	112	<30	<30	<30	<30	<30	<30	<30	<30	<30	14.5	4.9
Mercury	mg/kg	0.13	0.70	0.007	0.010	<0.0050	<0.0050	<0.0050	<0.0050	0.010	0.0075	0.010	0.019	<0.005
Zinc	mg/kg	124	271	54.2	80.3	20.3	70.5	30.6	50.6	70.1	82.9	76.7	104	35.7

Notes:

[1] Maximum concentration measured at any of the near-field or far-field stations in baseline samples collected between 2008 and 2012 (Lorax 2013).

[2] Average of three samples collected at GB6 and GB1, average of two samples collected at GB7 and GB8.

CCME SQG-MAL: CCME Sediment Quality Guideline for the Protection of Marine Aquatic Life

ISQG: Interim Sediment Quality Guidelines

PEL: Probable Effects Level

Bold denotes exceedance of the CCME ISQG.

Table 5.13 Sediment Quality Results from the Sampling Locations in Grays Bay, August 2024

Parameter	Units	CCME SQG-MAL		Summary Statistics				
		ISQG	PEL	n	Min	Max	Mean	Std Dev
Particle Size								
Clay (<4um)	%	-	-	19	<1.0	77.1	47.0	22.4
Gravel (>2mm)	%	-	-	19	<1.0	29.4	5.3	7.6
Sand (2.0mm - 0.063mm)	%	-	-	19	<1.0	95.6	22.7	28.3
Silt (0.063mm-4um)	%	-	-	19	1.8	46.2	25.6	11.9
Metals								
Arsenic	mg/kg	7.24	41.6	19	3.72	**12.1**	**7.37**	2.33
Cadmium	mg/kg	0.70	4.2	19	<0.020	0.117	0.048	0.025
Chromium	mg/kg	52.3	160	19	16.4	**93.7**	**57.8**	19.7
Copper	mg/kg	18.7	108	19	4.1	**39.2**	**28.6**	10.3
Lead	mg/kg	30.2	112	19	3.7	12.2	9.3	2.5
Mercury	mg/kg	0.13	0.70	19	<0.0050	0.0144	0.0095	0.0030
Zinc	mg/kg	124	271	19	24.5	104.0	71.6	22.8
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	mg/kg	0.00671	0.0889	19	**<0.050**	**<0.050**	**<0.050**	-
Acenaphthylene	mg/kg	0.00587	0.128	19	**<0.050**	**<0.050**	**<0.050**	-
Anthracene	mg/kg	0.0469	0.245	19	**<0.050**	**<0.050**	**<0.050**	-
Benzo(a)anthracene	mg/kg	0.0748	0.693	19	<0.050	<0.050	<0.050	-
Benzo(a)pyrene	mg/kg	0.0888	0.763	19	<0.050	<0.050	<0.050	-
Chrysene	mg/kg	0.108	0.846	19	<0.050	<0.050	<0.050	-
Dibenzo(a,h)anthracene	mg/kg	0.00622	0.135	19	**<0.050**	**<0.050**	**<0.050**	-
Fluoranthene	mg/kg	0.113	1.494	19	<0.050	<0.050	<0.050	-
Fluorene	mg/kg	0.0212	0.144	19	**<0.050**	**<0.050**	**<0.050**	-
Methylnaphthalene, 2-	mg/kg	0.0202	0.201	19	**<0.030**	**<0.030**	**<0.030**	-
Naphthalene	mg/kg	0.0346	0.391	19	<0.010	<0.010	<0.010	-
Phenanthrene	mg/kg	0.0867	0.544	19	<0.050	<0.050	<0.050	-
Pyrene	mg/kg	0.153	1.398	19	<0.050	<0.050	<0.050	-
Polychlorinated Biphenyls								
Aroclor 1254	mg/kg	0.0633	0.709	19	<0.011	<0.011	<0.011	-
Polychlorinated Biphenyls	mg/kg	0.0215	0.189	19	<0.011	<0.011	<0.011	-

Notes:

SQG-MAL = sediment quality guidelines for the protection of marine aquatic life; ISQG = interim sediment quality guidelines; PEL = probable effect level.

Bold text indicates an exceedance of the CCME ISQGL; italics text indicates an exceedance of the CCME PEL.

5.4.2.1 Particle Size

Clay was the dominant substrate, with silt and sand the sub-dominant substrates at all sampling locations, with the exception of the sampling locations near the mouth of the Kennarctic River (SED9 and SED20), which were predominantly sand substrates (Figure 5.16). Gravel was the lowest sediment component across the locations sampled, with an average of 5.3% (Table 5.13). Sediment composition and distribution throughout the locations sampled in 2024 were consistent with those found in the historical sediment samples collected in 2012 (Lorax 2013) (Figure 5.15). The complete sediment sampling results are included in Appendix C, Table C.3-1.

5.4.2.2 Analytical Results

Physical parameters measured in sediment samples included moisture content, pH, and TOC (Appendix C, Table C.3-1). Moisture content ranged from 16% (SED20) to 44.9% (SED11). Sediment pH was measured by diluting the sediment in water at a 1:2 ratio (soil: water). Sample pH was only measured in two samples as part of the salinity analysis and ranged from 6.78 (SED5) to 7.24 (SED4), and TOC ranged from 0.141% (SED20) to 0.891% (SED8). No CCME SQG-MAL exist for pH or TOC.

A comparison of sediment chemistry results and their corresponding CCME SQG-MAL are provided in Table 5.13. Only 7 of the 19 metals analyzed have a SQG-MAL. Cadmium, lead, mercury, and zinc were below the CCME ISQG-MAL in all sediment samples. The following SQG-MAL for metals were exceeded in samples from one or more of the sampling locations:

- Arsenic exceeded the CCME ISQG of 7.24 mg/kg in 10 samples (SED3, 4, 6, 7, 10, 11, 15, 17 – 19).
- Chromium exceeded the CCME ISQG of 52.3 mg/kg in 13 samples (SED3 – 7, 10, 11, 13 – 15, 17 –19).
- Copper exceeded the CCME ISQG of 18.7 mg/kg in 17 samples (SED1 – 8, 10 – 19).

Elevated concentrations above the CCME ISQG for arsenic, copper, and chromium are consistent with other marine sediment data collected from Grays Bay in 2004, 2005, 2008, and 2012 (Wolfden 2006; MMG 2012; Lorax 2013). Similar to the historical sites, sediment quality was influenced by particle size distribution. Fine-grained sediments (silt and clay) have higher surface area-to-volume ratios than coarse-grained sediments (sand and gravel) and, therefore, typically have higher concentrations of metals (Lorax 2013; GBEEC 2017). Sediment samples collected near the Kennartic River (SED9 and 20), which had predominately sand substrate composition, had lower metal concentrations than sediment collected from Grays Bay, which had predominately clay substrates. Sediment samples from the Kennarctic River were also below the CCME SQG-MAL for all metals (Table C.3-1), including arsenic, which had previously exceeded SQG-MAL in historical samples (Table 5.12; Wolfden 2006; Lorax 2013).

Nine VOCs were analyzed in the samples: benzene, ethylbenzene, toluene, xylene, methyl-tert-butyl ether, and styrene. Concentrations were below DLs in these samples; no CCME WQG-MAL exists for BTEX (Table C.3-1).

A total of 28 PAHs were analyzed in the samples; concentrations were below DLs in these samples (Table C.3-1). Results for the PAHs were compared to CCME SQG-MAL, which were available for 13 of the 28 PAHs analyzed (Table 5.13). The following SQG-MAL for PAHs were exceeded in one or more of the sampling locations. For these PAH exceedances, the analytical DL was above the CCME ISQG-MAL, resulting in exceedances of the guideline:

- Acenaphthene exceeded the CCME ISQG of 0.00671 mg/kg in all sampling locations.
- Acenaphthylene exceeded the CCME ISQG of 0.00587 mg/kg in all sampling locations.
- Anthracene exceeded the CCME ISQG of 0.0469 mg/kg in all sampling locations.
- Dibenzo(a,h)anthracene exceeded the CCME ISQG of 0.00622 mg/kg in all sampling locations.
- Fluorene exceeded the CCME ISQG of 0.0212 mg/kg in all sampling locations.
- 2-Methylnaphthalene exceeded the CCME ISQG of 0.0202 mg/kg in all sampling locations.

5.4.2.3 Quality Assurance Quality Control

The QA/QC results indicated that, overall, the sediment quality data collected were of high quality. Key outcomes included:

- The QC analyses met the laboratory DQO.
- Holding times recommended by the laboratory were met for all parameters.
- The RPD between parent and duplicate samples were below 20%, with the exception of five metals (chromium, cobalt, nickel, uranium, and zinc) in the SED20 and duplicate samples.

5.5 Benthic Invertebrate Community

Benthic fauna are divided into two main groups based on the habitat type: epifauna and infauna (Thorson 1957). Epifauna inhabit the upper layer of the substrate and include mobile forms (e.g., amphipods, mysids) and sessile forms (e.g., sea anemones). Infauna (e.g., polychaetes and bivalves) live within the bottom sediment, primarily within 5 cm of the substrate surface, and are typically considered to be relatively sedentary (Kingston 2001).

Previous sampling of benthic organisms in the Coronation Gulf and Kitikmeot Sea are limited (Fredriksen 2018; Bilous et al. 2022). Fredriksen (2018) studied the epibenthic community in the Kitikmeot Sea from seven stations, three within Bathurst Inlet and four within Dease Strait, in August 2016 using a van Veen Grab (Wilco, 0.1m^2). A total of 33 epibenthic species were identified; the most abundant taxa was echinodermata (31%), followed by mollusca (12%), cnidaria (9%), macroalgae (9%), annelida (6%), chordata (3%), and ochrophyta (3%). Fredriksen (2018) found that on Arctic shelves, brittle stars (*Ophiocten sericeum*) were the dominant taxa in abundance and biomass. Low current sites with fine-grained substrates had low taxon richness and high dominance of ophiuroids and some tube-forming polychaetes. Sites with high current and rocky substrates had the highest taxa richness and were characterized by anemones, crinoids, macroalgae, and holothurians (Fredriksen 2018).

Bilous et al. (2022) sampled benthic invertebrates at three stations in Kugluktuk in September 2017 using a benthic dredge (Wildco® Bottom Sampler, 15.2 cm × 20.3 cm). A total of 228 organisms from 20 taxa were collected. The most common species captured were the tellinid mollusc (*Macoma balthical*). The most abundant benthic class were bivalves, followed by gastropods. The most common bivalve order was Carditida (Bilous et al. 2022). Previous studies in other coastal Arctic areas have also found high abundances of polychaetes and bivalves (Bluhm et al. 2005; Brown et al. 2011).

5.5.1 Historical Benthic Invertebrate Community

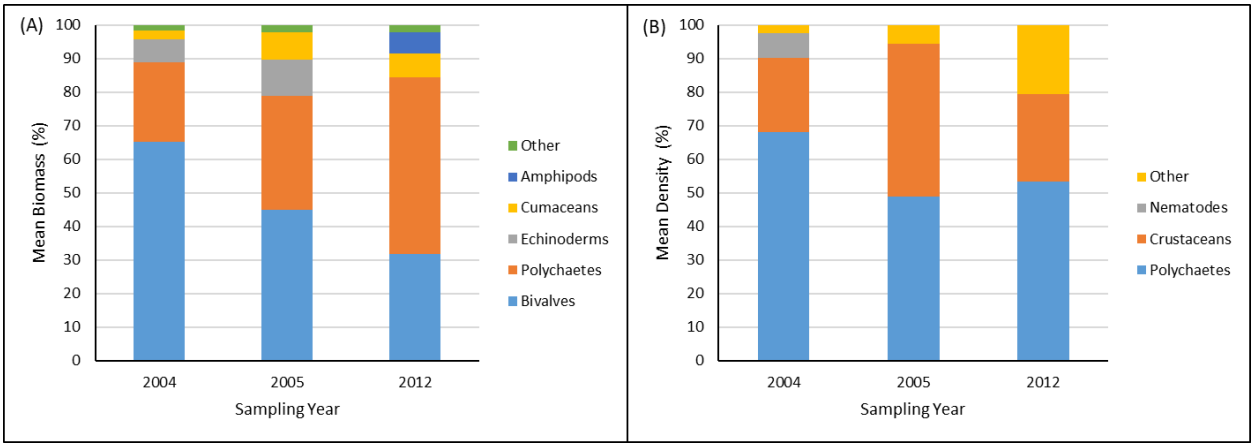
Benthic infauna sampling was completed in Grays Bay in 2004, 2005, and 2012 as part of baseline studies for the High Lake and Izok Lake Project (Wolfden 2006; Elliott and Cross 2013). Infaunal benthos collected in 2004 and 2005 had similar biomass, densities, and species composition (Table 5.14; Wolfden 2006). Mean benthic biomass was slightly greater in 2005 than in 2004, 143.7 g/m^2 ± 227.2 and 100.0 g/m^2 ± 255.6, respectively (Table 5.14). Benthic biomass samples were dominated by bivalves, polychaetes, echinoderms, and cumaceans in both sampling years (Figure 5.17).

Table 5.14 Comparison of Infaunal Benthic Sampling Results from 2004, 2005, and 2012 in Grays Bay

Variable		2004[1]	2005[1]	2012[2]
Grab Sampler		0.024 m² Ekman grab samples	0.024 m² Ekman grab samples	0.052m^2 Ekman grab samples
Number of Grab Samples		30	40	24
Depth range sampled (m)		6–30	5–15	5–30
Biomass	Maximum (g/m²)	621.1	458.6	16.4
	Minimum (g/m²)	7	16.3	1.2
	Mean (g/m²)	100	143.7	8.9
	Dominant group (% of total)	Bivalves (65.3)	Bivalves (44.9)	Polychaetes (52.5)
Density	Maximum (#/m²)	37,142	65,543	10,186
	Minimum (#/m²)	7,506	3,094	256
	Mean (#/m²)	20,426	26,061	3,415
	Dominant group (% of total)	Polychaetes (68.2)	Polychaetes (48.8)	Polychaetes (55.3)
	Dominant species (% of polychaete)	*Alagaophamus neotenus* (61.7)	*Alagaophamus neotenus* (47.8)	*Alagaophamus neotenus* (43.0)
	Dominant species (% of cumaceans)	*Brachydiastylis resima* (96.1)	*Brachydiastylis resima* (98.6)	*Brachydiastylis resima* (97.5)

Notes:
[1] Wolfden 2006
[2] Elliot and Cross 2013

Figure 5.17 Comparison of Dominant Orders in Mean Biomass (A) and Density (B) from Grays Bay Infaunal Benthic Sampling Results, 2004, 2005, and 2012



Mean benthic density was also slightly greater in 2005 than in 2004, 26,061/m^2 ± 21,863 and 20,426/m^2 ± 10,001, respectively (Table 5.14). The slightly lower mean biomass and densities in 2004 were likely due to the deeper depths sampled in that year (Wolfden 2006). Infaunal benthic density samples were dominated by polychaetes and crustaceans in both years (Figure 5.17). Dominant polychaete species included *Alagaophamus neotenus*, *Tharyx* spp., *Levinsenia gracilis*, *Scoloplos armiger*, *Laonice cirrata*, and *Lumbrineris* spp. Cumaceans, ostracods, and tanaidacea were the most common crustaceans. Bivalves were dominant in terms of biomass but only contributed to less than 1.2% of the total number of individuals in 2004 and 1.8% in 2005 (Wolfden 2006).

Benthic infauna sampled from Grays Bay in 2012 had lower biomass and density than in 2004 and 2005 (Table 5.14). The mean biomass of all samples collected was 8.9 g/m^2 and ranged from 1.2 g/m^2 at 5-m depth to 16.4 g/m^2 at 20 m depth (Elliot and Cross 2013). Similar to 2004 and 2005, the biomass of benthic infauna was dominated by polychaetes (52.5%) and bivalves (31.8%) (Figure 5.17).

The mean benthic density of all taxa in 2012 was 3,415 individuals/m^2 and ranged from 256/m^2 at 5-m depth to 10,816/m^2 at 20-m depth (Table 5.14). It was noted that there was variability among sites at the same depth; however, differences among depths (all sites combined) were also noted, as mean densities were lower at 5-m depth (478/m^2) than at 10-m (2,108/m^2), 20-m (6,897/m^2), and 30-m (3,958/m^2) depths. Elliot and Cross (2013) determined that the low densities recorded at 5-m and 10-m depths were due to a predominantly hard bottom type, where some of the samples were collected, and the resulting shallow penetration of the grab sampler. Similar to the 2004 and 2005 samples, polychaetes and crustaceans dominated the number of infauna and accounted for 55.3% and 26.0% of the total infauna, respectively (Figure 5.17). Dominant polychaete species included *Alagaophamus neotenus*, *Pholoe minuta*, *Levinsenia gracilis*, *Tharyx* spp., *Lumbrineris* spp., and *Scoloplos armiger*. Crustaceans captured included ostracods, copepods, cumaceans, tanaidaceans, isopods, and amphipods (Elliot and Cross 2013).

Benthic infauna samples collected in Grays Bay in 2012 had similar group and species composition to those collected in previous years (Wolfden 2006) and other Arctic locations (Thomson 1982; Bluhm et al. 2005; Brown et al. 2011; Bilous et al. 2022). Densities were also within ranges that have been previously reported in the Coronation Gulf, including Cambridge Bay in 1966 – 1969 (Atkinson and Wacasey 1989); Roberts Bay, Melville Sound in 1997 and 1998 (RL&L and Golder 2002); and Bathurst Inlet in 2001, 2002, and 2007 (Rescan 2007). Biomasses were also similar; however, densities in Grays Bay were greater than those found at similar depths in other Arctic locations (Cross and Thomson 1981, 1987; Thomson 1982).

5.5.2 Field Sampling Program

Benthic invertebrate samples collected at 19 sampling locations (Figure 4.3) are summarized in Table 5.15 and Table 5.16. The complete benthic invertebrate sampling results are included in Appendix D. A total of 14,185 organisms from 147 taxa were collected.

The abundance of organisms and taxa collected varied among the sampling areas. The highest abundance of organisms was at SED1 (east site outside of LAA), with 2,264 organisms collected, and the lowest abundance was at SED20 (site at Kennarctic River mouth), with only 5 organisms (Table 5.15). The greatest number of taxa was observed at SED8 (west site outside of LAA) with a total of 62 taxa; SED20 had the fewest number of taxa with only 3 (Table 5.15). The most abundant taxa were annelida (76%), arthropoda (18%), mollusca (3%), and nemertea (2%), with all other phyla representing less than 1% of the total abundance (Table 5.16). Polychaeta was the most abundant class; dominant species included *Tharyx* sp., *Micronephthys cornuta, Kirkegaardia* sp., *Levinsenia gracilis*, *Pholoe minuta*, and *Exogone* sp. Malacostraca was the second most abundant class, with dominant species included *Brachydiastylis resima*, *Akanthophoreus* sp., *Akanthophoreidae* indet., and *Pontoporeia femorata* (Appendix D).

The total density from the 19 sampling locations was 271,395/m^2. The sampling locations with the lowest densities were those near the Kennarctic River (96/m^2 at SED20 and 402/m^2 at SED19) and SED 12 (287/m^2). The greatest density was observed at the far west sampling location, SED1, with 43,316/m^2 (Table 5.15). Taxon with the greatest densities included annelida (59%), arthropoda (18%), mollusca (13%), nemertea (5.2%), cnidaria (2.0%), and echinodermata (1.2%), with all other phyla representing less than 1% of the total density (Table 5.16).

Overall total biomass was 105 g for the 19 sampling locations, ranging from 0.0316 g at SED20 to 21.3 g at SED5 (Table 5.15). Bivalvia (85%), annelida (10%), and amphipoda (1.8%) had the greatest biomass of the identified sampled taxon; all other taxa represented less than 1% of the total biomass (Table 5.17).

Table 5.15 Summary of Benthic Invertebrate Sampling Results from August 2024

Site ID	Total Abundance (# of Organisms)	Total Number of Taxa	Total Density (org/m^2)	Total Biomass (g)
SED1	2,264	52	43,316	7.30
SED3	944	61	18,061	2.52
SED4	234	44	4,477	1.40
SED5	974	54	18,635	21.3
SED6	985	49	18,846	17.1
SED7	1,558	39	29,808	8.55
SED8	1,445	62	27,647	2.00
SED9	21	9	402	0.124
SED10	223	32	4,267	0.471
SED11	861	58	16,473	21.1
SED12	15	8	287	0.0685
SED13	400	51	7,653	1.80
SED14	374	48	7,156	2.62
SED15	801	48	15,325	3.27
SED16	1,550	53	29,655	10.9
SED17	195	33	3,731	0.195
SED18	102	14	1,952	0.406
SED19	1,234	51	23,610	3.74
SED20	5	3	96	0.0316

Table 5.16 Summary Statistics of Benthic Invertebrate Results from August 2024

Taxon	Abundance (#/sample)				Density (#/L)			
	Min	Max	Mean	% of Total	Min	Max	Mean	% of Total
Annelida	1	645	19	76.1	19	12,340	372	58.7
Arthropoda	1	229	14	17.7	19	4,381	277	18.4
Echinodermata	1	8	2	3.30	19	153	43	1.16
Bryozoa	1	1	1	0.01	19	19	19	0.211
Cnidaria	1	5	2	0.25	19	96	38	2.01
Hemichordate	1	7	4	0.01	19	134	77	0.211
Nemertea	1	29	6	2.23	19	555	124	5.18
Platyhelminthes	1	3	2	0.04	19	57	32	0.317
Cephalorhyncha	1	4	2	0.08	19	77	33	0.740
Mollusca	1	37	4	3.30	19	708	73	13.1

Table 5.17 Summary Statistics of Benthic Invertebrate Biomass Results from August 2024

Taxa Grouping	Biomass (g)			
	Min	Max	Mean	% of Total
Annelida	0.00061	1.95	0.561	10.2
Bryozoa	0.0143	0.014	0.014	0.027
Anthozoa	0.00002	0.398	0.079	0.525
Hydrozoa	0	0.025	0.009	0.053
Staurozoa	0.01516	0.073	0.044	0.084
Amphipoda	0.00093	0.441	0.106	1.82
Cumacea	0.00018	0.660	0.068	0.97
Decapoda	0.00219	0.026	0.014	0.027
Isopoda	0.00001	0.122	0.013	0.150
Tanaid	0.00000	0.092	0.015	0.210
Holothuroidea	0.00004	0.0059	0.0037	0.010
Ophiuroidea	0.00027	0.0099	0.0041	0.028
Hemichordata	0.00007	0.0019	0.0010	0.0018
Diptera	0.00075	0.00075	0.00075	0.00072
Bivalvia	0.00398	20.7	5.92	84.7
Gastropoda	0.00016	0.424	0.042	0.476
Nemertea	0.00352	0.098	0.037	0.536
Platyhelminthes	0.00011	0.060	0.020	0.058
Priapulida	0.00002	0.089	0.027	0.183

5.5.2.1 Quality Assurance Quality Control

Quality assurance re-sorts were performed on one sample. The sample was randomly selected (SED15) and re-sorted in its entirety. The QA sample (SED15) had a sorting efficiency of 98.23%, indicating that the benthic invertebrate sort efficiency, accuracy and consistency met the DQO.

6 Summary Discussion

6.1 Oceanography

The ADCP instrument was deployed by Nunami Stantec for 30 days in August 2025 (from July 24 to August 23) on the seabed in the area for the proposed vessel wharf of the port in a water depth of 29 m. This instrument measured time-series data for water level, bottom temperature, currents, and waves. The water level data indicated diurnal tides with a maximum observed tidal range of 0.42 m. ASL Environmental Sciences observed a tidal range of 0.69 m in 2012 and measured over a period of 42 days with a pressure sensor installed in 8 m of water near the port area (Mudge et al. 2012).

The bottom water temperature in August 2025 ranged from -0.63 °C to 2.34 °C. The strength of current speeds measured in 2025 depended on their direction and were higher in the range of about 0.2 m/s to 0.5 m/s flowing in an eastern direction. The maximum current speed measured during the deployment period was 0.58 m/s (1.1 kt) on August 6, 2025, and flowing towards the northeast, approximately 9 m below the surface water. When currents were flowing towards the west, they were generally at much lower speeds and up to 0.2 m/s. There was a noticeable correlation between stronger, eastward current circulation and weaker, westward circulation and where near-surface and mid-depth currents were generally higher than currents near the bottom. On average, the dominant current flowed towards the northeast below the surface and at mid-depth, but was approximately equal in direction between the northeast and west-southwest for currents near the bottom. ASL also deployed an ADCP in 2012 to obtain information on waves, currents and tidal heights in Grays Bay (Mudge et al. 2012). Their ADCP was deployed in the summer for a longer period (93 days) and 1.5 km from the port site. The largest current measured was 1.04 m/s (2.1 kt), and also observed the highest currents were flowing towards the northeast for near-surface and mid-depth currents, with the highest near-bottom currents to the north.

ADCP spatial transect data for currents in the marine PDA were collected on August 24 and 25, 2025, in the areas of the vessel and barge wharfs, including the proposed marine outfall location, to the west and north of the port site and in the area of the public berths to the east of the port in the smaller bay. These current measurements from near-surface to near-bottom provided spatial current data in the PDA and were collected during an ebbing and flooding tide. Results indicate the direction of currents around the PDA is not the same during an ebb and flood tide. The predominant water current direction during the ebb tide near the surface was to the north in the area of the barge ramp and wharf, which then flowed towards the east in the vessel wharf area at higher speeds (0.15 to 0.45 m/s). The presence of a small surface gyre was noticed east of the wharf area with weaker southwest flowing currents. The surface currents in the public wharf area were generally weaker, with no coherent direction for the flow, and were attributed to the small bay area being relatively shallow and sheltered from a westerly wind. The near-bottom currents and direction for an ebb tide in the PDA were generally weaker (< 0.30 m/s) with no structured flow direction like for the surface currents, except in the barge wharf and ramp areas, where the bottom currents were generally flowing northward. Unlike the current circulation in the PDA for an ebb tide, the currents measured during the flood tide for near-surface and bottom water layers were generally low (< 0.30 m/s) and similar to the bottom current speeds for the ebb tide, with no discernable direction to the flows because of the low speeds. Overall, for the water column, the near-surface to mid-depth currents for

the ebb tide were generally stronger (0.20 to 0.40 m/s) and towards the east in the vessel wharf area compared to the weaker bottom currents (< 0.20 m/s) that were flowing in a different and general southwest direction. In the public berths area, currents for the ebb tide were also lower (< 0.20 m/s) throughout the water column and flowed towards the southwest. It is interesting to note that the ADCP spatial transect data for currents in the vessel wharf area were similar to some of the ADCP time-series data (i.e., stronger currents in the upper water column when flowing towards the east). Current directions for the water column during the flood tide were predominantly to the west-southwest with significantly lower current speeds than for the ebb tide, and ranged from approximately 0.05 to 0.20 m/s in the PDA. The currents in the public berths area were the lowest and generally < 0.1 m/s and in the same southwest direction as for the ebb tide.

Waves measured in August 2025 by the ADCP in the area of the vessel wharf were small waves in the range of 0.1 m to 0.5 m, and up to 0.8 m, but not as common, and were generally from the eastern sector (NNE, NE and ESE). The few larger waves recorded were primarily from WNW, with 0.9 m being the largest wave measured from 294°. The peak wave period (Tp) for the range of Hs wave heights recorded were generally 1 to 5 seconds and accounted for 94% of all wave heights, with wave heights in the 0.1 m to 0.2 m range being the largest category at 19.8 % and with peak wave periods of 4 to 5 seconds. The smaller waves from the ESE direction are likely reflected waves from the coastline. The waves from the NNE and NE are likely a result of wind-driven waves and fetch for winds from the NE. The larger waves from the WNW are likely propagating from Coronation Gulf and through the channel to the west of Hepburn Island and the mainland because of the longer fetch distance across open water to the port site compared to waves from the NE. The Nunami Stantec GBRP meteorological station at Grays Bay was back in operation on August 19, 2025. Only four days of local wind speed and directional data were available that overlapped with the ADCP time-series data; the winds were light, averaging 4 m/s, and too short a record to provide any meaningful interpretation for physical oceanographic processes for the waves and currents measured at the port site. ASL recorded similar wave spectra with their ADCP in 2012 and 1.5 km from the port site. The longest period waves and generally the largest waves arrived from the west and indicated that the shorter, locally generated waves or reflections were likely arriving from the east, south, and north-west. They recorded several waves exceeding 0.5 m. The largest wave measured by ASL was 1.15 m and came from the west with a peak period of 5 seconds.

The physical processes and forces contributing to the hydrodynamic circulation patterns observed in the vessel wharf area and at the location of the ADCP station for the time-series data in 2025 are not entirely evident. The circulation pattern could be a result of changes in the discharge of the Kennarctic River, generating buoyancy-driven flows and influencing vertical stratification of the water column, wind forcing that generates surface currents, vertical mixing, and lateral intrusions, tidal forcing and the generation of tidal currents (though not anticipated to be an important force in Grays Bay because of the relatively small tidal range), topography and coastal features (depth, shape and coastal features of Grays Bay can influence circulation patterns and create localized gyres and affect the flow of waters), and meteorological conditions such as storms and very high winds can influence currents and circulation. The absence of local bathymetric, meteorological and river discharge data did not permit elucidate of the forces that might be contributing to the observed currents and waves collected by the ADCP and could be considered a data gap.

6.2 Water Quality

Water quality sampling in Grays Bay was conducted in August 2024 and in May, July, and August 2025 across multiple stations within the PDA, LAA, and RAA. Across all sampling events, in situ measurements showed consistent patterns in temperature, salinity, pH, dissolved oxygen, conductivity, and turbidity. Surface waters were warmer and less saline, particularly near the Kennarctic River, where freshwater input influenced stratification and reduced salinity levels. Deeper stations exhibited a clear thermocline around 20 m, with salinity and conductivity increasing with depth. Dissolved oxygen levels remained above the CCME minimum guideline of 8.0 mg/L, and pH values were stable across all depths, falling within the acceptable range of 7.0 to 8.7. Turbidity was generally low and stable, with occasional spikes. Chemical analyses across all sampling periods showed that most metals, nutrients, and organic compounds were below detection limits or CCME guidelines. Notably, cadmium and chromium had detection limits that exceeded guideline thresholds but were below the detection limits. VOCs and PAHs were consistently below detection limits, and no exceedances of CCME guidelines were recorded. Water quality samples from Grays Bay did not exceed the short-term CCME WQG-MAL for any parameters with available WQG-MAL.

When compared to historical water quality data collected between 2004 and 2012, the 2024–2025 results reaffirmed long-standing trends. Historical data also showed stratification driven by ice melt and river inflow, with similar vertical profiles in temperature and salinity. Metal concentrations in earlier years were generally low, apart from mercury exceedances in 2005, which were not observed in recent sampling. The influence of the Kennarctic River on surface water conditions and suspended sediment loads remains a consistent feature across decades. Overall, the 2024–2025 water quality data—including the May 2025 sampling—confirm the stability of the marine environment in Grays Bay.

6.3 Zooplankton

Zooplankton sampling for the Project was conducted concurrently with water quality sampling from August 22 to 27, 2024, at nine stations within the PDA, LAA, and RAA. Samples were collected using a 336-micron mesh conical net via vertical tows from just above the seabed to the surface. Samples were screened and preserved onsite, then processed in Biologica's lab for taxonomic identification and enumeration. A total of 9,313 organisms from 27 taxa were identified, with arthropods (mainly copepods and branchiopods) comprising 84% of total abundance, followed by cnidarians (8%) and chordates (4%). The highest abundance was recorded at station ZP8 (2,829 organisms), while ZP9 and ZP5 had the lowest (78 and 79 organisms, respectively). The overall total density of the nine sampling locations was 2.07/L, ranging from 0.037/L at ZP5 to 0.412/L at ZP8. Arthropoda (85%), cnidaria (7%), and chordata (4%) had the greatest densities of the sampled taxon. Total biomass ranged from 0.005 g at ZP9 to 0.610 g at ZP3, with a total biomass of 1.739 g from the nine sampling locations. Cladocera (30%), cnidaria (8%), and chaetognatha (6%) had the greatest biomass of the identified sampled taxon.

The 2024 zooplankton study in Grays Bay reaffirms long-standing ecological patterns observed in earlier surveys, particularly those from 2004. Arthropods continue to dominate both in abundance and biomass, with species like *Acartia longiremis* and *Pseudocalanus minutus* consistently present across decades, indicating a stable community composition. The species assemblage closely mirrors descriptions by

Grainger (1965) of the upper 100 m of Arctic surface waters, with a widespread offshore and inshore distribution.

6.4 Sediment Quality

Sediment quality sampling was conducted from August 22 to 27, 2024, at 19 stations across the Project PDA, LAA, and RAA in Grays Bay. Using a standard Ponar grab sampler, samples were analyzed for physical characteristics such as particle size, moisture, pH, and total organic carbon, as well as chemical parameters including metals, PAHs, and PCBs. Clay was the dominant substrate across most sites, with silt and sand as sub-dominant components, while sand prevailed near the Kennarctic River. Elevated concentrations of arsenic, chromium, and copper exceeded the CCME ISQG in multiple samples, though none exceeded the PEL. PAHs such as acenaphthene, anthracene, and fluorene also exceeded ISQGs; however, these exceedances may be attributed to analytical detection limits being higher than guideline thresholds, rather than elevated concentrations. Sampling locations near the Kennarctic River, which had coarser substrates, showed lower metal concentrations, reinforcing the influence of particle size on contaminant levels.

Overall, the 2024 sediment quality results reaffirmed patterns observed in historical surveys conducted between 2004 and 2012. Substrate composition remained consistent, with fine-grained sediments associated with elevated metal concentrations and sand-dominated areas near the Kennarctic River showing lower levels of contamination. The presence of elevated arsenic near the Kennarctic River was also consistent with previous findings. While PAH exceedances were noted in current datasets, the 2024 study illustrated that these may be due to methodological limitations.

6.5 Benthic Invertebrate Community

Benthic invertebrate sampling was conducted from August 22 to 27, 2024, at 19 stations across Grays Bay, encompassing the PDA, LAA, and RAA. Samples were collected using a standard Ponar grab sampler and processed by Biologica for taxonomic identification and biomass analysis. A total of 14,185 organisms representing 147 taxa were identified. The benthic community was dominated by annelids (76%), followed by arthropods (18%), mollusks (3%), and nemerteans (2%), with other phyla contributing less than 1%. Polychaetes were the most abundant class, with dominant species including *Tharyx* sp., *Micronephthys cornuta*, and *Levinsenia gracilis*. Organism abundance varied across sampling locations, with the highest count recorded at SED1 (2,264 organisms), the east site outside of LAA, and the lowest at SED20 (5 organisms), near the mouth of the Kennarctic River. Biomass ranged from 0.0316 g (SED20) to 21.3 g (SED5), with bivalves contributing 85% of total biomass. Density patterns reflected habitat conditions, with lower densities at sites near Kennarctic River, which notably had coarser substrates.

The 2024 benthic survey confirmed long-standing patterns observed in historical studies from 2004, 2005, and 2012, particularly the dominance of polychaetes in abundance and bivalves in biomass. These consistent trends reflect a stable benthic community structure over time.

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Appendix A Water Quality Results

A.1 Certificate of Analysis

CERTIFICATE OF ANALYSIS

Work Order	: **YL2500253**		
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Emily Hulley	Account Manager	: Brent Mack
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Telephone	: ----	E-mail	: Brent.Mack@ALSGlobal.com
Project	: Grays Bay Project (123514868.4000.205.300)	Telephone	: 778-370-3279
PO	: ----	Date Samples Received	: 07-May-2025 12:46
C-O-C number	: ----	Date Analysis Commenced	: 10-May-2025
Sampler	: ----	Issue Date	: 16-May-2025 12:39
Site	: ----		
Quote number	: Stantec Western Canada Standing Offer - 2025-2027		
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*
Ilnaz Badbezanchi	Supervisor - Metals Prep	Metals, Burnaby, British Columbia
Kate Dimitrova	Supervisor - Inorganic	Inorganics, Burnaby, British Columbia
Monica Ko	Lab Assistant	Inorganics, Burnaby, British Columbia

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*
mg/L	milligrams per litre
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.

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SCH-BH-05	SCH-B4-09	WRF-BF-01	WRF-B4-04	DUP-1-WRF-B4-01
					Client sampling date / time	27-Apr-2025 20:16	01-May-2025 03:15	05-May-2025 02:45	07-May-2025 03:10	05-May-2025 03:00
						YL2500253-001	YL2500253-002	YL2500253-003	YL2500253-004	YL2500253-005
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100S/VA	2.0	µS/cm		24100	38600	41900	41700	41700
pH	----	E108/VA	0.10	pH units		7.77	7.74	7.70	7.72	7.76
Solids, total suspended [TSS]	----	E160S/VA	2.0	mg/L		<2.0	<2.0	3.3	6.6	4.1
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.50	mg/L		3690	5460	5760	5530	5730
Total Metals										
Aluminum, total	7429-90-5	E466S/VA	0.0050	mg/L		0.0103	0.0059	0.0059	0.0061	<0.0050
Antimony, total	7440-36-0	E466S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total	7440-38-2	E466S/VA	0.00040	mg/L		0.00099	0.00118	0.00127	0.00125	0.00127
Barium, total	7440-39-3	E466S/VA	0.0010	mg/L		0.0156	0.0116	0.0107	0.0114	0.0106
Beryllium, total	7440-41-7	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, total	7440-69-9	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total	7440-42-8	E466S/VA	0.30	mg/L		2.30	3.33	3.36	3.71	3.43
Cadmium, total	7440-43-9	E466S/VA	0.000020	mg/L		0.000051	0.000042	0.000046	0.000042	0.000046
Calcium, total	7440-70-2	E466S/VA	1.0	mg/L		244	355	359	353	367
Cesium, total	7440-46-2	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, total	7440-47-3	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E466S/VA	0.000050	mg/L		0.000204	0.000109	0.000082	0.000107	0.000085
Copper, total	7440-50-8	E466S/VA	0.00050	mg/L		0.00297	0.00081	0.00053	0.00077	<0.00050
Gallium, total	7440-55-3	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron, total	7439-89-6	E466S/VA	0.010	mg/L		0.018	0.016	<0.010	0.010	<0.010
Lead, total	7439-92-1	E466S/VA	0.00010	mg/L		<0.00010	0.00031	<0.00010	<0.00010	<0.00010

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SCH-BH-05	SCH-B4-09	WRF-BF-01	WRF-B4-04	DUP-1-WRF-B4-01
					Client sampling date / time	27-Apr-2025 20:16	01-May-2025 03:15	05-May-2025 02:45	07-May-2025 03:10	05-May-2025 03:00
						YL2500253-001	YL2500253-002	YL2500253-003	YL2500253-004	YL2500253-005
						Result	Result	Result	Result	Result
Total Metals										
Lithium, total	7439-93-2	E466S/VA	0.020	mg/L		0.108	0.159	0.165	0.179	0.165
Magnesium, total	7439-95-4	E466S/VA	1.0	mg/L		748	1110	1180	1130	1170
Manganese, total	7439-96-5	E466S/VA	0.00020	mg/L		0.0210	0.00479	0.00129	0.00411	0.00133
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E466S/VA	0.00010	mg/L		0.00565	0.00834	0.00862	0.00848	0.00881
Nickel, total	7440-02-0	E466S/VA	0.00050	mg/L		0.00347	0.00109	0.00075	0.00099	0.00073
Phosphorus, total	7723-14-0	E466S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E466S/VA	1.0	mg/L		228	299	308	301	303
Rhenium, total	7440-15-5	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Rubidium, total	7440-17-7	E466S/VA	0.0050	mg/L		0.0718	0.0906	0.0925	0.0927	0.0932
Selenium, total	7782-49-2	E466S/VA	0.00050	mg/L		<0.00050	<0.00100	<0.00055	<0.00090	<0.00100
Silicon, total	7440-21-3	E468S.NaSi/VA	1.0	mg/L		1.7	<1.0	<1.0	<1.0	<1.0
Silver, total	7440-22-4	E466S/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium, total	7440-23-5	E468S.NaSi/VA	2.5	mg/L		5970	8600	8860	8580	8920
Strontium, total	7440-24-6	E466S/VA	0.010	mg/L		4.12	6.05	6.32	6.06	6.27
Sulfur, total	7704-34-9	E466S/VA	5.0	mg/L		448	670	720	696	713
Tellurium, total	13494-80-9	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium, total	7440-28-0	E466S/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Thorium, total	7440-29-1	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Tin, total	7440-31-5	E466S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium, total	7440-32-6	E466S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SCH-BH-05	SCH-B4-09	WRF-BF-01	WRF-B4-04	DUP-1-WRF-B4-01
					Client sampling date / time	27-Apr-2025 20:16	01-May-2025 03:15	05-May-2025 02:45	07-May-2025 03:10	05-May-2025 03:00
						YL2500253-001	YL2500253-002	YL2500253-003	YL2500253-004	YL2500253-005
						Result	Result	Result	Result	Result
Total Metals										
Tungsten, total	7440-33-7	E466S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium, total	7440-61-1	E466S/VA	0.000050	mg/L		0.00160	0.00224	0.00237	0.00227	0.00227
Vanadium, total	7440-62-2	E466S/VA	0.00050	mg/L		0.00062	0.00072	0.00075	0.00069	0.00075
Yttrium, total	7440-65-5	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E466S/VA	0.0030	mg/L		0.0216	0.0049	<0.0030	<0.0030	<0.0030
Zirconium, total	7440-67-7	E466S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

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	Travel Blank	Field Blank WRF-B4-04	----	----	----
					Client sampling date / time	07-May-2025 00:00	07-May-2025 03:25	----	----	----
						YL2500253-006	YL2500253-007	----	----	----
						Result	Result	----	----	----
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		<2.0	<2.0	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		<0.60	<0.60	----	----	----
pH	----	E108/VA	0.10	pH units		5.04	5.09	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	Travel Blank	Field Blank WRF-B4-04	----	----	----
					Client sampling date / time	07-May-2025 00:00	07-May-2025 03:25	----	----	----
						YL2500253-006	YL2500253-007	----	----	----
						Result	Result	----	----	----
Total Metals										
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Travel Blank	Field Blank WRF-B4-04	----	----	----
					Client sampling date / time	07-May-2025 00:00	07-May-2025 03:25	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500253-006	YL2500253-007	----	----	----
						Result	Result	----	----	----
Total Metals										
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		<0.10	<0.10	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		<0.50	<0.50	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Zirconium, total	7440-67-7	E420/VA	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 INTERPRETIVE REPORT

Work Order	: **YL2500253**	Page	: 1 of 12
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Emily Hulley	Account Manager	: Brent Mack
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9
Telephone	: ----	Telephone	: 778-370-3279
Project	: Grays Bay Project (123514868.4000.205.300)	Date Samples Received	: 07-May-2025 12:46
PO	: ----	Issue Date	: 16-May-2025 12:38
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: Stantec Western Canada Standing Offer - 2025-2027		
No. of samples received	: 7		
No. of samples analysed	: 7		

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 Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Method Blank value outliers occur - please see following pages for full details.
- Matrix Spike 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
Method Blank (MB) Values								
Total Metals	QC-MRG2-1992354 001	----	Sodium, total	7440-23-5	E468S.NaSi	2.9 mg/L B	2.5 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.*

Matrix Spike (MS) Recoveries								
Total Metals	Anonymous	Anonymous	Thorium, total	7440-29-1	E420	68.0 % MES	70.0-130%	Recovery less than lower data quality objective

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(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 Seawater										
HDPE SCH-B4-09	E100S	01-May-2025	13-May-2025	28 days	12 days	✓	13-May-2025	28 days	12 days	✓
Physical Tests : Conductivity in Seawater										
HDPE SCH-BH-05	E100S	27-Apr-2025	13-May-2025	28 days	16 days	✓	13-May-2025	28 days	16 days	✓
Physical Tests : Conductivity in Seawater										
HDPE WRF-B4-04	E100S	07-May-2025	13-May-2025	28 days	6 days	✓	13-May-2025	28 days	6 days	✓
Physical Tests : Conductivity in Seawater										
HDPE DUP-1-WRF-B4-01	E100S	05-May-2025	13-May-2025	28 days	8 days	✓	13-May-2025	28 days	8 days	✓
Physical Tests : Conductivity in Seawater										
HDPE WRF-BF-01	E100S	05-May-2025	13-May-2025	28 days	8 days	✓	13-May-2025	28 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE Field Blank WRF-B4-04	E100	07-May-2025	13-May-2025	28 days	6 days	✓	13-May-2025	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE Travel Blank	E100	07-May-2025	13-May-2025	28 days	7 days	✓	13-May-2025	28 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 : pH by Meter										
HDPE										
Field Blank WRF-B4-04	E108	07-May-2025	13-May-2025	0.25 hrs	153 hrs	× EHTR-FM	13-May-2025	0.25 hrs	153 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
WRF-B4-04	E108	07-May-2025	13-May-2025	0.25 hrs	153 hrs	× EHTR-FM	13-May-2025	0.25 hrs	153 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
Travel Blank	E108	07-May-2025	13-May-2025	0.25 hrs	156 hrs	× EHTR-FM	13-May-2025	0.25 hrs	156 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
DUP-1-WRF-B4-01	E108	05-May-2025	13-May-2025	0.25 hrs	201 hrs	× EHTR-FM	13-May-2025	0.25 hrs	201 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
WRF-BF-01	E108	05-May-2025	13-May-2025	0.25 hrs	201 hrs	× EHTR-FM	13-May-2025	0.25 hrs	201 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
SCH-B4-09	E108	01-May-2025	13-May-2025	0.25 hrs	297 hrs	× EHTR-FM	13-May-2025	0.25 hrs	297 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
SCH-BH-05	E108	27-Apr-2025	13-May-2025	0.25 hrs	376 hrs	× EHTR-FM	13-May-2025	0.25 hrs	376 hrs	× EHTR-FM
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE										
SCH-BH-05	E160S	27-Apr-2025	----	----	----		10-May-2025	7 days	13 days	× EHTR
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE										
WRF-B4-04	E160S	07-May-2025	----	----	----		13-May-2025	7 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
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE										
DUP-1-WRF-B4-01	E160S	05-May-2025	----	----	----		12-May-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE										
WRF-BF-01	E160S	05-May-2025	----	----	----		12-May-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE										
SCH-B4-09	E160S	01-May-2025	----	----	----		10-May-2025	7 days	9 days	× EHT
Physical Tests : TSS by Gravimetry										
HDPE										
Field Blank WRF-B4-04	E160	07-May-2025	----	----	----		13-May-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
Travel Blank	E160	07-May-2025	----	----	----		13-May-2025	7 days	7 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
SCH-B4-09	E508S	01-May-2025	13-May-2025	28 days	12 days	✓	13-May-2025	28 days	12 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
SCH-BH-05	E508S	27-Apr-2025	13-May-2025	28 days	15 days	✓	13-May-2025	28 days	15 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WRF-B4-04	E508S	07-May-2025	13-May-2025	28 days	6 days	✓	13-May-2025	28 days	6 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
DUP-1-WRF-B4-01	E508S	05-May-2025	13-May-2025	28 days	8 days	✓	13-May-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
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WRF-BF-01	E508S	05-May-2025	13-May-2025	28 days	8 days	✓	13-May-2025	28 days	8 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
Field Blank WRF-B4-04	E508	07-May-2025	13-May-2025	28 days	6 days	✓	13-May-2025	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
Travel Blank	E508	07-May-2025	13-May-2025	28 days	6 days	✓	13-May-2025	28 days	6 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE - total (lab preserved)										
SCH-B4-09	E466S	01-May-2025	13-May-2025	180 days	12 days	✓	15-May-2025	180 days	12 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE - total (lab preserved)										
SCH-BH-05	E466S	27-Apr-2025	13-May-2025	180 days	16 days	✓	15-May-2025	180 days	16 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE - total (lab preserved)										
WRF-B4-04	E466S	07-May-2025	13-May-2025	180 days	6 days	✓	15-May-2025	180 days	6 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE - total (lab preserved)										
DUP-1-WRF-B4-01	E466S	05-May-2025	13-May-2025	180 days	8 days	✓	15-May-2025	180 days	8 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE - total (lab preserved)										
WRF-BF-01	E466S	05-May-2025	13-May-2025	180 days	8 days	✓	15-May-2025	180 days	8 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
Field Blank WRF-B4-04	E420	07-May-2025	12-May-2025	180 days	6 days	✓	13-May-2025	180 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
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
Travel Blank	E420	07-May-2025	12-May-2025	180 days	6 days	✓	13-May-2025	180 days	6 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
SCH-B4-09	E468S.NaSi	01-May-2025	13-May-2025	180 days	12 days	✓	15-May-2025	180 days	12 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
SCH-BH-05	E468S.NaSi	27-Apr-2025	13-May-2025	180 days	16 days	✓	15-May-2025	180 days	16 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WRF-B4-04	E468S.NaSi	07-May-2025	13-May-2025	180 days	6 days	✓	15-May-2025	180 days	6 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
DUP-1-WRF-B4-01	E468S.NaSi	05-May-2025	13-May-2025	180 days	8 days	✓	15-May-2025	180 days	8 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WRF-BF-01	E468S.NaSi	05-May-2025	13-May-2025	180 days	8 days	✓	15-May-2025	180 days	8 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.

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	1994132	1	3	33.3	5.0	✓
Conductivity in Seawater	E100S	1994133	1	5	20.0	5.0	✓
pH by Meter	E108	1994130	1	8	12.5	5.0	✓
TSS by Gravimetry	E160	1994153	1	11	9.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1991814	1	20	5.0	5.0	✓
Total Metals in Seawater by Triple Quad ICPMS	E466S	1992354	1	18	5.5	5.0	✓
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1992355	1	5	20.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1993027	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1993028	1	5	20.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	1994132	1	3	33.3	5.0	✓
Conductivity in Seawater	E100S	1994133	1	5	20.0	5.0	✓
pH by Meter	E108	1994130	1	8	12.5	5.0	✓
TSS by Gravimetry	E160	1994153	1	11	9.0	5.0	✓
TSS by Gravimetry (Seawater)	E160S	1990456	3	32	9.3	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1991814	1	20	5.0	5.0	✓
Total Metals in Seawater by Triple Quad ICPMS	E466S	1992354	1	18	5.5	5.0	✓
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1992355	1	5	20.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1993027	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1993028	1	5	20.0	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	1994132	1	3	33.3	5.0	✓
Conductivity in Seawater	E100S	1994133	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1994153	1	11	9.0	5.0	✓
TSS by Gravimetry (Seawater)	E160S	1990456	3	32	9.3	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1991814	1	20	5.0	5.0	✓
Total Metals in Seawater by Triple Quad ICPMS	E466S	1992354	1	18	5.5	5.0	✓
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1992355	1	5	20.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1993027	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1993028	1	5	20.0	5.0	✓
Matrix Spikes (MS)							
Total Metals in Water by CRC ICPMS	E420	1991814	1	20	5.0	5.0	✓
Total Metals in Seawater by Triple Quad ICPMS	E466S	1992354	1	18	5.5	5.0	✓
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1992355	1	5	20.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1993027	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							
Total Mercury in Seawater by CVAAS	E508S	1993028	1	5	20.0	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 - Vancouver	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 in Seawater	E100S ALS Environmental - Vancouver	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 seawater sample. Conductivity measurements are temperature-compensated to 25°C. Salinity in Practical Salinity Units is calculated.
pH by Meter	E108 ALS Environmental - Vancouver	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.
TSS by Gravimetry	E160 ALS Environmental - Vancouver	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.
TSS by Gravimetry (Seawater)	E160S ALS Environmental - Vancouver	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.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	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 Metals in Seawater by Triple Quad ICPMS	E466S ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Seawater samples are digested with nitric and hydrochloric acids, and analyzed by Triple Quadrupole ICPMS. This method is compliant with digestion requirements of the British Columbia Environmental Laboratory Manual.
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Seawater samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. This method is compliant with digestion requirements of the British Columbia Environmental Laboratory Manual.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Mercury in Seawater by CVAAS	E508S ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Seawater samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), 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.

QUALITY CONTROL REPORT

Work Order	: **YL2500253**	Page	: 1 of 15
Client	: Stantec Consulting Ltd.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Emily Hulley	Account Manager	: Brent Mack
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9
Telephone	: ----	Telephone	: 778-370-3279
Project	: Grays Bay Project (123514868.4000.205.300)	Date Samples Received	: 07-May-2025 12:46
PO	: ----	Date Analysis Commenced	: 10-May-2025
C-O-C number	: ----	Issue Date	: 16-May-2025 12:38
Sampler	: ----		
Site	: ----		
Quote number	: Stantec Western Canada Standing Offer - 2025-2027		
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*
Ilnaz Badbezanchi	Supervisor - Metals Prep	Vancouver Metals, Burnaby, British Columbia
Kate Dimitrova	Supervisor - Inorganic	Vancouver Inorganics, Burnaby, British Columbia
Monica Ko	Lab Assistant	Vancouver Inorganics, Burnaby, British Columbia

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: 1994130)											
VA25B0877-001	Anonymous	pH	----	E108	0.10	pH units	6.88	6.88	0.00%	4%	----
Physical Tests (QC Lot: 1994132)											
VA25B0877-001	Anonymous	Conductivity	----	E100	5.0	µS/cm	198000	206000	3.72%	10%	----
Physical Tests (QC Lot: 1994133)											
YL2500253-001	SCH-BH-05	Conductivity	----	E100S	2.0	µS/cm	24100	24200	0.414%	20%	----
Physical Tests (QC Lot: 1994153)											
VA25B0667-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	12.3	13.3	1.0	Diff <2x LOR	----
Total Metals (QC Lot: 1991814)											
FJ2501336-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.179	0.177	1.16%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00081	0.00081	0.000002	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00114	0.00115	0.838%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.195	0.198	1.53%	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	0.015	0.015	0.00010	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000496	0.0000561	12.5%	20%	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	33.3	32.7	1.77%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000038	0.000040	0.000002	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	0.00052	0.00051	0.000008	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00161	0.00164	0.00004	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.292	0.284	2.53%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000368	0.000370	0.000002	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0084	0.0083	0.0001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	9.92	9.91	0.0378%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0326	0.0331	1.49%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00392	0.00387	1.32%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00688	0.00686	0.287%	20%	----
		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	0.930	0.944	1.51%	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*
Total Metals (QC Lot: 1991814) - continued											
FJ2501336-001	Anonymous	Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00100	0.00104	0.00004	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000854	0.000836	2.03%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3.70	3.69	0.348%	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	9.24	9.55	3.32%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.128	0.124	3.70%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	11.6	11.1	4.39%	20%	----
		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	0.0000005	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	0.00415	0.00430	3.72%	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	0.00112	0.00112	0.399%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00110	0.00116	0.00006	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0085	0.0085	0.000006	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	0.00021	0.000008	Diff <2x LOR	----
Total Metals (QC Lot: 1992354)											
YL2500253-001	SCH-BH-05	Aluminum, total	7429-90-5	E466S	0.0050	mg/L	0.0103	0.0106	0.0003	Diff <2x LOR	----
		Antimony, total	7440-36-0	E466S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E466S	0.00040	mg/L	0.00099	0.00105	0.00006	Diff <2x LOR	----
		Barium, total	7440-39-3	E466S	0.0010	mg/L	0.0156	0.0155	0.727%	20%	----
		Beryllium, total	7440-41-7	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E466S	0.30	mg/L	2.30	2.29	0.009	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E466S	0.000020	mg/L	0.000051	0.000036	0.000015	Diff <2x LOR	----
		Calcium, total	7440-70-2	E466S	1.0	mg/L	244	243	0.247%	20%	----
		Cesium, total	7440-46-2	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E466S	0.000050	mg/L	0.000204	0.000185	0.000019	Diff <2x LOR	----
		Copper, total	7440-50-8	E466S	0.00050	mg/L	0.00297	0.00296	0.00001	Diff <2x LOR	----
		Gallium, total	7440-55-3	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E466S	0.010	mg/L	0.018	0.017	0.0006	Diff <2x LOR	----
		Lead, total	7439-92-1	E466S	0.00010	mg/L	<0.00010	<0.00010	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: 1992354) - continued											
YL2500253-001	SCH-BH-05	Lithium, total	7439-93-2	E466S	0.020	mg/L	0.108	0.107	0.001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E466S	1.0	mg/L	748	746	0.271%	20%	----
		Manganese, total	7439-96-5	E466S	0.00020	mg/L	0.0210	0.0208	1.01%	20%	----
		Molybdenum, total	7439-98-7	E466S	0.00010	mg/L	0.00565	0.00558	1.24%	20%	----
		Nickel, total	7440-02-0	E466S	0.00050	mg/L	0.00347	0.00331	0.00016	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E466S	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E466S	1.0	mg/L	228	228	0.312%	20%	----
		Rhenium, total	7440-15-5	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E466S	0.0050	mg/L	0.0718	0.0720	0.340%	20%	----
		Selenium, total	7782-49-2	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Silver, total	7440-22-4	E466S	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Strontium, total	7440-24-6	E466S	0.010	mg/L	4.12	4.09	0.603%	20%	----
		Sulfur, total	7704-34-9	E466S	5.0	mg/L	448	460	2.80%	20%	----
		Tellurium, total	13494-80-9	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E466S	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E466S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E466S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E466S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E466S	0.000050	mg/L	0.00160	0.00154	3.45%	20%	----
		Vanadium, total	7440-62-2	E466S	0.00050	mg/L	0.00062	0.00054	0.00007	Diff <2x LOR	----
		Yttrium, total	7440-65-5	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E466S	0.0030	mg/L	0.0216	0.0219	0.0002	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Total Metals (QC Lot: 1992355)											
YL2500253-001	SCH-BH-05	Silicon, total	7440-21-3	E468S.NaSi	1.0	mg/L	1.7	1.7	0.02	Diff <2x LOR	----
		Sodium, total	7440-23-5	E468S.NaSi	2.5	mg/L	5970	5940	0.477%	20%	----
Total Metals (QC Lot: 1993027)											
FJ2501313-008	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Total Metals (QC Lot: 1993028)											
YL2500253-001	SCH-BH-05	Mercury, total	7439-97-6	E508S	0.0000050	mg/L	<0.0000050	<0.0000050	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 (QCLot: 1990456)						
Solids, total suspended [TSS]	----	E160S	2	mg/L	<2.0	----
Physical Tests (QCLot: 1992094)						
Solids, total suspended [TSS]	----	E160S	2	mg/L	<2.0	----
Physical Tests (QCLot: 1994132)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 1994133)						
Conductivity	----	E100S	2	µS/cm	<2.0	----
Physical Tests (QCLot: 1994153)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1994160)						
Solids, total suspended [TSS]	----	E160S	2	mg/L	<2.0	----
Total Metals (QCLot: 1991814)						
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	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1991814) - continued						
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 (QCLot: 1992354)						
Aluminum, total	7429-90-5	E466S	0.005	mg/L	<0.0050	----
Antimony, total	7440-36-0	E466S	0.001	mg/L	<0.0010	----
Arsenic, total	7440-38-2	E466S	0.0004	mg/L	<0.00040	----
Barium, total	7440-39-3	E466S	0.001	mg/L	<0.0010	----
Beryllium, total	7440-41-7	E466S	0.0005	mg/L	<0.00050	----
Bismuth, total	7440-69-9	E466S	0.0005	mg/L	<0.00050	----
Boron, total	7440-42-8	E466S	0.3	mg/L	<0.30	----
Cadmium, total	7440-43-9	E466S	0.00002	mg/L	<0.000020	----
Calcium, total	7440-70-2	E466S	1	mg/L	<1.0	----
Cesium, total	7440-46-2	E466S	0.0005	mg/L	<0.00050	----
Chromium, total	7440-47-3	E466S	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E466S	0.00005	mg/L	<0.000050	----
Copper, total	7440-50-8	E466S	0.0005	mg/L	<0.00050	----
Gallium, total	7440-55-3	E466S	0.0005	mg/L	<0.00050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1992354) - continued						
Iron, total	7439-89-6	E466S	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E466S	0.0001	mg/L	<0.00010	----
Lithium, total	7439-93-2	E466S	0.02	mg/L	<0.020	----
Magnesium, total	7439-95-4	E466S	1	mg/L	<1.0	----
Manganese, total	7439-96-5	E466S	0.0002	mg/L	<0.00020	----
Molybdenum, total	7439-98-7	E466S	0.0001	mg/L	<0.00010	----
Nickel, total	7440-02-0	E466S	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E466S	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E466S	1	mg/L	<1.0	----
Rhenium, total	7440-15-5	E466S	0.0005	mg/L	<0.00050	----
Rubidium, total	7440-17-7	E466S	0.005	mg/L	<0.0050	----
Selenium, total	7782-49-2	E466S	0.0005	mg/L	<0.00050	----
Silver, total	7440-22-4	E466S	0.0001	mg/L	<0.00010	----
Strontium, total	7440-24-6	E466S	0.01	mg/L	<0.010	----
Sulfur, total	7704-34-9	E466S	5	mg/L	<5.0	----
Tellurium, total	13494-80-9	E466S	0.0005	mg/L	<0.00050	----
Thallium, total	7440-28-0	E466S	0.00005	mg/L	<0.000050	----
Thorium, total	7440-29-1	E466S	0.0005	mg/L	<0.00050	----
Tin, total	7440-31-5	E466S	0.001	mg/L	<0.0010	----
Titanium, total	7440-32-6	E466S	0.005	mg/L	<0.0050	----
Tungsten, total	7440-33-7	E466S	0.001	mg/L	<0.0010	----
Uranium, total	7440-61-1	E466S	0.00005	mg/L	<0.000050	----
Vanadium, total	7440-62-2	E466S	0.0005	mg/L	<0.00050	----
Yttrium, total	7440-65-5	E466S	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E466S	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E466S	0.0005	mg/L	<0.00050	----
Total Metals (QCLot: 1992355)						
Silicon, total	7440-21-3	E468S.NaSi	1	mg/L	<1.0	----
Sodium, total	7440-23-5	E468S.NaSi	2.5	mg/L	# 2.9	B
Total Metals (QCLot: 1993027)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Total Metals (QCLot: 1993028)						
Mercury, total	7439-97-6	E508S	0.000005	mg/L	<0.0000050	----

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 (QCLot: 1990456)									
Solids, total suspended [TSS]	----	E160S	2	mg/L	150 mg/L	91.5	85.0	115	----
Physical Tests (QCLot: 1992094)									
Solids, total suspended [TSS]	----	E160S	2	mg/L	150 mg/L	88.3	85.0	115	----
Physical Tests (QCLot: 1994130)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1994132)									
Conductivity	----	E100	1	µS/cm	147 µS/cm	101	90.0	110	----
Physical Tests (QCLot: 1994133)									
Conductivity	----	E100S	2	µS/cm	147 µS/cm	101	80.0	120	----
Physical Tests (QCLot: 1994153)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1994160)									
Solids, total suspended [TSS]	----	E160S	2	mg/L	150 mg/L	86.5	85.0	115	----
Total Metals (QCLot: 1991814)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	107	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	108	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	107	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	97.4	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	99.0	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	105	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	99.0	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	100	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	102	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 (QCLot: 1991814) - continued									
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	100	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	107	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	93.8	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	104	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	106	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	104	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	103	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	101	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	105	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	107	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	104	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	105	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Total Metals (QCLot: 1992354)									
Aluminum, total	7429-90-5	E466S	0.005	mg/L	2 mg/L	105	80.0	120	----
Antimony, total	7440-36-0	E466S	0.001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, total	7440-38-2	E466S	0.0004	mg/L	1 mg/L	110	80.0	120	----
Barium, total	7440-39-3	E466S	0.001	mg/L	0.25 mg/L	106	80.0	120	----
Beryllium, total	7440-41-7	E466S	0.0005	mg/L	0.1 mg/L	98.9	80.0	120	----
Bismuth, total	7440-69-9	E466S	0.0005	mg/L	1 mg/L	106	80.0	120	----
Boron, total	7440-42-8	E466S	0.3	mg/L	1 mg/L	97.9	80.0	120	----
Cadmium, total	7440-43-9	E466S	0.00002	mg/L	0.1 mg/L	99.5	80.0	120	----
Calcium, total	7440-70-2	E466S	1	mg/L	50 mg/L	94.6	80.0	120	----
Cesium, total	7440-46-2	E466S	0.0005	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, total	7440-47-3	E466S	0.0005	mg/L	0.25 mg/L	108	80.0	120	----
Cobalt, total	7440-48-4	E466S	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E466S	0.0005	mg/L	0.25 mg/L	97.2	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
Total Metals (QCLot: 1992354) - continued									
Gallium, total	7440-55-3	E466S	0.0005	mg/L	0.25 mg/L	98.8	80.0	120	----
Iron, total	7439-89-6	E466S	0.01	mg/L	1 mg/L	103	80.0	120	----
Lead, total	7439-92-1	E466S	0.0001	mg/L	0.5 mg/L	105	80.0	120	----
Lithium, total	7439-93-2	E466S	0.02	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, total	7439-95-4	E466S	1	mg/L	50 mg/L	103	80.0	120	----
Manganese, total	7439-96-5	E466S	0.0002	mg/L	0.25 mg/L	105	80.0	120	----
Molybdenum, total	7439-98-7	E466S	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, total	7440-02-0	E466S	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Phosphorus, total	7723-14-0	E466S	0.05	mg/L	10 mg/L	101	80.0	120	----
Potassium, total	7440-09-7	E466S	1	mg/L	50 mg/L	97.2	80.0	120	----
Rhenium, total	7440-15-5	E466S	0.0005	mg/L	0.1 mg/L	103	80.0	120	----
Rubidium, total	7440-17-7	E466S	0.005	mg/L	0.1 mg/L	107	80.0	120	----
Selenium, total	7782-49-2	E466S	0.0005	mg/L	1 mg/L	99.3	80.0	120	----
Silver, total	7440-22-4	E466S	0.0001	mg/L	0.1 mg/L	91.6	80.0	120	----
Strontium, total	7440-24-6	E466S	0.01	mg/L	0.25 mg/L	107	80.0	120	----
Sulfur, total	7704-34-9	E466S	5	mg/L	50 mg/L	105	80.0	120	----
Tellurium, total	13494-80-9	E466S	0.0005	mg/L	0.1 mg/L	97.9	80.0	120	----
Thallium, total	7440-28-0	E466S	0.00005	mg/L	1 mg/L	107	80.0	120	----
Thorium, total	7440-29-1	E466S	0.0005	mg/L	0.1 mg/L	102	80.0	120	----
Tin, total	7440-31-5	E466S	0.001	mg/L	0.5 mg/L	99.0	80.0	120	----
Titanium, total	7440-32-6	E466S	0.005	mg/L	0.25 mg/L	106	80.0	120	----
Tungsten, total	7440-33-7	E466S	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Uranium, total	7440-61-1	E466S	0.00005	mg/L	0.005 mg/L	101	80.0	120	----
Vanadium, total	7440-62-2	E466S	0.0005	mg/L	0.5 mg/L	99.5	80.0	120	----
Yttrium, total	7440-65-5	E466S	0.0005	mg/L	0.1 mg/L	105	80.0	120	----
Zinc, total	7440-66-6	E466S	0.003	mg/L	0.5 mg/L	105	80.0	120	----
Zirconium, total	7440-67-7	E466S	0.0005	mg/L	0.1 mg/L	102	80.0	120	----
Total Metals (QCLot: 1992355)									
Silicon, total	7440-21-3	E468S.NaSi	1	mg/L	10 mg/L	108	80.0	120	----
Sodium, total	7440-23-5	E468S.NaSi	2.5	mg/L	50 mg/L	97.9	80.0	120	----
Total Metals (QCLot: 1993027)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	94.1	80.0	120	----
Total Metals (QCLot: 1993028)									
Mercury, total	7439-97-6	E508S	0.000005	mg/L	0 mg/L	93.8	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: **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: 1991814)										
FJ2501336-002	Anonymous	Aluminum, total	7429-90-5	E420	0.199 mg/L	0.2 mg/L	99.6	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0192 mg/L	0.02 mg/L	95.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0386 mg/L	0.04 mg/L	96.6	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00980 mg/L	0.01 mg/L	98.0	70.0	130	----
		Boron, total	7440-42-8	E420	0.099 mg/L	0.1 mg/L	98.8	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00385 mg/L	0.004 mg/L	96.3	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00968 mg/L	0.01 mg/L	96.8	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	----
		Copper, total	7440-50-8	E420	0.0182 mg/L	0.02 mg/L	90.8	70.0	130	----
		Iron, total	7439-89-6	E420	1.85 mg/L	2 mg/L	92.5	70.0	130	----
		Lead, total	7439-92-1	E420	0.0192 mg/L	0.02 mg/L	95.8	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0923 mg/L	0.1 mg/L	92.3	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0181 mg/L	0.02 mg/L	90.4	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0187 mg/L	0.02 mg/L	93.5	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0372 mg/L	0.04 mg/L	93.1	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.48 mg/L	10 mg/L	94.8	70.0	130	----
		Potassium, total	7440-09-7	E420	3.86 mg/L	4 mg/L	96.6	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Silicon, total	7440-21-3	E420	9.42 mg/L	10 mg/L	94.2	70.0	130	----
		Silver, total	7440-22-4	E420	0.00394 mg/L	0.004 mg/L	98.6	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.4 mg/L	20 mg/L	97.1	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0392 mg/L	0.04 mg/L	98.0	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00386 mg/L	0.004 mg/L	96.5	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0136 mg/L	0.02 mg/L	68.0	70.0	130	MES
		Tin, total	7440-31-5	E420	0.0190 mg/L	0.02 mg/L	95.1	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0398 mg/L	0.04 mg/L	99.5	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0199 mg/L	0.02 mg/L	99.4	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00387 mg/L	0.004 mg/L	96.8	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0942 mg/L	0.1 mg/L	94.2	70.0	130	----
		Zinc, total	7440-66-6	E420	0.361 mg/L	0.4 mg/L	90.4	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0390 mg/L	0.04 mg/L	97.4	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: 1992354)										
YL2500253-002	SCH-B4-09	Aluminum, total	7429-90-5	E466S	4.20 mg/L	4 mg/L	105	70.0	130	----
		Antimony, total	7440-36-0	E466S	0.379 mg/L	0.4 mg/L	94.8	70.0	130	----
		Arsenic, total	7440-38-2	E466S	0.429 mg/L	0.4 mg/L	107	70.0	130	----
		Barium, total	7440-39-3	E466S	0.405 mg/L	0.4 mg/L	101	70.0	130	----
		Beryllium, total	7440-41-7	E466S	0.774 mg/L	0.8 mg/L	96.8	70.0	130	----
		Bismuth, total	7440-69-9	E466S	0.182 mg/L	0.2 mg/L	90.9	70.0	130	----
		Boron, total	7440-42-8	E466S	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E466S	0.0738 mg/L	0.08 mg/L	92.3	70.0	130	----
		Calcium, total	7440-70-2	E466S	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E466S	0.200 mg/L	0.2 mg/L	100	70.0	130	----
		Chromium, total	7440-47-3	E466S	0.880 mg/L	0.8 mg/L	110	70.0	130	----
		Cobalt, total	7440-48-4	E466S	0.402 mg/L	0.4 mg/L	100	70.0	130	----
		Copper, total	7440-50-8	E466S	0.370 mg/L	0.4 mg/L	92.4	70.0	130	----
		Gallium, total	7440-55-3	E466S	0.0471 mg/L	0.05 mg/L	94.2	70.0	130	----
		Iron, total	7439-89-6	E466S	40.5 mg/L	40 mg/L	101	70.0	130	----
		Lead, total	7439-92-1	E466S	0.370 mg/L	0.4 mg/L	92.4	70.0	130	----
		Lithium, total	7439-93-2	E466S	2.35 mg/L	2 mg/L	117	70.0	130	----
		Magnesium, total	7439-95-4	E466S	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E466S	0.422 mg/L	0.4 mg/L	106	70.0	130	----
		Molybdenum, total	7439-98-7	E466S	0.408 mg/L	0.4 mg/L	102	70.0	130	----
		Nickel, total	7440-02-0	E466S	0.794 mg/L	0.8 mg/L	99.2	70.0	130	----
		Phosphorus, total	7723-14-0	E466S	200 mg/L	200 mg/L	99.9	70.0	130	----
		Potassium, total	7440-09-7	E466S	ND mg/L	----	ND	70.0	130	----
		Rhenium, total	7440-15-5	E466S	0.0491 mg/L	0.05 mg/L	98.2	70.0	130	----
		Rubidium, total	7440-17-7	E466S	0.416 mg/L	0.4 mg/L	104	70.0	130	----
		Selenium, total	7782-49-2	E466S	0.779 mg/L	0.8 mg/L	97.3	70.0	130	----
		Silver, total	7440-22-4	E466S	0.0718 mg/L	0.08 mg/L	89.7	70.0	130	----
		Strontium, total	7440-24-6	E466S	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E466S	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E466S	0.724 mg/L	0.8 mg/L	90.5	70.0	130	----
		Thallium, total	7440-28-0	E466S	0.0747 mg/L	0.08 mg/L	93.4	70.0	130	----
		Thorium, total	7440-29-1	E466S	0.384 mg/L	0.4 mg/L	96.1	70.0	130	----
		Tin, total	7440-31-5	E466S	0.384 mg/L	0.4 mg/L	96.1	70.0	130	----
		Titanium, total	7440-32-6	E466S	0.884 mg/L	0.8 mg/L	110	70.0	130	----
		Tungsten, total	7440-33-7	E466S	0.395 mg/L	0.4 mg/L	98.8	70.0	130	----
		Uranium, total	7440-61-1	E466S	0.0766 mg/L	0.08 mg/L	95.8	70.0	130	----
		Vanadium, total	7440-62-2	E466S	2.14 mg/L	2 mg/L	107	70.0	130	----
		Yttrium, total	7440-65-5	E466S	0.0506 mg/L	0.05 mg/L	101	70.0	130	----
		Zinc, total	7440-66-6	E466S	7.81 mg/L	8 mg/L	97.7	70.0	130	----
		Zirconium, total	7440-67-7	E466S	0.829 mg/L	0.8 mg/L	104	70.0	130	----
Total Metals (QCLot: 1992355)										
YL2500253-002	SCH-B4-09	Silicon, total	7440-21-3	E468S.NaSi	206 mg/L	200 mg/L	103	70.0	130	----
		Sodium, total	7440-23-5	E468S.NaSi	ND mg/L	----	ND	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: 1993027)										
FJ2501313-009	Anonymous	Mercury, total	7439-97-6	E508	0.0000956 mg/L	0 mg/L	95.6	70.0	130	----
Total Metals (QCLot: 1993028)										
YL2500253-002	SCH-B4-09	Mercury, total	7439-97-6	E508S	0.0000959 mg/L	0 mg/L	95.9	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).*

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Number: 17 -

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Report To	Contact and company name below will appear on the final report
Company:	Stantec Consulting Ltd.
Contact:	Emily Hulley
Phone:	250-655-5371
	Company address below will appear on the final report
Street:	101-487 Range Lake Road
City/Province:	Yellowknife, NT
Postal Code:	X1A 3R9
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Discovery Mining Services Ltd.
SEPP Advisor	Rod Brown
Project Information	
ALS Account # / Quote #:	
Outlet/Activity	
Project #	Grays Bay Project (123514868.4000.205.300)
Adv./SA:	
ALS Lab Work Order # (lab use only):	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Emily.Hulley@stantec.com
Email 2	Stephanie.Nebess@stantec.com
Email 3	Elaine.Little@stantec.com
Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	SAPinvoices@stantec.com
Email 2	
Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Brent Mack	Sampler:

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)
- 4 day [P4-20%] ☐
- 3 day [P3-25%] ☐
- 2 day [P2-50%] ☐

EMERGENCY
- 1 Business day [E - 100%] ☐
- Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total Suspended Solids / pH	Electrical Conductivity	Total Metals	Total Mercury	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	~~Dup-1~~ SCH-BH-05	27-APR-25	20:16	Seawater	3	R	R	R	R		
	SCH-BH-09	1-MAY-25	13:15	Seawater	3	R	R	R	R		
	WRI-BH-01	5-MAY-25	02:45	Seawater	3	R	R	R	R		
	URC-BH-04	7-MAY-25	03:10	Seawater	3	R	R	R	R		
	Dup-1 WRF-BH-01	5-MAY-25	03:00	Seawater	3	R	R	R	R		
	Travel Blank			Water		R	R	R	R		
	Field Blank WRF-BH-04	7-MAY-25	03:25	Water	3	R	R	R	R		

Environmental Division
Yellowknife
Work Order Reference
YL2500253

Telephone : +1 867 873 5593

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☐ NO	
Are samples for human consumption/ use? ☐ YES ☐ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐
Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
5.1							

SHIPMENT RELEASE (client use)		
Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date:	Time:
	May 7/25	12:44

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. *If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.*

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Number: 17 -

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Report To	Contact and company name below will appear on the final report	Report Format / Distribution	Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)
Company:	Stantec Consulting Ltd.	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	Emily Hulley	Quality Control (QC) Report with Report ☑ YES ☐ NO	PRIORITY (Business Days): 4 day [P4-20%] ☐ / 3 day [P3-25%] ☐ / 2 day [P2-50%] ☐ — EMERGENCY: 1 Business day [E - 100%] ☐ / Same Day, Weekend or Statutory holiday [E2 -200%] ☐ (Laboratory opening fees may apply)]
Phone:	250-655-5371	☐ Compare Results to Criteria on Report - provide details below if box checked	
	Company address below will appear on the final report	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Street:	101-487 Range Lake Road	Email 1 or Fax: Emily.Hulley@stantec.com	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
City/Province:	Yellowknife, NT	Email 2: Stephanie.Nabess@stantec.com	For tests that can not be performed according to the service level selected, you will be contacted.
Postal Code:	X1A 3R9	Email 3: Elaine.Little@stantec.com	
Invoice To	Same as Report To ☑ YES ☐ NO	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ YES ☐ NO	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:	Discovery Mining Services Ltd.	Email 1 or Fax: SAPinvoices@stantec.com	
SEPP Advisor	Rod Brown	Email 2:	
Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:		AFE/Cost Center: / PO#:	
Outlet/Activity		Major/Minor Code: / Routing Code:	
Project #	Grays Bay Project (123514868.4000.205.300)	Requisitioner:	
Adv./SA		Location:	
ALS Lab Work Order # (lab use only):		ALS Contact: Brent Mack	Sampler:

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total Suspended Solids / pH	Electrical Conductivity	Total Metals	Total Mercury	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	SCH-BH-05	27-APR-25	20:16	Seawater	W	R	R	R	R			
	SCH-BH-09	1-MAY-25	3:15	Seawater	3	R	R	R	R			
	WRF-BH-01	5-MAY-25	02:45	Seawater	3	R	R	R	R			
	WRF-BH-04	7-MAY-25	03:10	Seawater	3	R	R	R	R			
	Dup-1 WRF-BH-01	5-MAY-25	03:00	Seawater	3	R	R	R	R			
	Travel Blank			Water		R	R	R	R			
	Field Blank WRF-BH-04	7-MAY-25	03:25	Water	3	R	R	R	R			

Environmental Division
Yellowknife
Work Order Reference
YL2500253

Telephone : +1 867 873 5593

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)	SAMPLE CONDITION AS RECEIVED (lab use only)
Are samples taken from a Regulated DW System? ☐ YES ☐ NO		Frozen ☐ SIF Observations Yes ☐ No ☐
Are samples for human consumption/ use? ☐ YES ☐ NO		Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐ Cooling Initiated ☐
		INITIAL COOLER TEMPERATURES °C: 5.1 / FINAL COOLER TEMPERATURES °C:

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
				May 7/25	12:46			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com
Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 -
Page of

Report To	Contact and company name below will appear on the final report
Company:	Stantec Consulting Ltd.
Contact:	Emily Hulley
Phone:	250-655-5371
	Company address below will appear on the final report
Street:	101-487 Range Lake Road
City/Province:	Yellowknife, NT
Postal Code:	X1A 3R9
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Discovery Mining Services Ltd.
SEPP Advisor	Rod Brown

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Emily.Hulley@stantec.com
Email 2	Stephanie.Nabess@stantec.com
Email 3	Elaine.Little@stantec.com

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	SAPinvoices@stantec.com
Email 2	

Project Information	
ALS Account # / Quote #:	
Outlet/Activity	
Project #	Grays Bay Project (123514868.4000.205.300)
Adv./SA	
ALS Lab Work Order # (lab use only):	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Brent Mack	Sampler:

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total Suspended Solids / pH	Electrical Conductivity	Total Metals	Total Mercury
	SCH-BH-05	27-APR-25	20:16	Seawater	3	R	R	R	R
	SCH-BH-09	1-MAY-25	3:15	Seawater	3	R	R	R	R
	WRF-BH-01	5-MAY-25	02:45	Seawater	3	R	R	R	R
	WRC-BH-04	7-MAY-25	03:10	Seawater	3	R	R	R	R
	Dup-1: WRF-BH-01	5-MAY-25	03:00	Seawater	3	R	R	R	R
	Travel Blank			Water		R	R	R	R
	Field Blank WRF-BH-04	7-MAY-25	03:25	Water	3	R	R	R	R

SAMPLES ON HOLD

SUSPECTED HAZARD (see Special Instructions)

Environmental Division
Yellowknife
Work Order Reference
YL2500253

Telephone : +1 867 873 6593

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☑ YES ☐ NO

Are samples for human consumption/ use?
☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐ | Ice Packs ☐ Ice Cubes ☐ | Custody seal intact Yes ☐ No ☐ | Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
5.1				5.7	6.7	8	

SHIPMENT RELEASE (client use)		
Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: May 7/25	Time: 12:46

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: 5/9	Time: 1120m

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

CERTIFICATE OF ANALYSIS

Work Order	: **YL2401338**	Page	: 1 of 26
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Account Manager	: Oliver Gregg
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Project	: 123514868	Date Samples Received	: 29-Aug-2024 13:05
PO	: ----	Date Analysis Commenced	: 30-Aug-2024
C-O-C number	: ----	Issue Date	: 12-Sep-2024 12:10
Sampler	: ----		
Site	: ----		
Quote number	: YL24-STAC100-001		
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*
Angelo Salandanan	Lab Assistant	Metals, Burnaby, British Columbia
Cynthia Bauer	Organic Supervisor	Organics, Calgary, Alberta
Ghazaleh Khanmirzaei	Analyst	Metals, Burnaby, British Columbia
Joshua Stessun	Laboratory Analyst	Organics, Calgary, Alberta
Jyotsnarani Devi	Laboratory Analyst	Organics, Calgary, Alberta
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia
Shantal Breeze	Laboratory Analyst	Organics, Calgary, Alberta
Sorina Motea	Laboratory Analyst	Organics, Calgary, Alberta
Tracy Harley	Supervisor - Water Quality Instrumentation	Inorganics, Burnaby, British Columbia

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
µg/L	micrograms per litre
mg/L	milligrams per litre

<: 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*
YL2401338-002	WQ1-S	Water sample for total mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.

Qualifiers

Qualifier	*Description*
DTC	*Dissolved concentration exceeds total. Results were confirmed by re-analysis.*
RRV	*Reported result verified by repeat analysis.*

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-D	WQ1-S	DUP-X	WQ10-D	WQ10-S
					Client sampling date / time	26-Aug-2024 10:55	26-Aug-2024 11:13	26-Aug-2024 11:14	26-Aug-2024 12:50	26-Aug-2024 12:52
						YL2401338-001	YL2401338-002	YL2401338-003	YL2401338-004	YL2401338-005
						Result	Result	Result	Result	Result
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		5080	4990	5080	5330	4860
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		4610	4530	4470	4960	4520
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		50.9	49.0	49.2	53.9	51.6
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		15400	14700	14900	16200	15400
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		0.074	0.100	0.079	0.094	0.096
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0300	0.0195	0.0221 RRV	0.0301 RRV	0.0204 RRV
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		0.0360	0.0234	0.0196	0.0309	0.0205
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		2210	2110	2130	2310	2200
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		2.06 RRV	1.11	2.10	2.10	2.07 RRV
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		0.86 RRV	0.98	0.88	1.00	1.00 RRV
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		0.0086	0.0081	0.0079	0.0103	0.0079
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		3.24	3.30	3.23	3.47	3.25
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		302	300	304	319	296
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-D	WQ1-S	DUP-X	WQ10-D	WQ10-S
					Client sampling date / time	26-Aug-2024 10:55	26-Aug-2024 11:13	26-Aug-2024 11:14	26-Aug-2024 12:50	26-Aug-2024 12:52
						YL2401338-001	YL2401338-002	YL2401338-003	YL2401338-004	YL2401338-005
						Result	Result	Result	Result	Result
Total Metals										
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		0.134	0.135	0.134	0.144	0.133
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		1050	1030	1050	1100	1000
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		0.0078	0.0083	0.0084	0.0088	0.0079
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		319	324	324	333	310
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		0.087	0.084	0.085	0.087	0.081
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		8580	8490	8380	9020	8220
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		5.88	5.73	5.84	6.21	5.64
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		730	753	739	769	718
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		0.00229	0.00231	0.00244	0.00259	0.00237
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-D	WQ1-S	DUP-X	WQ10-D	WQ10-S
					Client sampling date / time	26-Aug-2024 10:55	26-Aug-2024 11:13	26-Aug-2024 11:14	26-Aug-2024 12:50	26-Aug-2024 12:52
						YL2401338-001	YL2401338-002	YL2401338-003	YL2401338-004	YL2401338-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		0.0072	0.0076	0.0077	0.0105	0.0073
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		3.49	3.46	3.39	3.66	3.35
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		306	299	300	321	294
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		0.133	0.132	0.128	0.140	0.127
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		934	918	904	1010	919
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		0.0081	0.0079	0.0078	0.0087	0.0082
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		302	309	305	336	305
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		0.082	0.079	0.080	0.086	0.079
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		7930	7760	7490	8270	7460
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		5.90	5.60	5.57	6.24	5.74
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		675	699	681	767	688

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-D	WQ1-S	DUP-X	WQ10-D	WQ10-S
					Client sampling date / time	26-Aug-2024 10:55	26-Aug-2024 11:13	26-Aug-2024 11:14	26-Aug-2024 12:50	26-Aug-2024 12:52
						YL2401338-001	YL2401338-002	YL2401338-003	YL2401338-004	YL2401338-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		0.00240	0.00225	0.00236	0.00253	0.00223
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/CG	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/CG	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F3 (C16-C34)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F4 (C34-C50)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
VHw (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/CG	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-D	WQ1-S	DUP-X	WQ10-D	WQ10-S
					Client sampling date / time	26-Aug-2024 10:55	26-Aug-2024 11:13	26-Aug-2024 11:14	26-Aug-2024 12:50	26-Aug-2024 12:52
						YL2401338-001	YL2401338-002	YL2401338-003	YL2401338-004	YL2401338-005
						Result	Result	Result	Result	Result
Hydrocarbons										
VPHw	----	EC580A/CG	100	µg/L		<100	<100	<100	<100	<100
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/CG	1.0	%		96.3	88.4	88.4	93.7	94.0
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/CG	1.0	%		91.9	95.8	93.9	95.8	90.4
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	1.0	%		84.5	82.6	83.4	81.3	82.5
Difluorobenzene, 1,4-	540-36-3	E611A/CG	1.0	%		101	99.2	99.1	98.9	99.2
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	85-01-8	E641A/CG	0.020	µg/L		<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WQ1-D	WQ1-S	DUP-X	WQ10-D	WQ10-S
					Client sampling date / time: 26-Aug-2024 10:55	26-Aug-2024 11:13	26-Aug-2024 11:14	26-Aug-2024 12:50	26-Aug-2024 12:52
					YL2401338-001	YL2401338-002	YL2401338-003	YL2401338-004	YL2401338-005
					Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons									
Quinoline	91-22-5	E641A/CG	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/CG	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/CG	0.030	µg/L	<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/CG	0.060	µg/L	<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/CG	0.070	µg/L	<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/CG	0.065	µg/L	<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	E641A/CG	0.1	%	63.3	65.3	67.7	64.0	65.4
Naphthalene-d8	1146-65-2	E641A/CG	0.1	%	72.1	69.1	72.1	72.2	77.4
Phenanthrene-d10	1517-22-2	E641A/CG	0.1	%	69.7	68.9	71.2	69.9	75.5

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-D	WQ-6-S	WQ3-S	DUP-Y	WQ3-D
					Client sampling date / time	26-Aug-2024 13:25	26-Aug-2024 13:29	26-Aug-2024 13:56	26-Aug-2024 13:57	26-Aug-2024 13:52
						YL2401338-006	YL2401338-007	YL2401338-008	YL2401338-009	YL2401338-010
						Result	Result	Result	Result	Result
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		5480	4940	4750	4810	5140
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		4700	4640	4520	4460	4690
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		55.9	51.6	54.8	51.1	53.8
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		16900	15500	16400	15300	16200
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		0.091	0.092	0.088	0.096	0.095
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0267 RRV	0.0221 RRV	0.0204 RRV	0.0205 RRV	0.0369
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		0.0293	0.0203	0.0205	0.0198	0.0412
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		2400	2220	2350	2180	2320
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.16	1.98	2.06	1.02	2.08 RRV
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		1.06	0.99	0.98	1.08	1.01 RRV
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		0.0103	0.0076	0.0075	0.0077	0.0094
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		3.63	3.20	2.82	3.16	3.42
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		332	295	258	289	312
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-D	WQ-6-S	WQ3-S	DUP-Y	WQ3-D
					Client sampling date / time	26-Aug-2024 13:25	26-Aug-2024 13:29	26-Aug-2024 13:56	26-Aug-2024 13:57	26-Aug-2024 13:52
						YL2401338-006	YL2401338-007	YL2401338-008	YL2401338-009	YL2401338-010
						Result	Result	Result	Result	Result
Total Metals										
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		0.149	0.131	0.114	0.128	0.136
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		1130	1020	998	994	1060
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		0.0090	0.0079	0.0073	0.0084	0.0088
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		342	306	309	312	332
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		0.091	0.084	0.083	0.082	0.088
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		9010	8260	8250	8150	8630
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		6.16	5.54	5.08	5.88	6.06
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		794	706	697	715	747
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		0.00248	0.00228	0.00208	0.00245	0.00240
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals										

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-D	WQ-6-S	WQ3-S	DUP-Y	WQ3-D
					Client sampling date / time	26-Aug-2024 13:25	26-Aug-2024 13:29	26-Aug-2024 13:56	26-Aug-2024 13:57	26-Aug-2024 13:52
						YL2401338-006	YL2401338-007	YL2401338-008	YL2401338-009	YL2401338-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		0.0088	0.0074	0.0070	0.0079	0.0089
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		3.50	3.46	3.30	3.36	3.62
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		305	303	295	303	320
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		0.133	0.130	0.126	0.130	0.137
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		957	942	919	900	945
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		0.0090	0.0080	0.0084	0.0081	0.0082
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		319	307	311	300	323
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		0.086	0.080	0.082	0.080	0.080
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		7890	7690	7560	7420	7690
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		5.85	5.73	5.60	5.51	5.84
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		720	692	652	660	702

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-D	WQ-6-S	WQ3-S	DUP-Y	WQ3-D
					Client sampling date / time	26-Aug-2024 13:25	26-Aug-2024 13:29	26-Aug-2024 13:56	26-Aug-2024 13:57	26-Aug-2024 13:52
						YL2401338-006	YL2401338-007	YL2401338-008	YL2401338-009	YL2401338-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		0.00244	0.00216	0.00221	0.00235	0.00240
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/CG	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/CG	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F3 (C16-C34)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F4 (C34-C50)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
VHw (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/CG	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-D	WQ-6-S	WQ3-S	DUP-Y	WQ3-D
					Client sampling date / time	26-Aug-2024 13:25	26-Aug-2024 13:29	26-Aug-2024 13:56	26-Aug-2024 13:57	26-Aug-2024 13:52
						YL2401338-006	YL2401338-007	YL2401338-008	YL2401338-009	YL2401338-010
						Result	Result	Result	Result	Result
Hydrocarbons										
VPHw	----	EC580A/CG	100	µg/L		<100	<100	<100	<100	<100
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/CG	1.0	%		89.5	93.7	77.1	81.3	93.6
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/CG	1.0	%		80.5	92.2	96.2	89.2	96.6
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	1.0	%		79.1	85.6	83.2	83.6	84.7
Difluorobenzene, 1,4-	540-36-3	E611A/CG	1.0	%		99.4	99.3	98.6	100.0	97.6
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	85-01-8	E641A/CG	0.020	µg/L		<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-D	WQ-6-S	WQ3-S	DUP-Y	WQ3-D
					Client sampling date / time	26-Aug-2024 13:25	26-Aug-2024 13:29	26-Aug-2024 13:56	26-Aug-2024 13:57	26-Aug-2024 13:52
						YL2401338-006	YL2401338-007	YL2401338-008	YL2401338-009	YL2401338-010
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Quinoline	91-22-5	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/CG	0.030	µg/L		<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/CG	0.060	µg/L		<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/CG	0.070	µg/L		<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/CG	0.065	µg/L		<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/CG	0.1	%		64.2	64.2	72.4	85.0	64.0
Naphthalene-d8	1146-65-2	E641A/CG	0.1	%		73.5	72.1	70.3	85.7	69.2
Phenanthrene-d10	1517-22-2	E641A/CG	0.1	%		72.3	68.9	69.6	83.3	64.0

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ4-D	WQ4-S	WQ5-D	WQ5-S	WQ9-S
					Client sampling date / time	27-Aug-2024 09:24	27-Aug-2024 09:48	27-Aug-2024 10:12	27-Aug-2024 10:15	27-Aug-2024 11:50
						YL2401338-011	YL2401338-012	YL2401338-013	YL2401338-014	YL2401338-015
						Result	Result	Result	Result	Result
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		4930	4950	4920	4940	524
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		4800	4680	4610	4500	4750
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		52.4	49.8	50.1	51.2	6.4
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		15700	15000	15100	15600	2090
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		0.106	0.097	0.104	0.130	0.109
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0865	0.0210	0.0330	0.0210 RRV	0.0180 RRV
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		0.0725	0.0248	0.0390	0.0205	0.0200
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		2240	2140	2160	2210	274
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.18	1.34	1.22	1.01	2.21
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		0.95	0.96	0.91	0.91	1.37
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	0.486
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		0.0086	0.0081	0.0082	0.0082	0.0073
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		3.29	3.26	3.34	3.24	0.32
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		308	302	307	298	36.5
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ4-D	WQ4-S	WQ5-D	WQ5-S	WQ9-S
					Client sampling date / time	27-Aug-2024 09:24	27-Aug-2024 09:48	27-Aug-2024 10:12	27-Aug-2024 10:15	27-Aug-2024 11:50
						YL2401338-011	YL2401338-012	YL2401338-013	YL2401338-014	YL2401338-015
						Result	Result	Result	Result	Result
Total Metals										
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	0.58
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		0.136	0.136	0.138	0.132	<0.025
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		1010	1020	1010	1020	105
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		0.0029	<0.0025	<0.0025	<0.0025	0.0222
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		0.0086	0.0082	0.0092	0.0086	<0.0025
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		318	310	310	325	33.5
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		0.086	0.084	0.084	0.082	0.012
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	1.19
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		8490	8160	8240	8260	875
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		6.08	5.74	5.81	5.94	0.623
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		732	705	693	722	61.3
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	0.0228
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		0.00231	0.00238	0.00237	0.00228	<0.00050
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals										

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ4-D	WQ4-S	WQ5-D	WQ5-S	WQ9-S
					Client sampling date / time	27-Aug-2024 09:24	27-Aug-2024 09:48	27-Aug-2024 10:12	27-Aug-2024 10:15	27-Aug-2024 11:50
						YL2401338-011	YL2401338-012	YL2401338-013	YL2401338-014	YL2401338-015
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		0.0085	0.0077	0.0078	0.0073	0.0073
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		3.55	3.47	3.53	3.39	3.23 DTC
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		320	307	316	300	290 DTC
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		0.136	0.132	0.135	0.130	0.127 DTC
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		973	950	927	912	977 DTC
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		0.0091	0.0082	0.0087	0.0080	0.0077 DTC
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		321	318	304	307	288 DTC
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		0.083	0.082	0.080	0.079	0.078
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		7720	7550	7520	7480	7990 DTC
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		6.21	5.60	5.84	5.72	5.35 DTC
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		736	716	700	707	680

Analytical Results

Sub-Matrix: Seawater (Matrix: Water)					Client sample ID	WQ4-D	WQ4-S	WQ5-D	WQ5-S	WQ9-S
					Client sampling date / time	27-Aug-2024 09:24	27-Aug-2024 09:48	27-Aug-2024 10:12	27-Aug-2024 10:15	27-Aug-2024 11:50
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401338-011	YL2401338-012	YL2401338-013	YL2401338-014	YL2401338-015
						Result	Result	Result	Result	Result
Dissolved Metals										
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		0.00229	0.00228	0.00228	0.00229	0.00230 DTC
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/CG	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/CG	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F3 (C16-C34)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F4 (C34-C50)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
VHw (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/CG	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ4-D	WQ4-S	WQ5-D	WQ5-S	WQ9-S
					Client sampling date / time	27-Aug-2024 09:24	27-Aug-2024 09:48	27-Aug-2024 10:12	27-Aug-2024 10:15	27-Aug-2024 11:50
						YL2401338-011	YL2401338-012	YL2401338-013	YL2401338-014	YL2401338-015
						Result	Result	Result	Result	Result
Hydrocarbons										
VPHw	----	EC580A/CG	100	µg/L		<100	<100	<100	<100	<100
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/CG	1.0	%		96.9	92.8	94.2	93.8	89.7
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/CG	1.0	%		92.2	91.8	112	109	116
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	1.0	%		83.0	83.3	91.3	91.2	88.6
Difluorobenzene, 1,4-	540-36-3	E611A/CG	1.0	%		99.3	98.2	102	101	101
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	85-01-8	E641A/CG	0.020	µg/L		<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ4-D	WQ4-S	WQ5-D	WQ5-S	WQ9-S
					Client sampling date / time	27-Aug-2024 09:24	27-Aug-2024 09:48	27-Aug-2024 10:12	27-Aug-2024 10:15	27-Aug-2024 11:50
						YL2401338-011	YL2401338-012	YL2401338-013	YL2401338-014	YL2401338-015
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Quinoline	91-22-5	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/CG	0.030	µg/L		<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/CG	0.060	µg/L		<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/CG	0.070	µg/L		<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/CG	0.065	µg/L		<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/CG	0.1	%		68.1	66.0	67.5	65.2	73.4
Naphthalene-d8	1146-65-2	E641A/CG	0.1	%		69.6	68.8	71.6	71.8	70.9
Phenanthrene-d10	1517-22-2	E641A/CG	0.1	%		67.1	66.0	67.7	69.3	67.3

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ8-D	WQ8-S	WQ7-D	WQ7-S	FB
					Client sampling date / time	27-Aug-2024 12:20	27-Aug-2024 12:15	27-Aug-2024 12:42	27-Aug-2024 12:44	27-Aug-2024 16:30
						YL2401338-016	YL2401338-017	YL2401338-018	YL2401338-019	YL2401338-020
						Result	Result	Result	Result	Result
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		5160	4870	4860	4870	<1.00
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		4990	4420	4610	4540	<1.00
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	0.0058	<0.0050	0.0141	<0.0050
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		55.0	49.1	52.1	52.3	<5.0
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		16500	14900	15900	15900	<50
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		0.090	0.101	0.096	0.098	<0.050
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0381	0.0200	0.0323	0.0208 RRV	<0.0040
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		0.0441	0.0231	0.0386	0.0202	<0.0020
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		2330	2120	2260	2270	<30
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		2.12	1.54	1.10	1.11	1.02 RRV
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		0.93	1.25	0.96	0.98	1.49 RRV
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		0.0098	0.0083	0.0082	0.0082	<0.0025
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		3.43	3.29	3.32	3.31	<0.10
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		318	303	308	305	<1.0
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ8-D	WQ8-S	WQ7-D	WQ7-S	FB
					Client sampling date / time	27-Aug-2024 12:20	27-Aug-2024 12:15	27-Aug-2024 12:42	27-Aug-2024 12:44	27-Aug-2024 16:30
						YL2401338-016	YL2401338-017	YL2401338-018	YL2401338-019	YL2401338-020
						Result	Result	Result	Result	Result
Total Metals										
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		0.141	0.133	0.134	0.135	<0.025
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		1060	1000	994	998	<0.25
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		0.0085	0.0088	0.0082	0.0083	<0.0025
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		338	306	316	321	<2.5
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		0.090	0.083	0.084	0.086	<0.010
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		8790	8200	8190	8190	<2.5
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		6.22	5.86	5.87	5.86	<0.0050
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		786	703	719	710	<25.0
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		0.00234	0.00238	0.00244	0.00241	<0.00050
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals										

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ8-D	WQ8-S	WQ7-D	WQ7-S	FB
					Client sampling date / time	27-Aug-2024 12:20	27-Aug-2024 12:15	27-Aug-2024 12:42	27-Aug-2024 12:44	27-Aug-2024 16:30
						YL2401338-016	YL2401338-017	YL2401338-018	YL2401338-019	YL2401338-020
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		0.0102	0.0072	0.0080	0.0074	<0.0025
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		3.81	3.40	3.44	3.54	<0.10
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		334	301	303	310	<1.0
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		0.146	0.130	0.130	0.133	<0.025
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		1010	890	936	914	<0.25
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		0.0092	0.0085	0.0088	0.0092	<0.0025
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		329	315	321	312	<2.5
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		0.081	0.080	0.085	0.084	<0.010
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		8190	7420	7700	7470	<2.5
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		6.18	5.64	5.76	5.81	<0.0050
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		775	702	742	726	<25.0

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ8-D	WQ8-S	WQ7-D	WQ7-S	FB
					Client sampling date / time	27-Aug-2024 12:20	27-Aug-2024 12:15	27-Aug-2024 12:42	27-Aug-2024 12:44	27-Aug-2024 16:30
						YL2401338-016	YL2401338-017	YL2401338-018	YL2401338-019	YL2401338-020
						Result	Result	Result	Result	Result
Dissolved Metals										
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		0.00235	0.00229	0.00221	0.00213	<0.00050
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/CG	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/CG	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/CG	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F3 (C16-C34)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
F4 (C34-C50)	----	E601/CG	300	µg/L		<300	<300	<300	<300	<300
VHw (C6-C10)	----	E581.VH+F1/CG	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/CG	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ8-D	WQ8-S	WQ7-D	WQ7-S	FB
					Client sampling date / time	27-Aug-2024 12:20	27-Aug-2024 12:15	27-Aug-2024 12:42	27-Aug-2024 12:44	27-Aug-2024 16:30
						YL2401338-016	YL2401338-017	YL2401338-018	YL2401338-019	YL2401338-020
						Result	Result	Result	Result	Result
Hydrocarbons										
VPHw	----	EC580A/CG	100	µg/L		<100	<100	<100	<100	<100
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/CG	1.0	%		93.3	89.8	94.1	91.6	88.7
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/CG	1.0	%		114	117	99.1	109	104
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	1.0	%		90.1	90.0	88.7	85.8	85.0
Difluorobenzene, 1,4-	540-36-3	E611A/CG	1.0	%		102	102	103	102	102
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/CG	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A/CG	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	85-01-8	E641A/CG	0.020	µg/L		<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: **Seawater**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ8-D	WQ8-S	WQ7-D	WQ7-S	FB
					Client sampling date / time	27-Aug-2024 12:20	27-Aug-2024 12:15	27-Aug-2024 12:42	27-Aug-2024 12:44	27-Aug-2024 16:30
						YL2401338-016	YL2401338-017	YL2401338-018	YL2401338-019	YL2401338-020
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Quinoline	91-22-5	E641A/CG	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/CG	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/CG	0.030	µg/L		<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/CG	0.060	µg/L		<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/CG	0.070	µg/L		<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/CG	0.065	µg/L		<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/CG	0.1	%		65.6	65.0	63.1	73.0	68.5
Naphthalene-d8	1146-65-2	E641A/CG	0.1	%		74.3	71.4	69.2	71.4	68.0
Phenanthrene-d10	1517-22-2	E641A/CG	0.1	%		70.8	68.5	65.3	68.3	64.4

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **YL2401338**	Page	: 1 of 54
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Account Manager	: Oliver Gregg
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Project	: 123514868	Date Samples Received	: 29-Aug-2024 13:05
PO	: ----	Issue Date	: 12-Sep-2024 12:12
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: YL24-STAC100-001		
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

- 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.

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) FB	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ4-D	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ4-S	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ5-D	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ5-S	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ7-D	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ7-S	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	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 : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ8-D	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ8-S	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ9-S	E298	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) DUP-X	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) DUP-Y	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ10-D	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ10-S	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ1-D	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ1-S	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ3-D	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ3-S	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ6-D	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WQ-6-S	E298	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE FB	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ4-D	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ4-S	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ5-D	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ5-S	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 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 : Bromide in Seawater by IC										
HDPE WQ7-D	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ7-S	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ8-D	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ8-S	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ9-S	E235S.Br	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE DUP-X	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE DUP-Y	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ10-D	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ10-S	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 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
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ1-D	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ1-S	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ3-D	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ3-S	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ6-D	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE WQ-6-S	E235S.Br	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE FB	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ4-D	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ4-S	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 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 : Chloride in Seawater by IC										
HDPE WQ5-D	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ5-S	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ7-D	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ7-S	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ8-D	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ8-S	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ9-S	E235S.Cl	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE DUP-X	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE DUP-Y	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 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
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ10-D	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ10-S	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ1-D	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ1-S	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ3-D	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ3-S	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ6-D	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE WQ-6-S	E235S.Cl	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE FB	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 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 : Fluoride in Seawater by IC										
HDPE WQ4-D	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ4-S	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ5-D	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ5-S	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ7-D	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ7-S	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ8-D	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ8-S	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ9-S	E235S.F	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 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 : Fluoride in Seawater by IC										
HDPE DUP-X	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE DUP-Y	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ10-D	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ10-S	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ1-D	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ1-S	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ3-D	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ3-S	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE WQ6-D	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 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	
Anions and Nutrients : Fluoride in Seawater by IC										
HDPE										
WQ-6-S	E235S.F	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
FB	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ4-D	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ4-S	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ5-D	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ5-S	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ7-D	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ7-S	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ8-D	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 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 : Nitrate in Seawater by IC										
HDPE										
WQ8-S	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ9-S	E235S.NO3	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
DUP-X	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
DUP-Y	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ10-D	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ10-S	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ1-D	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ1-S	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE										
WQ3-D	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL

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 Seawater by IC										
HDPE WQ3-S	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE WQ6-D	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrate in Seawater by IC										
HDPE WQ-6-S	E235S.NO3	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE FB	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ4-D	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ4-S	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ5-D	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ5-S	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ7-D	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 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 Seawater by IC										
HDPE WQ7-S	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ8-D	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ8-S	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ9-S	E235S.NO2	27-Aug-2024	02-Sep-2024	3 days	6 days	× EHT	02-Sep-2024	3 days	6 days	× EHT
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE DUP-X	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE DUP-Y	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ10-D	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ10-S	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ1-D	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	× EHTL	02-Sep-2024	3 days	7 days	× EHTL

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 Seawater by IC										
HDPE WQ1-S	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	✗ EHTL	02-Sep-2024	3 days	7 days	✗ EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ3-D	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	✗ EHTL	02-Sep-2024	3 days	7 days	✗ EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ3-S	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	✗ EHTL	02-Sep-2024	3 days	7 days	✗ EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ6-D	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	✗ EHTL	02-Sep-2024	3 days	7 days	✗ EHTL
Anions and Nutrients : Nitrite in Seawater by IC										
HDPE WQ-6-S	E235S.NO2	26-Aug-2024	02-Sep-2024	3 days	7 days	✗ EHTL	02-Sep-2024	3 days	7 days	✗ EHTL
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE FB	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ4-D	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ4-S	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ5-D	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 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 : Sulfate in Seawater by IC										
HDPE WQ5-S	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ7-D	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ7-S	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ8-D	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ8-S	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ9-S	E235S.SO4	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	02-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE DUP-X	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE DUP-Y	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ10-D	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 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
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ10-S	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ1-D	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ1-S	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ3-D	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ3-S	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ6-D	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC										
HDPE WQ-6-S	E235S.SO4	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	02-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) FB	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ4-D	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	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 Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ4-S	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ5-D	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ5-S	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ7-D	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ7-S	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ8-D	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ8-S	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ9-S	E375-T	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) DUP-X	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓

Matrix: **Water**

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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 Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ10-D	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ10-S	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ1-D	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ1-S	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ6-D	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) DUP-Y	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ3-D	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ3-S	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) WQ-6-S	E375-T	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	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 in Seawater by Fluorescence										
Amber glass total (sulfuric acid) FB	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ4-D	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ4-S	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ5-D	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ5-S	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ7-D	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ7-S	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ8-D	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ8-S	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	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 in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ9-S	E318S	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) DUP-X	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) DUP-Y	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ10-D	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ10-S	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ1-D	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ1-S	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ3-D	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) WQ3-S	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	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
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid)										
WQ6-D	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid)										
WQ-6-S	E318S	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
FB	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ4-D	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ4-S	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ5-D	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ5-S	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ7-D	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ7-S	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	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) WQ8-D	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WQ8-S	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WQ9-S	E372-U	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	05-Sep-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) DUP-X	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) DUP-Y	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WQ10-D	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WQ10-S	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WQ1-D	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WQ1-S	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	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
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ3-D	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ3-S	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ6-D	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WQ-6-S	E372-U	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	05-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
DUP-Y	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ10-D	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ10-S	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ3-D	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ3-S	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	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 Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ4-D	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ4-S	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ5-D	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ5-S	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ6-D	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ-6-S	E509S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ8-D	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ8-S	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) WQ9-S	E509S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	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 Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
DUP-X	E509S	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ1-D	E509S	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ1-S	E509S	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
FB	E509S	27-Aug-2024	06-Sep-2024	28 days	9 days	✓	06-Sep-2024	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ7-D	E509S	27-Aug-2024	06-Sep-2024	28 days	9 days	✓	06-Sep-2024	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WQ7-S	E509S	27-Aug-2024	06-Sep-2024	28 days	9 days	✓	06-Sep-2024	28 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
FB	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ4-D	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ4-S	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 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
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ5-D	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ5-S	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ7-D	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ7-S	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ8-D	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ8-S	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
WQ9-S	E421S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
DUP-X	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved)										
DUP-Y	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓

Matrix: **Water**

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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 Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ10-D	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ10-S	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ1-D	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ1-S	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ3-D	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ3-S	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ6-D	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by CRC ICPMS										
HDPE - dissolved (lab preserved) WQ-6-S	E421S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) DUP-X	E601	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓

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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 : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ10-D	E601	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ10-S	E601	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ1-D	E601	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ1-S	E601	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ6-D	E601	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) FB	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ4-D	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ4-S	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ5-D	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓

Matrix: **Water**

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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 : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ5-S	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ7-D	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ7-S	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ8-D	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ8-S	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ9-S	E601	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) DUP-Y	E601	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ3-D	E601	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ3-S	E601	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓

Matrix: **Water**

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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 : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WQ-6-S	E601	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) FB	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ4-D	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ4-S	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ5-D	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ5-S	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ7-D	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ7-S	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ8-D	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 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
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ8-S	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ9-S	E581.VH+F1	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) DUP-X	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) DUP-Y	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ10-D	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ10-S	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ1-D	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ1-S	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ3-D	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	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
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ3-S	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ6-D	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WQ-6-S	E581.VH+F1	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) FB	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ4-D	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ4-S	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ5-D	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ5-S	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ7-D	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 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
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ7-S	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ8-D	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ8-S	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ9-S	E358-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) DUP-X	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) DUP-Y	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ10-D	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ10-S	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WQ1-D	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	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 : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WQ1-S	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WQ3-D	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WQ3-S	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WQ6-D	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WQ-6-S	E358-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
FB	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ4-D	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ4-S	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ5-D	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 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	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ5-S	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ7-D	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ7-S	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ8-D	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ8-S	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ9-S	E355-L	27-Aug-2024	02-Sep-2024	28 days	6 days	✓	03-Sep-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
DUP-X	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
DUP-Y	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ10-D	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	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)										
WQ10-S	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ1-D	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ1-S	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ3-D	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ3-S	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ6-D	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
WQ-6-S	E355-L	26-Aug-2024	02-Sep-2024	28 days	7 days	✓	03-Sep-2024	28 days	8 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
DUP-X	E641A	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
WQ10-D	E641A	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ10-S	E641A	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ1-D	E641A	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ1-S	E641A	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ6-D	E641A	26-Aug-2024	01-Sep-2024	14 days	6 days	✓	01-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) FB	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ4-D	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ4-S	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ5-D	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ5-S	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 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*
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ7-D	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ7-S	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ8-D	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ8-S	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ9-S	E641A	27-Aug-2024	03-Sep-2024	14 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) DUP-Y	E641A	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ3-D	E641A	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ3-S	E641A	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WQ-6-S	E641A	26-Aug-2024	03-Sep-2024	14 days	8 days	✓	03-Sep-2024	40 days	0 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
Total Metals : Total Mercury in Seawater by CVAAS										
HDPE - total (lab preserved)										
WQ1-S	E508S	26-Aug-2024	06-Sep-2024	0 hrs	253 hrs	× UCP	06-Sep-2024	0 hrs	253 hrs	× UCP
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
DUP-Y	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ10-D	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ10-S	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ3-D	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ3-S	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ4-D	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ4-S	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ5-D	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	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
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ5-S	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ6-D	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ-6-S	E508S	26-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ7-D	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ7-S	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ8-D	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ8-S	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ9-S	E508S	27-Aug-2024	06-Sep-2024	28 days	10 days	✓	06-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
DUP-X	E508S	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 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
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
WQ1-D	E508S	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid)										
FB	E508S	27-Aug-2024	06-Sep-2024	28 days	9 days	✓	06-Sep-2024	28 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
FB	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WQ4-D	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WQ4-S	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WQ5-D	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WQ5-S	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WQ7-D	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved)										
WQ7-S	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 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
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ8-D	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ8-S	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ9-S	E420S	27-Aug-2024	03-Sep-2024	180 days	7 days	✓	04-Sep-2024	180 days	8 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) DUP-X	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) DUP-Y	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ10-D	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ10-S	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ1-D	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ1-S	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 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
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ3-D	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ3-S	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ6-D	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by CRC ICPMS										
HDPE - total (lab preserved) WQ-6-S	E420S	26-Aug-2024	03-Sep-2024	180 days	8 days	✓	04-Sep-2024	180 days	9 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) FB	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ4-D	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ4-S	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ5-D	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ5-S	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 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
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ7-D	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ7-S	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ8-D	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ8-S	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ9-S	E611A	27-Aug-2024	30-Aug-2024	14 days	3 days	✓	30-Aug-2024	14 days	3 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) DUP-X	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) DUP-Y	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ10-D	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ10-S	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	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
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ1-D	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ1-S	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ3-D	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ3-S	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ6-D	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) WQ-6-S	E611A	26-Aug-2024	30-Aug-2024	14 days	4 days	✓	30-Aug-2024	14 days	4 days	✓

Legend & Qualifier Definitions

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

EHT: Exceeded ALS recommended hold time prior to analysis.

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

UCP: Unsuitable Container and/or Preservative used (invalidates standard hold time). Maximum hold time of zero applied. Test results may be biased low / unreliable, and may not meet regulatory requirements.

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)							
Ammonia by Fluorescence	E298	1629045	1	20	5.0	5.0	✓
Bromide in Seawater by IC	E235S.Br	1629005	1	20	5.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1626966	2	36	5.5	5.0	✓
Chloride in Seawater by IC	E235S.Cl	1629006	1	20	5.0	5.0	✓
Dissolved Mercury in Seawater by CVAAS	E509S	1636032	1	20	5.0	5.0	✓
Dissolved Metals in Seawater by CRC ICPMS	E421S	1630200	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1629041	1	20	5.0	5.0	✓
Fluoride in Seawater by IC	E235S.F	1629007	1	20	5.0	5.0	✓
Nitrate in Seawater by IC	E235S.NO3	1629008	1	20	5.0	5.0	✓
Nitrite in Seawater by IC	E235S.NO2	1629009	1	20	5.0	5.0	✓
Sulfate in Seawater by IC	E235S.SO4	1629010	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1629044	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1629046	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1636075	1	20	5.0	5.0	✓
Total Metals in Seawater by CRC ICPMS	E420S	1630199	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1629042	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1629043	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1626967	2	20	10.0	5.0	✓
Laboratory Control Samples (LCS)							
Ammonia by Fluorescence	E298	1629045	1	20	5.0	5.0	✓
Bromide in Seawater by IC	E235S.Br	1629005	1	20	5.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1626966	2	36	5.5	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	1628397	2	26	7.6	5.0	✓
Chloride in Seawater by IC	E235S.Cl	1629006	1	20	5.0	5.0	✓
Dissolved Mercury in Seawater by CVAAS	E509S	1636032	1	20	5.0	5.0	✓
Dissolved Metals in Seawater by CRC ICPMS	E421S	1630200	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1629041	1	20	5.0	5.0	✓
Fluoride in Seawater by IC	E235S.F	1629007	1	20	5.0	5.0	✓
Nitrate in Seawater by IC	E235S.NO3	1629008	1	20	5.0	5.0	✓
Nitrite in Seawater by IC	E235S.NO2	1629009	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1628398	2	24	8.3	5.0	✓
Sulfate in Seawater by IC	E235S.SO4	1629010	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1629044	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1629046	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1636075	1	20	5.0	5.0	✓
Total Metals in Seawater by CRC ICPMS	E420S	1630199	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) - Continued							
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1629042	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1629043	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1626967	2	20	10.0	5.0	✓
Method Blanks (MB)							
Ammonia by Fluorescence	E298	1629045	1	20	5.0	5.0	✓
Bromide in Seawater by IC	E235S.Br	1629005	1	20	5.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1626966	2	36	5.5	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	1628397	2	26	7.6	5.0	✓
Chloride in Seawater by IC	E235S.Cl	1629006	1	20	5.0	5.0	✓
Dissolved Mercury in Seawater by CVAAS	E509S	1636032	1	20	5.0	5.0	✓
Dissolved Metals in Seawater by CRC ICPMS	E421S	1630200	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1629041	1	20	5.0	5.0	✓
Fluoride in Seawater by IC	E235S.F	1629007	1	20	5.0	5.0	✓
Nitrate in Seawater by IC	E235S.NO3	1629008	1	20	5.0	5.0	✓
Nitrite in Seawater by IC	E235S.NO2	1629009	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1628398	2	24	8.3	5.0	✓
Sulfate in Seawater by IC	E235S.SO4	1629010	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1629044	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1629046	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1636075	1	20	5.0	5.0	✓
Total Metals in Seawater by CRC ICPMS	E420S	1630199	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1629042	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1629043	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1626967	2	20	10.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1629045	1	20	5.0	5.0	✓
Bromide in Seawater by IC	E235S.Br	1629005	1	20	5.0	5.0	✓
BTEX by Headspace GC-MS	E611A	1626966	2	36	5.5	5.0	✓
Chloride in Seawater by IC	E235S.Cl	1629006	1	20	5.0	5.0	✓
Dissolved Mercury in Seawater by CVAAS	E509S	1636032	1	20	5.0	5.0	✓
Dissolved Metals in Seawater by CRC ICPMS	E421S	1630200	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1629041	1	20	5.0	5.0	✓
Fluoride in Seawater by IC	E235S.F	1629007	1	20	5.0	5.0	✓
Nitrate in Seawater by IC	E235S.NO3	1629008	1	20	5.0	5.0	✓
Nitrite in Seawater by IC	E235S.NO2	1629009	1	20	5.0	5.0	✓
Sulfate in Seawater by IC	E235S.SO4	1629010	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1629044	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1629046	1	20	5.0	5.0	✓
Total Mercury in Seawater by CVAAS	E508S	1636075	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							
Total Metals in Seawater by CRC ICPMS	E420S	1630199	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1629042	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1629043	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
Bromide in Seawater by IC	E235S.Br ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Seawater by IC	E235S.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Seawater by IC	E235S.F ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Seawater by IC	E235S.NO2 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Seawater by IC	E235S.NO3 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Seawater by IC	E235S.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	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 in Seawater by Fluorescence	E318S ALS Environmental - Vancouver	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 - Vancouver	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 inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO_2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	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 - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Total Metals in Seawater by CRC ICPMS	E420S ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Seawater 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.
Dissolved Metals in Seawater by CRC ICPMS	E421S ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Seawater 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.
Total Mercury in Seawater by CVAAS	E508S ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Seawater samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Mercury in Seawater by CVAAS	E509S ALS Environmental - Vancouver	Water	APHA 3030B/EPA 1631E (mod)	Seawater 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.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Calgary	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) 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. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Calgary	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. 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 - Calgary	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.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Calgary	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in $CaCO_3$ 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 it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in $CaCO_3$ 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 it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
F1-BTEX	EC580 ALS Environmental - Calgary	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
VPH: VH-BTEX-Styrene	EC580A ALS Environmental - Calgary	Water	BC MOE Lab Manual (VPH in Water and Solids) (mod)	Volatile Petroleum Hydrocarbons (VPH) is calculated as follows: VPHw = Volatile Hydrocarbons (VH C6-C10) minus benzene, toluene, ethylbenzene, xylenes (BTEX) and styrene.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in Seawater	EP318S ALS Environmental - Vancouver	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 Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Vancouver	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Calgary	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.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Calgary	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: **YL2401338**	Page	: 1 of 22
Client	: Stantec Consulting Ltd.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Account Manager	: Oliver Gregg
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Project	: 123514868	Date Samples Received	: 29-Aug-2024 13:05
PO	: ----	Date Analysis Commenced	: 30-Aug-2024
C-O-C number	: ----	Issue Date	: 12-Sep-2024 12:11
Sampler	: ----		
Site	: ----		
Quote number	: YL24-STAC100-001		
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
- 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*
Angelo Salandanan	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
Cynthia Bauer	Organic Supervisor	Calgary Organics, Calgary, Alberta
Ghazaleh Khanmirzaei	Analyst	Vancouver Metals, Burnaby, British Columbia
Joshua Stessun	Laboratory Analyst	Calgary Organics, Calgary, Alberta
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Sorina Motea	Laboratory Analyst	Calgary Organics, Calgary, Alberta
Tracy Harley	Supervisor - Water Quality Instrumentation	Vancouver Inorganics, Burnaby, British Columbia

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*
Anions and Nutrients (QC Lot: 1629005)											
YL2401338-001	WQ1-D	Bromide	24959-67-9	E235S.Br	5.0	mg/L	50.9	49.7	2.35%	20%	----
Anions and Nutrients (QC Lot: 1629006)											
YL2401338-001	WQ1-D	Chloride	16887-00-6	E235S.Cl	50	mg/L	15400	15100	2.33%	20%	----
Anions and Nutrients (QC Lot: 1629007)											
YL2401338-001	WQ1-D	Fluoride	16984-48-8	E235S.F	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1629008)											
YL2401338-001	WQ1-D	Nitrate (as N)	14797-55-8	E235S.NO3	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1629009)											
YL2401338-001	WQ1-D	Nitrite (as N)	14797-65-0	E235S.NO2	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1629010)											
YL2401338-001	WQ1-D	Sulfate (as SO4)	14808-79-8	E235S.SO4	30	mg/L	2210	2140	2.90%	20%	----
Anions and Nutrients (QC Lot: 1629043)											
YL2401338-001	WQ1-D	Phosphorus, total	7723-14-0	E372-U	0.0040	mg/L	0.0300	0.0302	0.0003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1629044)											
YL2401338-001	WQ1-D	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0360	0.0363	0.719%	20%	----
Anions and Nutrients (QC Lot: 1629045)											
YL2401338-001	WQ1-D	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1629046)											
YL2401338-001	WQ1-D	Kjeldahl nitrogen, total [TKN]	----	E318S	0.050	mg/L	0.074	0.101	0.026	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1629041)											
YL2401338-001	WQ1-D	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.06	2.16	0.10	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1629042)											
YL2401338-001	WQ1-D	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	0.86	0.98	0.12	Diff <2x LOR	----
Total Metals (QC Lot: 1630199)											
YL2401338-001	WQ1-D	Aluminum, total	7429-90-5	E420S	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420S	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420S	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Barium, total	7440-39-3	E420S	0.0025	mg/L	0.0086	0.0083	0.0003	Diff <2x LOR	----
		Beryllium, total	7440-41-7	E420S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420S	0.0020	mg/L	<0.0020	<0.0020	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: 1630199) - continued											
YL2401338-001	WQ1-D	Boron, total	7440-42-8	E420S	0.10	mg/L	3.24	3.37	3.95%	20%	----
		Cadmium, total	7440-43-9	E420S	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420S	1.0	mg/L	302	305	1.11%	20%	----
		Cesium, total	7440-46-2	E420S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420S	0.20	mg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420S	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420S	0.025	mg/L	0.134	0.138	0.003	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420S	0.25	mg/L	1050	1020	2.02%	20%	----
		Manganese, total	7439-96-5	E420S	0.0025	mg/L	<0.0025	<0.0025	0	Diff <2x LOR	----
		Molybdenum, total	7439-98-7	E420S	0.0025	mg/L	0.0078	0.0087	0.0008	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420S	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420S	2.5	mg/L	319	311	2.60%	20%	----
		Rubidium, total	7440-17-7	E420S	0.010	mg/L	0.087	0.087	0.00002	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420S	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420S	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Silver, total	7440-22-4	E420S	0.00025	mg/L	<0.00025	<0.00025	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420S	2.5	mg/L	8580	8440	1.59%	20%	----
		Strontium, total	7440-24-6	E420S	0.0050	mg/L	5.88	5.88	0.134%	20%	----
		Sulfur, total	7704-34-9	E420S	25.0	mg/L	730	729	0.0782%	20%	----
		Tellurium, total	13494-80-9	E420S	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420S	0.0025	mg/L	<0.0025	<0.0025	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420S	0.00050	mg/L	0.00229	0.00252	0.00023	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420S	0.025	mg/L	<0.025	<0.025	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420S	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Total Metals (QC Lot: 1636075)											

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: 1636075) - continued											
YL2401338-001	WQ1-D	Mercury, total	7439-97-6	E508S	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1630200)											
YL2401338-001	WQ1-D	Aluminum, dissolved	7429-90-5	E421S	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421S	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421S	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421S	0.0025	mg/L	0.0072	0.0075	0.0002	Diff <2x LOR	----
		Beryllium, dissolved	7440-41-7	E421S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421S	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421S	0.10	mg/L	3.49	3.47	0.540%	20%	----
		Cadmium, dissolved	7440-43-9	E421S	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421S	1.0	mg/L	306	297	2.81%	20%	----
		Cesium, dissolved	7440-46-2	E421S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421S	0.20	mg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421S	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421S	0.025	mg/L	0.133	0.131	0.002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421S	0.25	mg/L	934	955	2.29%	20%	----
		Manganese, dissolved	7439-96-5	E421S	0.0025	mg/L	<0.0025	<0.0025	0	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421S	0.0025	mg/L	0.0081	0.0088	0.0007	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421S	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421S	2.5	mg/L	302	312	3.20%	20%	----
		Rubidium, dissolved	7440-17-7	E421S	0.010	mg/L	0.082	0.084	0.002	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421S	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421S	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Silver, dissolved	7440-22-4	E421S	0.00025	mg/L	<0.00025	<0.00025	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421S	2.5	mg/L	7930	8000	0.853%	20%	----
		Strontium, dissolved	7440-24-6	E421S	0.0050	mg/L	5.90	5.71	3.16%	20%	----
		Sulfur, dissolved	7704-34-9	E421S	25.0	mg/L	675	712	5.36%	20%	----
		Tellurium, dissolved	13494-80-9	E421S	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421S	0.0050	mg/L	<0.0050	<0.0050	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*
Dissolved Metals (QC Lot: 1630200) - continued											
YL2401338-001	WQ1-D	Tin, dissolved	7440-31-5	E421S	0.0025	mg/L	<0.0025	<0.0025	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421S	0.00050	mg/L	0.00240	0.00230	0.00010	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421S	0.025	mg/L	<0.025	<0.025	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421S	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1636032)											
YL2401338-001	WQ1-D	Mercury, dissolved	7439-97-6	E509S	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1626966)											
CG2412404-001	Anonymous	Benzene	71-43-2	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611A	0.50	µg/L	0.59	0.57	0.02	Diff <2x LOR	----
		Toluene	108-88-3	E611A	0.50	µg/L	98.6	93.4	5.34%	30%	----
		Xylene, m+p-	179601-23-1	E611A	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611A	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1626969)											
CG2412392-001	Anonymous	Benzene	71-43-2	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611A	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611A	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1626967)											
YL2401338-001	WQ1-D	F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0	Diff <2x LOR	----
		VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1626970)											
YL2401338-013	WQ5-D	F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0	Diff <2x LOR	----
		VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	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
Anions and Nutrients (QCLot: 1629005)						
Bromide	24959-67-9	E235S.Br	5	mg/L	<5.0	----
Anions and Nutrients (QCLot: 1629006)						
Chloride	16887-00-6	E235S.Cl	50	mg/L	<50	----
Anions and Nutrients (QCLot: 1629007)						
Fluoride	16984-48-8	E235S.F	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 1629008)						
Nitrate (as N)	14797-55-8	E235S.NO3	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1629009)						
Nitrite (as N)	14797-65-0	E235S.NO2	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 1629010)						
Sulfate (as SO4)	14808-79-8	E235S.SO4	30	mg/L	<30	----
Anions and Nutrients (QCLot: 1629043)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0040	----
Anions and Nutrients (QCLot: 1629044)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1629045)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1629046)						
Kjeldahl nitrogen, total [TKN]	----	E318S	0.05	mg/L	<0.050	----
Organic / Inorganic Carbon (QCLot: 1629041)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 1629042)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 1630199)						
Aluminum, total	7429-90-5	E420S	0.05	mg/L	<0.050	----
Antimony, total	7440-36-0	E420S	0.003	mg/L	<0.0030	----
Arsenic, total	7440-38-2	E420S	0.003	mg/L	<0.0030	----
Barium, total	7440-39-3	E420S	0.0025	mg/L	<0.0025	----
Beryllium, total	7440-41-7	E420S	0.0005	mg/L	<0.00050	----
Bismuth, total	7440-69-9	E420S	0.002	mg/L	<0.0020	----
Boron, total	7440-42-8	E420S	0.1	mg/L	<0.10	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1630199) - continued						
Cadmium, total	7440-43-9	E420S	0.0002	mg/L	<0.00020	----
Calcium, total	7440-70-2	E420S	1	mg/L	<1.0	----
Cesium, total	7440-46-2	E420S	0.0005	mg/L	<0.00050	----
Chromium, total	7440-47-3	E420S	0.005	mg/L	<0.0050	----
Cobalt, total	7440-48-4	E420S	0.001	mg/L	<0.0010	----
Copper, total	7440-50-8	E420S	0.005	mg/L	<0.0050	----
Iron, total	7439-89-6	E420S	0.2	mg/L	<0.20	----
Lead, total	7439-92-1	E420S	0.002	mg/L	<0.0020	----
Lithium, total	7439-93-2	E420S	0.025	mg/L	<0.025	----
Magnesium, total	7439-95-4	E420S	0.25	mg/L	<0.25	----
Manganese, total	7439-96-5	E420S	0.0025	mg/L	<0.0025	----
Molybdenum, total	7439-98-7	E420S	0.0025	mg/L	<0.0025	----
Nickel, total	7440-02-0	E420S	0.005	mg/L	<0.0050	----
Phosphorus, total	7723-14-0	E420S	1	mg/L	<1.0	----
Potassium, total	7440-09-7	E420S	2.5	mg/L	<2.5	----
Rubidium, total	7440-17-7	E420S	0.01	mg/L	<0.010	----
Selenium, total	7782-49-2	E420S	0.002	mg/L	<0.0020	----
Silicon, total	7440-21-3	E420S	0.5	mg/L	<0.50	----
Silver, total	7440-22-4	E420S	0.00025	mg/L	<0.00025	----
Sodium, total	7440-23-5	E420S	2.5	mg/L	<2.5	----
Strontium, total	7440-24-6	E420S	0.005	mg/L	<0.0050	----
Sulfur, total	7704-34-9	E420S	25	mg/L	<25.0	----
Tellurium, total	13494-80-9	E420S	0.01	mg/L	<0.010	----
Thallium, total	7440-28-0	E420S	0.0005	mg/L	<0.00050	----
Thorium, total	7440-29-1	E420S	0.005	mg/L	<0.0050	----
Tin, total	7440-31-5	E420S	0.0025	mg/L	<0.0025	----
Titanium, total	7440-32-6	E420S	0.005	mg/L	<0.0050	----
Tungsten, total	7440-33-7	E420S	0.005	mg/L	<0.0050	----
Uranium, total	7440-61-1	E420S	0.0005	mg/L	<0.00050	----
Vanadium, total	7440-62-2	E420S	0.005	mg/L	<0.0050	----
Zinc, total	7440-66-6	E420S	0.025	mg/L	<0.025	----
Zirconium, total	7440-67-7	E420S	0.01	mg/L	<0.010	----
Total Metals (QCLot: 1636075)						
Mercury, total	7439-97-6	E508S	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1630200)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1630200) - continued						
Aluminum, dissolved	7429-90-5	E421S	0.05	mg/L	<0.050	----
Antimony, dissolved	7440-36-0	E421S	0.003	mg/L	<0.0030	----
Arsenic, dissolved	7440-38-2	E421S	0.003	mg/L	<0.0030	----
Barium, dissolved	7440-39-3	E421S	0.0025	mg/L	<0.0025	----
Beryllium, dissolved	7440-41-7	E421S	0.0005	mg/L	<0.00050	----
Bismuth, dissolved	7440-69-9	E421S	0.002	mg/L	<0.0020	----
Boron, dissolved	7440-42-8	E421S	0.1	mg/L	<0.10	----
Cadmium, dissolved	7440-43-9	E421S	0.0002	mg/L	<0.00020	----
Calcium, dissolved	7440-70-2	E421S	1	mg/L	<1.0	----
Cesium, dissolved	7440-46-2	E421S	0.0005	mg/L	<0.00050	----
Chromium, dissolved	7440-47-3	E421S	0.005	mg/L	<0.0050	----
Cobalt, dissolved	7440-48-4	E421S	0.001	mg/L	<0.0010	----
Copper, dissolved	7440-50-8	E421S	0.005	mg/L	<0.0050	----
Iron, dissolved	7439-89-6	E421S	0.2	mg/L	<0.20	----
Lead, dissolved	7439-92-1	E421S	0.002	mg/L	<0.0020	----
Lithium, dissolved	7439-93-2	E421S	0.025	mg/L	<0.025	----
Magnesium, dissolved	7439-95-4	E421S	0.25	mg/L	<0.25	----
Manganese, dissolved	7439-96-5	E421S	0.0025	mg/L	<0.0025	----
Molybdenum, dissolved	7439-98-7	E421S	0.0025	mg/L	<0.0025	----
Nickel, dissolved	7440-02-0	E421S	0.005	mg/L	<0.0050	----
Phosphorus, dissolved	7723-14-0	E421S	1	mg/L	<1.0	----
Potassium, dissolved	7440-09-7	E421S	2.5	mg/L	<2.5	----
Rubidium, dissolved	7440-17-7	E421S	0.01	mg/L	<0.010	----
Selenium, dissolved	7782-49-2	E421S	0.002	mg/L	<0.0020	----
Silicon, dissolved	7440-21-3	E421S	0.5	mg/L	<0.50	----
Silver, dissolved	7440-22-4	E421S	0.00025	mg/L	<0.00025	----
Sodium, dissolved	7440-23-5	E421S	2.5	mg/L	<2.5	----
Strontium, dissolved	7440-24-6	E421S	0.005	mg/L	<0.0050	----
Sulfur, dissolved	7704-34-9	E421S	25	mg/L	<25.0	----
Tellurium, dissolved	13494-80-9	E421S	0.01	mg/L	<0.010	----
Thallium, dissolved	7440-28-0	E421S	0.0005	mg/L	<0.00050	----
Thorium, dissolved	7440-29-1	E421S	0.005	mg/L	<0.0050	----
Tin, dissolved	7440-31-5	E421S	0.0025	mg/L	<0.0025	----
Titanium, dissolved	7440-32-6	E421S	0.005	mg/L	<0.0050	----
Tungsten, dissolved	7440-33-7	E421S	0.005	mg/L	<0.0050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1630200) - continued						
Uranium, dissolved	7440-61-1	E421S	0.0005	mg/L	<0.00050	----
Vanadium, dissolved	7440-62-2	E421S	0.005	mg/L	<0.0050	----
Zinc, dissolved	7440-66-6	E421S	0.025	mg/L	<0.025	----
Zirconium, dissolved	7440-67-7	E421S	0.01	mg/L	<0.010	----
Dissolved Metals (QCLot: 1636032)						
Mercury, dissolved	7439-97-6	E509S	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 1626966)						
Benzene	71-43-2	E611A	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611A	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611A	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	<0.30	----
Volatile Organic Compounds (QCLot: 1626969)						
Benzene	71-43-2	E611A	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611A	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611A	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1626967)						
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Hydrocarbons (QCLot: 1626970)						
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Hydrocarbons (QCLot: 1628397)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 1629513)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Hydrocarbons (QCLot: 1629513) - continued						
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1628398)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1629512)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1629512) - continued						
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----

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
Anions and Nutrients (QCLot: 1629005)									
Bromide	24959-67-9	E235S.Br	5	mg/L	0.5 mg/L	99.3	85.0	115	----
Anions and Nutrients (QCLot: 1629006)									
Chloride	16887-00-6	E235S.Cl	50	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1629007)									
Fluoride	16984-48-8	E235S.F	1	mg/L	1 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1629008)									
Nitrate (as N)	14797-55-8	E235S.NO3	0.5	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1629009)									
Nitrite (as N)	14797-65-0	E235S.NO2	0.1	mg/L	0.5 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 1629010)									
Sulfate (as SO4)	14808-79-8	E235S.SO4	30	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1629043)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.4	80.0	120	----
Anions and Nutrients (QCLot: 1629044)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.05 mg/L	92.6	80.0	120	----
Anions and Nutrients (QCLot: 1629045)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.4	85.0	115	----
Anions and Nutrients (QCLot: 1629046)									
Kjeldahl nitrogen, total [TKN]	----	E318S	0.05	mg/L	4 mg/L	98.2	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1629041)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	87.3	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1629042)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	94.7	80.0	120	----
Total Metals (QCLot: 1630199)									
Aluminum, total	7429-90-5	E420S	0.05	mg/L	2 mg/L	106	80.0	120	----
Antimony, total	7440-36-0	E420S	0.003	mg/L	1 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420S	0.003	mg/L	1 mg/L	108	80.0	120	----
Barium, total	7440-39-3	E420S	0.0025	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, total	7440-41-7	E420S	0.0005	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420S	0.002	mg/L	1 mg/L	102	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 (QCLot: 1630199) - continued									
Boron, total	7440-42-8	E420S	0.1	mg/L	1 mg/L	94.2	80.0	120	----
Cadmium, total	7440-43-9	E420S	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Calcium, total	7440-70-2	E420S	1	mg/L	50 mg/L	96.1	80.0	120	----
Cesium, total	7440-46-2	E420S	0.0005	mg/L	0.05 mg/L	101	80.0	120	----
Chromium, total	7440-47-3	E420S	0.005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420S	0.001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E420S	0.005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420S	0.2	mg/L	1 mg/L	101	80.0	120	----
Lead, total	7439-92-1	E420S	0.002	mg/L	0.5 mg/L	104	80.0	120	----
Lithium, total	7439-93-2	E420S	0.025	mg/L	0.25 mg/L	98.9	80.0	120	----
Magnesium, total	7439-95-4	E420S	0.25	mg/L	50 mg/L	106	80.0	120	----
Manganese, total	7439-96-5	E420S	0.0025	mg/L	0.25 mg/L	105	80.0	120	----
Molybdenum, total	7439-98-7	E420S	0.0025	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, total	7440-02-0	E420S	0.005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, total	7723-14-0	E420S	1	mg/L	10 mg/L	102	80.0	120	----
Potassium, total	7440-09-7	E420S	2.5	mg/L	50 mg/L	109	80.0	120	----
Rubidium, total	7440-17-7	E420S	0.01	mg/L	0.1 mg/L	99.7	80.0	120	----
Selenium, total	7782-49-2	E420S	0.002	mg/L	1 mg/L	100	80.0	120	----
Silicon, total	7440-21-3	E420S	0.5	mg/L	10 mg/L	106	80.0	120	----
Silver, total	7440-22-4	E420S	0.00025	mg/L	0.1 mg/L	93.7	80.0	120	----
Sodium, total	7440-23-5	E420S	2.5	mg/L	50 mg/L	108	80.0	120	----
Strontium, total	7440-24-6	E420S	0.005	mg/L	0.25 mg/L	100	80.0	120	----
Sulfur, total	7704-34-9	E420S	25	mg/L	50 mg/L	97.6	80.0	120	----
Tellurium, total	13494-80-9	E420S	0.01	mg/L	0.1 mg/L	101	80.0	120	----
Thallium, total	7440-28-0	E420S	0.0005	mg/L	1 mg/L	106	80.0	120	----
Thorium, total	7440-29-1	E420S	0.005	mg/L	0.1 mg/L	100	80.0	120	----
Tin, total	7440-31-5	E420S	0.0025	mg/L	0.5 mg/L	98.2	80.0	120	----
Titanium, total	7440-32-6	E420S	0.005	mg/L	0.25 mg/L	99.2	80.0	120	----
Tungsten, total	7440-33-7	E420S	0.005	mg/L	0.1 mg/L	98.5	80.0	120	----
Uranium, total	7440-61-1	E420S	0.0005	mg/L	0.005 mg/L	99.2	80.0	120	----
Vanadium, total	7440-62-2	E420S	0.005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, total	7440-66-6	E420S	0.025	mg/L	0.5 mg/L	104	80.0	120	----
Zirconium, total	7440-67-7	E420S	0.01	mg/L	0.1 mg/L	97.5	80.0	120	----
Total Metals (QCLot: 1636075)									
Mercury, total	7439-97-6	E508S	0.000005	mg/L	0 mg/L	96.9	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: 1630200)									
Aluminum, dissolved	7429-90-5	E421S	0.05	mg/L	2 mg/L	100	80.0	120	----
Antimony, dissolved	7440-36-0	E421S	0.003	mg/L	1 mg/L	95.9	80.0	120	----
Arsenic, dissolved	7440-38-2	E421S	0.003	mg/L	1 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421S	0.0025	mg/L	0.25 mg/L	99.6	80.0	120	----
Beryllium, dissolved	7440-41-7	E421S	0.0005	mg/L	0.1 mg/L	98.8	80.0	120	----
Bismuth, dissolved	7440-69-9	E421S	0.002	mg/L	1 mg/L	96.8	80.0	120	----
Boron, dissolved	7440-42-8	E421S	0.1	mg/L	1 mg/L	99.7	80.0	120	----
Cadmium, dissolved	7440-43-9	E421S	0.0002	mg/L	0.1 mg/L	97.1	80.0	120	----
Calcium, dissolved	7440-70-2	E421S	1	mg/L	50 mg/L	98.4	80.0	120	----
Cesium, dissolved	7440-46-2	E421S	0.0005	mg/L	0.05 mg/L	92.9	80.0	120	----
Chromium, dissolved	7440-47-3	E421S	0.005	mg/L	0.25 mg/L	97.2	80.0	120	----
Cobalt, dissolved	7440-48-4	E421S	0.001	mg/L	0.25 mg/L	95.6	80.0	120	----
Copper, dissolved	7440-50-8	E421S	0.005	mg/L	0.25 mg/L	98.6	80.0	120	----
Iron, dissolved	7439-89-6	E421S	0.2	mg/L	1 mg/L	99.3	80.0	120	----
Lead, dissolved	7439-92-1	E421S	0.002	mg/L	0.5 mg/L	94.4	80.0	120	----
Lithium, dissolved	7439-93-2	E421S	0.025	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, dissolved	7439-95-4	E421S	0.25	mg/L	50 mg/L	98.9	80.0	120	----
Manganese, dissolved	7439-96-5	E421S	0.0025	mg/L	0.25 mg/L	97.7	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421S	0.0025	mg/L	0.25 mg/L	98.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421S	0.005	mg/L	0.5 mg/L	96.3	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421S	1	mg/L	10 mg/L	108	80.0	120	----
Potassium, dissolved	7440-09-7	E421S	2.5	mg/L	50 mg/L	106	80.0	120	----
Rubidium, dissolved	7440-17-7	E421S	0.01	mg/L	0.1 mg/L	95.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421S	0.002	mg/L	1 mg/L	97.9	80.0	120	----
Silicon, dissolved	7440-21-3	E421S	0.5	mg/L	10 mg/L	106	80.0	120	----
Silver, dissolved	7440-22-4	E421S	0.00025	mg/L	0.1 mg/L	88.9	80.0	120	----
Sodium, dissolved	7440-23-5	E421S	2.5	mg/L	50 mg/L	101	80.0	120	----
Strontium, dissolved	7440-24-6	E421S	0.005	mg/L	0.25 mg/L	94.6	80.0	120	----
Sulfur, dissolved	7704-34-9	E421S	25	mg/L	50 mg/L	90.1	80.0	120	----
Tellurium, dissolved	13494-80-9	E421S	0.01	mg/L	0.1 mg/L	94.7	80.0	120	----
Thallium, dissolved	7440-28-0	E421S	0.0005	mg/L	1 mg/L	95.6	80.0	120	----
Thorium, dissolved	7440-29-1	E421S	0.005	mg/L	0.1 mg/L	90.0	80.0	120	----
Tin, dissolved	7440-31-5	E421S	0.0025	mg/L	0.5 mg/L	95.4	80.0	120	----
Titanium, dissolved	7440-32-6	E421S	0.005	mg/L	0.25 mg/L	98.8	80.0	120	----
Tungsten, dissolved	7440-33-7	E421S	0.005	mg/L	0.1 mg/L	91.2	80.0	120	----
Uranium, dissolved	7440-61-1	E421S	0.0005	mg/L	0.005 mg/L	91.1	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: 1630200) - continued									
Vanadium, dissolved	7440-62-2	E421S	0.005	mg/L	0.5 mg/L	99.2	80.0	120	----
Zinc, dissolved	7440-66-6	E421S	0.025	mg/L	0.5 mg/L	95.0	80.0	120	----
Zirconium, dissolved	7440-67-7	E421S	0.01	mg/L	0.1 mg/L	91.7	80.0	120	----
Mercury, dissolved	7439-97-6	E509S	0.000005	mg/L	0 mg/L	97.3	80.0	120	----
Volatile Organic Compounds (QCLot: 1626966)									
Benzene	71-43-2	E611A	0.5	µg/L	100 µg/L	107	70.0	130	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	100 µg/L	95.4	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	100 µg/L	116	70.0	130	----
Styrene	100-42-5	E611A	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Toluene	108-88-3	E611A	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	200 µg/L	99.0	70.0	130	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	100 µg/L	98.4	70.0	130	----
Volatile Organic Compounds (QCLot: 1626969)									
Benzene	71-43-2	E611A	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	100 µg/L	87.1	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	100 µg/L	111	70.0	130	----
Styrene	100-42-5	E611A	0.5	µg/L	100 µg/L	93.5	70.0	130	----
Toluene	108-88-3	E611A	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	200 µg/L	90.8	70.0	130	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	100 µg/L	93.0	70.0	130	----
Hydrocarbons (QCLot: 1626967)									
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	2480 µg/L	107	70.0	130	----
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	2490 µg/L	109	70.0	130	----
Hydrocarbons (QCLot: 1626970)									
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	2480 µg/L	126	70.0	130	----
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	2490 µg/L	126	70.0	130	----
Hydrocarbons (QCLot: 1628397)									
F2 (C10-C16)	----	E601	100	µg/L	3830 µg/L	81.0	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7950 µg/L	86.1	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4220 µg/L	76.7	70.0	130	----
Hydrocarbons (QCLot: 1629513)									
F2 (C10-C16)	----	E601	100	µg/L	3830 µg/L	82.7	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7950 µg/L	87.4	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4220 µg/L	76.7	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1628398)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	86.1	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	83.4	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	90.6	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	98.0	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	93.0	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	99.4	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	91.9	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	93.2	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	98.9	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	99.2	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	92.4	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	98.7	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	95.8	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	79.8	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	88.6	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	89.3	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	90.8	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	95.9	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	97.4	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	86.3	60.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1629512)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	84.8	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	81.4	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	80.4	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	90.7	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	85.0	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	88.0	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	82.9	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	89.6	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	90.4	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	92.4	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	88.0	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	92.7	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	92.3	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	91.8	60.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1629512) - continued									
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	93.0	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	93.9	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	97.9	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	89.8	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	90.6	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	82.6	60.0	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: 1629005)										
YL2401338-002	WQ1-S	Bromide	24959-67-9	E235S.Br	49.3 mg/L	50 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1629006)										
YL2401338-002	WQ1-S	Chloride	16887-00-6	E235S.Cl	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1629007)										
YL2401338-002	WQ1-S	Fluoride	16984-48-8	E235S.F	98.5 mg/L	100 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 1629008)										
YL2401338-002	WQ1-S	Nitrate (as N)	14797-55-8	E235S.NO3	243 mg/L	250 mg/L	97.1	75.0	125	----
Anions and Nutrients (QCLot: 1629009)										
YL2401338-002	WQ1-S	Nitrite (as N)	14797-65-0	E235S.NO2	47.3 mg/L	50 mg/L	94.6	75.0	125	----
Anions and Nutrients (QCLot: 1629010)										
YL2401338-002	WQ1-S	Sulfate (as SO4)	14808-79-8	E235S.SO4	9940 mg/L	10000 mg/L	99.4	75.0	125	----
Anions and Nutrients (QCLot: 1629043)										
YL2401338-002	WQ1-S	Phosphorus, total	7723-14-0	E372-U	0.0894 mg/L	0.1 mg/L	89.4	70.0	130	----
Anions and Nutrients (QCLot: 1629044)										
YL2401338-002	WQ1-S	Phosphorus, total dissolved	7723-14-0	E375-T	0.0450 mg/L	0.05 mg/L	90.1	70.0	130	----
Anions and Nutrients (QCLot: 1629045)										
YL2401338-002	WQ1-S	Ammonia, total (as N)	7664-41-7	E298	0.0985 mg/L	0.1 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 1629046)										
YL2401338-002	WQ1-S	Kjeldahl nitrogen, total [TKN]	----	E318S	2.82 mg/L	2.5 mg/L	113	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1629041)										
YL2401338-002	WQ1-S	Carbon, dissolved organic [DOC]	----	E358-L	4.73 mg/L	5 mg/L	94.5	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1629042)										
YL2401338-002	WQ1-S	Carbon, total organic [TOC]	----	E355-L	4.81 mg/L	5 mg/L	96.2	70.0	130	----
Total Metals (QCLot: 1630199)										
YL2401338-002	WQ1-S	Aluminum, total	7429-90-5	E420S	10.5 mg/L	10 mg/L	105	70.0	130	----
		Antimony, total	7440-36-0	E420S	0.975 mg/L	1 mg/L	97.5	70.0	130	----
		Arsenic, total	7440-38-2	E420S	1.08 mg/L	1 mg/L	108	70.0	130	----
		Barium, total	7440-39-3	E420S	1.02 mg/L	1 mg/L	102	70.0	130	----
		Beryllium, total	7440-41-7	E420S	1.95 mg/L	2 mg/L	97.6	70.0	130	----
		Bismuth, total	7440-69-9	E420S	0.447 mg/L	0.5 mg/L	89.5	70.0	130	----
		Boron, total	7440-42-8	E420S	4.34 mg/L	5 mg/L	86.9	70.0	130	----
		Cadmium, total	7440-43-9	E420S	0.202 mg/L	0.2 mg/L	101	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: 1630199) - continued										
YL2401338-002	WQ1-S	Calcium, total	7440-70-2	E420S	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420S	0.504 mg/L	0.5 mg/L	101	70.0	130	----
		Chromium, total	7440-47-3	E420S	1.96 mg/L	2 mg/L	98.2	70.0	130	----
		Cobalt, total	7440-48-4	E420S	0.969 mg/L	1 mg/L	96.9	70.0	130	----
		Copper, total	7440-50-8	E420S	0.939 mg/L	1 mg/L	93.9	70.0	130	----
		Iron, total	7439-89-6	E420S	97.0 mg/L	100 mg/L	97.0	70.0	130	----
		Lead, total	7439-92-1	E420S	0.940 mg/L	1 mg/L	94.0	70.0	130	----
		Lithium, total	7439-93-2	E420S	4.84 mg/L	5 mg/L	96.9	70.0	130	----
		Magnesium, total	7439-95-4	E420S	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420S	1.01 mg/L	1 mg/L	101	70.0	130	----
		Molybdenum, total	7439-98-7	E420S	1.04 mg/L	1 mg/L	104	70.0	130	----
		Nickel, total	7440-02-0	E420S	1.92 mg/L	2 mg/L	96.1	70.0	130	----
		Phosphorus, total	7723-14-0	E420S	561 mg/L	500 mg/L	112	70.0	130	----
		Potassium, total	7440-09-7	E420S	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420S	1.04 mg/L	1 mg/L	104	70.0	130	----
		Selenium, total	7782-49-2	E420S	1.96 mg/L	2 mg/L	98.1	70.0	130	----
		Silicon, total	7440-21-3	E420S	499 mg/L	500 mg/L	99.8	70.0	130	----
		Silver, total	7440-22-4	E420S	0.198 mg/L	0.2 mg/L	98.9	70.0	130	----
		Sodium, total	7440-23-5	E420S	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420S	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420S	971 mg/L	1000 mg/L	97.1	70.0	130	----
		Tellurium, total	13494-80-9	E420S	1.98 mg/L	2 mg/L	99.0	70.0	130	----
		Thallium, total	7440-28-0	E420S	0.189 mg/L	0.2 mg/L	94.3	70.0	130	----
		Thorium, total	7440-29-1	E420S	0.802 mg/L	1 mg/L	80.2	70.0	130	----
		Tin, total	7440-31-5	E420S	0.988 mg/L	1 mg/L	98.8	70.0	130	----
		Titanium, total	7440-32-6	E420S	2.07 mg/L	2 mg/L	104	70.0	130	----
		Tungsten, total	7440-33-7	E420S	0.953 mg/L	1 mg/L	95.3	70.0	130	----
		Uranium, total	7440-61-1	E420S	0.195 mg/L	0.2 mg/L	97.5	70.0	130	----
		Vanadium, total	7440-62-2	E420S	5.18 mg/L	5 mg/L	104	70.0	130	----
		Zinc, total	7440-66-6	E420S	19.7 mg/L	20 mg/L	98.6	70.0	130	----
		Zirconium, total	7440-67-7	E420S	2.11 mg/L	2 mg/L	105	70.0	130	----
Total Metals (QCLot: 1636075)										
YL2401338-002	WQ1-S	Mercury, total	7439-97-6	E508S	0.0000952 mg/L	0 mg/L	95.2	70.0	130	----
Dissolved Metals (QCLot: 1630200)										
YL2401338-002	WQ1-S	Aluminum, dissolved	7429-90-5	E421S	10.5 mg/L	10 mg/L	105	70.0	130	----
		Antimony, dissolved	7440-36-0	E421S	1.02 mg/L	1 mg/L	102	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421S	1.06 mg/L	1 mg/L	106	70.0	130	----
		Barium, dissolved	7440-39-3	E421S	1.01 mg/L	1 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421S	2.12 mg/L	2 mg/L	106	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421S	0.490 mg/L	0.5 mg/L	98.1	70.0	130	----
		Boron, dissolved	7440-42-8	E421S	5.89 mg/L	5 mg/L	118	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421S	0.197 mg/L	0.2 mg/L	98.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421S	ND mg/L	----	ND	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: 1630200) - continued										
YL2401338-002	WQ1-S	Cesium, dissolved	7440-46-2	E421S	0.521 mg/L	0.5 mg/L	104	70.0	130	----
		Chromium, dissolved	7440-47-3	E421S	1.92 mg/L	2 mg/L	96.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421S	0.951 mg/L	1 mg/L	95.1	70.0	130	----
		Copper, dissolved	7440-50-8	E421S	0.922 mg/L	1 mg/L	92.2	70.0	130	----
		Iron, dissolved	7439-89-6	E421S	93.2 mg/L	100 mg/L	93.2	70.0	130	----
		Lead, dissolved	7439-92-1	E421S	0.984 mg/L	1 mg/L	98.4	70.0	130	----
		Lithium, dissolved	7439-93-2	E421S	5.25 mg/L	5 mg/L	105	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421S	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421S	0.961 mg/L	1 mg/L	96.1	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421S	1.10 mg/L	1 mg/L	110	70.0	130	----
		Nickel, dissolved	7440-02-0	E421S	1.90 mg/L	2 mg/L	94.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421S	547 mg/L	500 mg/L	109	70.0	130	----
		Potassium, dissolved	7440-09-7	E421S	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421S	0.969 mg/L	1 mg/L	96.9	70.0	130	----
		Selenium, dissolved	7782-49-2	E421S	1.90 mg/L	2 mg/L	95.2	70.0	130	----
		Silicon, dissolved	7440-21-3	E421S	480 mg/L	500 mg/L	96.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421S	0.202 mg/L	0.2 mg/L	101	70.0	130	----
		Sodium, dissolved	7440-23-5	E421S	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421S	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421S	1020 mg/L	1000 mg/L	102	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421S	2.03 mg/L	2 mg/L	102	70.0	130	----
		Thallium, dissolved	7440-28-0	E421S	0.198 mg/L	0.2 mg/L	98.9	70.0	130	----
		Thorium, dissolved	7440-29-1	E421S	1.05 mg/L	1 mg/L	105	70.0	130	----
		Tin, dissolved	7440-31-5	E421S	0.996 mg/L	1 mg/L	99.6	70.0	130	----
		Titanium, dissolved	7440-32-6	E421S	1.93 mg/L	2 mg/L	96.6	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421S	1.02 mg/L	1 mg/L	102	70.0	130	----
		Uranium, dissolved	7440-61-1	E421S	0.204 mg/L	0.2 mg/L	102	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421S	5.10 mg/L	5 mg/L	102	70.0	130	----
		Zinc, dissolved	7440-66-6	E421S	19.8 mg/L	20 mg/L	98.8	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421S	2.19 mg/L	2 mg/L	110	70.0	130	----
Dissolved Metals (QCLot: 1636032)										
YL2401338-002	WQ1-S	Mercury, dissolved	7439-97-6	E509S	0.0000918 mg/L	0 mg/L	91.8	70.0	130	----
Volatile Organic Compounds (QCLot: 1626966)										
CG2412404-001	Anonymous	Benzene	71-43-2	E611A	97.2 µg/L	100 µg/L	97.2	70.0	130	----
		Ethylbenzene	100-41-4	E611A	81.2 µg/L	100 µg/L	81.2	70.0	130	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	110 µg/L	100 µg/L	110	70.0	130	----
		Styrene	100-42-5	E611A	80.5 µg/L	100 µg/L	80.5	70.0	130	----
		Toluene	108-88-3	E611A	83.2 µg/L	100 µg/L	83.2	70.0	130	----
		Xylene, m+p-	179601-23-1	E611A	166 µg/L	200 µg/L	83.2	70.0	130	----
		Xylene, o-	95-47-6	E611A	86.3 µg/L	100 µg/L	86.3	70.0	130	----
Volatile Organic Compounds (QCLot: 1626969)										
CG2412392-001	Anonymous	Benzene	71-43-2	E611A	96.2 µg/L	100 µg/L	96.2	70.0	130	----
		Ethylbenzene	100-41-4	E611A	85.8 µg/L	100 µg/L	85.8	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
Volatile Organic Compounds (QCLot: 1626969) - continued										
CG2412392-001	Anonymous	Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	111 µg/L	100 µg/L	111	70.0	130	----
		Styrene	100-42-5	E611A	93.7 µg/L	100 µg/L	93.7	70.0	130	----
		Toluene	108-88-3	E611A	89.0 µg/L	100 µg/L	89.0	70.0	130	----
		Xylene, m+p-	179601-23-1	E611A	181 µg/L	200 µg/L	90.3	70.0	130	----
		Xylene, o-	95-47-6	E611A	92.5 µg/L	100 µg/L	92.5	70.0	130	----

~~SEDIMENT~~ SEAWATER

ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 824756

Page 1 of 2

Report To	Contact and company name below will appear on the final report
Company:	STANTEC CONSULTING
Contact:	Conor McCracken
Phone:	
Company address below will appear on the final report	
Street:	Sidney BC
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☐ PDF ☐ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax (1) amy.mackay@stantec.com

Email 2 (2) conor.mccracken@stantec.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax

Email 2

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information	
ALS Account # / Quote #:	YL24-STAC100-001
Job #:	123514868
PO / AFE:	
LSD:	
ALS Lab Work Order # (lab use only):	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Contact: ~~Oliver~~ Gregga. Brent mack Sampler: AM/CM/EH ~~EM~~

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	total metals+Hg (F)	dissolved metals+Hg (F)	PAHs	anions	total nutrients	dissolved nutrients (F)	BTEX, PHC F1-F4 +VPH	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	WQ1-D	26-Aug-24	1055	~~Seal~~ Water	11	X	X	X	X	X	X	X		
	WQ1-S		1113		11	X	X	X	X	X	X	X		
	DUP-X		1114		11	X	X	X	X	X	X	X		
	WQ10-D		1250		11	X	X	X	X	X	X	X		
	WQ10-S		1252		11	X	X	X	X	X	X	X		
	WQ6-D		1325		11	X	X	X	X	X	X	X		
	WQ6-S		1329		11	X	X	X	X	X	X	X		
	WQ3-S		1356		11	X	X	X	X	X	X	X		
	DUP-Y		1357		11	X	X	X	X	X	X	X		
	WQ3-D		1352		11	X	X	X	X	X	X	X		
	WQ4-D	27-Aug-24	924		11	X	X	X	X	X	X	X		
	WQ4-S		948		11	X	X	X	X	X	X	X		

Environmental Division Yellowknife

Work Order Reference YL2401338

Telephone : +1 867 873 5593

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? | | YES | | NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

dissolved Hg, metals + nutrient all field filtered

CCME

SAMPLE CONDITION AS

Frozen ☐ | SIF Observations ☐ Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact ☐ Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
1.8	

SHIPMENT RELEASE (client use)

Released by: Amy Mackay Date: Aug Time:

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: MA Date: Aug 29/24 Time: 13:05

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Date: Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

SEAWATER

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Number: 17 - 824785

Page 2 of 2

Report To	Contact and company name below will appear on the final report
Company:	Stantec
Contact:	Conor McCracken
Phone:	
	Company address below will appear on the final report
Street:	Sidney BC
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☐ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL | | MAIL ☐ FAX
Email 1 or Fax: (1) Damy.mackay@stantec.com
Email 2: (2) conor.mcCracken@stantec.com
Email 3:

Invoice Distribution

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax:
Email 2:

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #: YL24-STAC100-001
Job #: 123514868
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#
Major/Minor Code: | Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only):

ALS Contact: Brent Mack

Sampler: Am/CM/EH

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	total metals-F/P	dissolved metals-F/P	PAHs	anions	total nutrients	dissolved nutrients-F	BTEX, PHC F1-F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	WQ5-D	27-Aug-24	1012		11	X	X	X	X	X	X	X		
	WQ5-S		1015		11	X	X	X	X	X	X	X		
	WQ9-S		1150		11	X	X	X	X	X	X	X		
	WQ8-D		1220		11	X	X	X	X	X	X	X		
	WQ8-S		1215		11	X	X	X	X	X	X	X		
	WQ7-D		1242		11	X	X	X	X	X	X	X		
	WQ7-S		1244		11	X	X	X	X	X	X	X		
	FB		1630		1	X	X	X	X	X	X	X		

Sea water

Lab water

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☐ NO

Are samples for human consumption/ use?
| | YES | | NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

CCME

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐
Ice Packs ☐ Ice Cubes ☐ | Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Amy Mackay	Aug	

INITIAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

CERTIFICATE OF ANALYSIS

Work Order	:	**YL2500854**			
Client	:	**Stantec Consulting Ltd.**	Laboratory	:	ALS Environmental - Yellowknife
Contact	:	Conor McCracken	Account Manager	:	Oliver Gregg
Address	:	4910 53 Street Yellowknife Northwest Territories Canada X1A 2P4	Address	:	102-487 Range Lake Road Yellowknife NT Canada X1A 3R9
Telephone	:	250 655 5371	E-mail	:	oliver.gregg@ALSGlobal.com
Project	:	123514868	Telephone	:	1 867 445 7143
PO	:	----	Date Samples Received	:	27-Aug-2025 15:58
C-O-C number	:	----	Date Analysis Commenced	:	30-Aug-2025
Sampler	:	LM, MS	Issue Date	:	25-Sep-2025 10:35
Site	:	----			
Quote number	:	YL24-STAC100-001			
No. of samples received	:	12			
No. of samples analysed	:	12			

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*
Angelo Salandanan	Lab Assistant	Metals, Burnaby, British Columbia
Chau Tran	Analyst	Metals, Burnaby, British Columbia
Cynthia Bauer	Organic Supervisor	Organics, Calgary, Alberta
Hdeep Kaur	Lab Assistant	Inorganics, Burnaby, British Columbia
Ilnaz Badbezanchi	Supervisor - Metals Prep	Metals, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Monica Ko	Supervisor - Inorganic	Inorganics, Burnaby, British Columbia
Ophelia Chiu	Department Manager - Organics	Organics, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia

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
mg/L	milligrams per litre
µg/L	micrograms per litre

<: 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*
YL2500854-011	Field Blank	Water sample(s) for dissolved mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Sample Preparation										
Dissolved carbon filtration location	----	EP358/VA	-	-		field	field	field	field	field
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		4500	4530	4580	4620	4610
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		4310	4420	4240	4240	4290
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0104	<0.0050	<0.0050	<0.0050	0.0088
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		49.2	51.9	48.6	49.4	49.1
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		13400	14200	13300	13500	13300
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		0.083	0.077	0.063	0.092	0.088
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	<0.50	0.67	<0.50
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0177	0.0220	0.0173	0.0176	0.0193
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		0.0173	0.0168	0.0179	0.0177	0.0179
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		1870	1980	1850	1870	1850
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.41	1.38	1.18	1.07	1.22
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		1.21	1.19	1.95	1.22	1.31
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Total Metals										
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		0.0098	0.0089	0.0104	0.0096	0.0092
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		3.10	3.10	3.27	3.15	3.21
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		299	295	306	294	305
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		0.115	0.119	0.123	0.119	0.121
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		912	922	928	944	935
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		0.0082	0.0072	0.0078	0.0083	0.0079
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		300	294	291	291	300

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Total Metals										
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		0.078	0.079	0.080	0.080	0.082
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		7210	7260	7520	7330	7300
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		5.53	5.38	5.35	5.43	5.54
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		722	718	713	727	725
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		0.00237	0.00226	0.00240	0.00224	0.00230
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		0.0097	0.0098	0.0092	0.0088	0.0088
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		2.86	2.84	2.77	2.78	2.79
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		286	276	279	278	277
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		0.116	0.114	0.114	0.115	0.116
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		874	905	860	861	873
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		0.0076	0.0072	0.0074	0.0078	0.0070
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		268	274	264	260	266
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		0.074	0.074	0.072	0.075	0.070

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		7460	7680	7430	7260	7460
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		5.30	5.51	5.48	5.49	5.31
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		622	620	621	627	607
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		0.00211	0.00208	0.00213	0.00202	0.00207
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611A/VA	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
BTEX+Styrene, total	n/a	E611A/VA	1.5	µg/L		<1.5	<1.5	<1.5	<1.5	<1.5
Hydrocarbons										
F1 (C6-C10)	----	E581.F1/CG	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/VA	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/VA	100	µg/L		<100	<100	<100	<100	<100
F3 (C16-C34)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
TEH (C10-C50)	n/a	E601/VA	400	µg/L		<400	<400	<400	<400	<400
TEH (C16-C50)	----	E601/VA	400	µg/L		<400	<400	<400	<400	<400
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%		81.9	78.2	74.9	83.9	86.0
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	1.0	%		109	95.6	107	100	107
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%		88.7	86.9	87.6	89.8	85.2

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds Surrogates										
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%		99.8	98.7	99.7	99.0	98.2
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A/VA	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/VA	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ1-S ----	WQ2-S ----	WQ3-S ----	WQ4-S ----	WQ5-S ----
					Client sampling date / time	26-Aug-2025 08:30	26-Aug-2025 08:55	26-Aug-2025 09:15	26-Aug-2025 09:30	26-Aug-2025 10:00
						YL2500854-001	YL2500854-002	YL2500854-003	YL2500854-004	YL2500854-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L		<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/VA	0.030	µg/L		<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/VA	0.060	µg/L		<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/VA	0.070	µg/L		<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/VA	0.065	µg/L		<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		105	111	93.2	105	102
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		102	106	90.5	103	100
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		106	112	95.5	107	103

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

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Sample Preparation										
Dissolved carbon filtration location	----	EP358/VA	-	-		field	field	field	field	field
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		4590	4630	4670	4490	4530

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		4260	4290	4330	4310	4230
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		44.9	45.3	44.5	45.0	44.8
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		12800	12900	12700	12800	12800
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		0.103	0.079	0.084	0.092	0.085
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0168	0.0166	0.0174	0.0182	0.0173
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		0.0186	0.0196	0.0198	0.0184	0.0177
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		1820	1850	1810	1800	1810
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.60	1.32	1.20	1.23	1.35
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		1.26	1.17	1.11	1.18	1.18
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	<0.050	0.056	<0.050
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		0.0102	0.0102	0.0094	0.0095	0.0099
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Total Metals										
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		3.22	3.22	3.22	3.12	3.13
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		300	304	306	296	301
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		0.120	0.122	0.121	0.118	0.117
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		932	940	949	911	918
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		0.0084	0.0084	0.0085	0.0083	0.0074
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		304	306	298	294	296
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		0.083	0.077	0.076	0.081	0.078
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Total Metals										
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		7290	7280	7260	7220	7190
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		5.51	5.57	5.39	5.44	5.29
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		726	714	740	732	719
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		0.00231	0.00233	0.00247	0.00236	0.00222
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		0.0089	0.0099	0.0092	0.0098	0.0095
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		2.88	2.94	2.94	2.88	2.81
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		282	286	287	279	281
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		0.117	0.119	0.119	0.118	0.115
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		864	868	877	878	857
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		0.0077	0.0075	0.0074	0.0072	0.0076
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		263	264	266	270	263
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		0.073	0.071	0.072	0.078	0.070
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	<0.00025	<0.00025	<0.00025

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		7350	7350	7360	7460	7340
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		5.61	5.50	5.38	5.48	5.38
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		627	624	619	629	610
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		0.00202	0.00212	0.00204	0.00206	0.00206
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	Field	Field
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611A/VA	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
BTEX+Styrene, total	n/a	E611A/VA	1.5	µg/L		<1.5	<1.5	<1.5	<1.5	<1.5
Hydrocarbons										
F1 (C6-C10)	----	E581.F1/CG	100	µg/L		<100	<100	<100	<100	<100
F1-BTEX	----	EC580/VA	100	µg/L		<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/VA	100	µg/L		<100	<100	<100	<100	<100
F3 (C16-C34)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/VA	250	µg/L		<250	<250	<250	<250	<250
TEH (C10-C50)	n/a	E601/VA	400	µg/L		<400	<400	<400	<400	<400
TEH (C16-C50)	----	E601/VA	400	µg/L		<400	<400	<400	<400	<400
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%		79.5	80.5	80.6	78.9	85.1
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	1.0	%		106	103	80.7	77.7	103
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%		87.7	88.2	86.1	89.0	87.4
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%		99.2	99.2	98.5	98.3	99.2
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A/VA	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/VA	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L		<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	<0.050	<0.050	<0.050	<0.050

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WQ6-S ----	WQ7-S ----	WQ8-S ----	WQ9-S ----	WQ10-S ----
					Client sampling date / time	26-Aug-2025 08:10	26-Aug-2025 06:55	26-Aug-2025 07:15	26-Aug-2025 07:30	26-Aug-2025 07:50
						YL2500854-006	YL2500854-007	YL2500854-008	YL2500854-009	YL2500854-010
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/VA	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/VA	0.030	µg/L		<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/VA	0.060	µg/L		<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/VA	0.070	µg/L		<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/VA	0.065	µg/L		<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		107	107	83.3	83.4	85.1
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		102	103	98.6	104	106
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		106	108	107	111	106

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

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
						YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/VA	-	-		field	field	----	----	----
Physical Tests										
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		<1.00	4520	----	----	----
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		<1.00	4310	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

					Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Anions and Nutrients										
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L		<5.0	44.5	----	----	----
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L		<50	12800	----	----	----
Fluoride	16984-48-8	E235S.F/VA	1.0	mg/L		<1.0	<1.0	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L		<0.050	0.092	----	----	----
Nitrate (as N)	14797-55-8	E235S.NO3/VA	0.50	mg/L		<0.50	<0.50	----	----	----
Nitrite (as N)	14797-65-0	E235S.NO2/VA	0.10	mg/L		<0.10	<0.10	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		<0.0040 DLM	0.0167	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L		<0.0020	0.0172	----	----	----
Sulfate (as SO4)	14808-79-8	E235S.SO4/VA	30	mg/L		<30	1800	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		<0.50	1.41	----	----	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L		<0.50	1.03	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420S/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Antimony, total	7440-36-0	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Arsenic, total	7440-38-2	E420S/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Barium, total	7440-39-3	E420S/VA	0.0025	mg/L		<0.0025	0.0090	----	----	----
Beryllium, total	7440-41-7	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Bismuth, total	7440-69-9	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	----	----	----
Boron, total	7440-42-8	E420S/VA	0.10	mg/L		<0.10	3.10	----	----	----
Cadmium, total	7440-43-9	E420S/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
						YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Total Metals										
Calcium, total	7440-70-2	E420S/VA	1.0	mg/L		<1.0	302	----	----	----
Cesium, total	7440-46-2	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Chromium, total	7440-47-3	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Cobalt, total	7440-48-4	E420S/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Copper, total	7440-50-8	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Iron, total	7439-89-6	E420S/VA	0.20	mg/L		<0.20	<0.20	----	----	----
Lead, total	7439-92-1	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	----	----	----
Lithium, total	7439-93-2	E420S/VA	0.025	mg/L		<0.025	0.118	----	----	----
Magnesium, total	7439-95-4	E420S/VA	0.25	mg/L		<0.25	915	----	----	----
Manganese, total	7439-96-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	----	----	----
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, total	7439-98-7	E420S/VA	0.0025	mg/L		<0.0025	0.0086	----	----	----
Nickel, total	7440-02-0	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Phosphorus, total	7723-14-0	E420S/VA	1.0	mg/L		<1.0	<1.0	----	----	----
Potassium, total	7440-09-7	E420S/VA	2.5	mg/L		<2.5	308	----	----	----
Rubidium, total	7440-17-7	E420S/VA	0.010	mg/L		<0.010	0.081	----	----	----
Selenium, total	7782-49-2	E420S/VA	0.0020	mg/L		<0.0020	<0.0020	----	----	----
Silicon, total	7440-21-3	E420S/VA	0.50	mg/L		<0.50	<0.50	----	----	----
Silver, total	7440-22-4	E420S/VA	0.00025	mg/L		<0.00025	<0.00025	----	----	----
Sodium, total	7440-23-5	E420S/VA	2.5	mg/L		<2.5	7250	----	----	----
Strontium, total	7440-24-6	E420S/VA	0.0050	mg/L		<0.0050	5.63	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

					Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Total Metals										
Sulfur, total	7704-34-9	E420S/VA	25.0	mg/L		<25.0	740	----	----	----
Tellurium, total	13494-80-9	E420S/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Thallium, total	7440-28-0	E420S/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Thorium, total	7440-29-1	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Tin, total	7440-31-5	E420S/VA	0.0025	mg/L		<0.0025	<0.0025	----	----	----
Titanium, total	7440-32-6	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Tungsten, total	7440-33-7	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Uranium, total	7440-61-1	E420S/VA	0.00050	mg/L		<0.00050	0.00241	----	----	----
Vanadium, total	7440-62-2	E420S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Zinc, total	7440-66-6	E420S/VA	0.025	mg/L		<0.025	<0.025	----	----	----
Zirconium, total	7440-67-7	E420S/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421S/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Antimony, dissolved	7440-36-0	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Arsenic, dissolved	7440-38-2	E421S/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Barium, dissolved	7440-39-3	E421S/VA	0.0025	mg/L		<0.0025	0.0094	----	----	----
Beryllium, dissolved	7440-41-7	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Bismuth, dissolved	7440-69-9	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	----	----	----
Boron, dissolved	7440-42-8	E421S/VA	0.10	mg/L		<0.10	2.86	----	----	----
Cadmium, dissolved	7440-43-9	E421S/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Calcium, dissolved	7440-70-2	E421S/VA	1.0	mg/L		<1.0	284	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

					Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Cesium, dissolved	7440-46-2	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Chromium, dissolved	7440-47-3	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Cobalt, dissolved	7440-48-4	E421S/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Copper, dissolved	7440-50-8	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Iron, dissolved	7439-89-6	E421S/VA	0.20	mg/L		<0.20	<0.20	----	----	----
Lead, dissolved	7439-92-1	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	----	----	----
Lithium, dissolved	7439-93-2	E421S/VA	0.025	mg/L		<0.025	0.116	----	----	----
Magnesium, dissolved	7439-95-4	E421S/VA	0.25	mg/L		<0.25	875	----	----	----
Manganese, dissolved	7439-96-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	----	----	----
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421S/VA	0.0025	mg/L		<0.0025	0.0074	----	----	----
Nickel, dissolved	7440-02-0	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Phosphorus, dissolved	7723-14-0	E421S/VA	1.0	mg/L		<1.0	<1.0	----	----	----
Potassium, dissolved	7440-09-7	E421S/VA	2.5	mg/L		<2.5	273	----	----	----
Rubidium, dissolved	7440-17-7	E421S/VA	0.010	mg/L		<0.010	0.076	----	----	----
Selenium, dissolved	7782-49-2	E421S/VA	0.0020	mg/L		<0.0020	<0.0020	----	----	----
Silicon, dissolved	7440-21-3	E421S/VA	0.50	mg/L		<0.50	<0.50	----	----	----
Silver, dissolved	7440-22-4	E421S/VA	0.00025	mg/L		<0.00025	<0.00025	----	----	----
Sodium, dissolved	7440-23-5	E421S/VA	2.5	mg/L		<2.5	7410	----	----	----
Strontium, dissolved	7440-24-6	E421S/VA	0.0050	mg/L		<0.0050	5.32	----	----	----
Sulfur, dissolved	7704-34-9	E421S/VA	25.0	mg/L		<25.0	612	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

					Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Tellurium, dissolved	13494-80-9	E421S/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Thallium, dissolved	7440-28-0	E421S/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Thorium, dissolved	7440-29-1	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Tin, dissolved	7440-31-5	E421S/VA	0.0025	mg/L		<0.0025	<0.0025	----	----	----
Titanium, dissolved	7440-32-6	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Tungsten, dissolved	7440-33-7	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Uranium, dissolved	7440-61-1	E421S/VA	0.00050	mg/L		<0.00050	0.00207	----	----	----
Vanadium, dissolved	7440-62-2	E421S/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Zinc, dissolved	7440-66-6	E421S/VA	0.025	mg/L		<0.025	<0.025	----	----	----
Zirconium, dissolved	7440-67-7	E421S/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	----	----	----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611A/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Toluene	108-88-3	E611A/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L		<0.30	<0.30	----	----	----
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time: 26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
					YL2500854-011	YL2500854-012	----	----	----
					Result	Result	----	----	----
Volatile Organic Compounds [Fuels]									
BTEX, total	----	E611A/VA	1.0	µg/L	<1.0	<1.0	----	----	----
BTEX+Styrene, total	n/a	E611A/VA	1.5	µg/L	<1.5	<1.5	----	----	----
Hydrocarbons									
F1 (C6-C10)	----	E581.F1/CG	100	µg/L	<100	<100	----	----	----
F1-BTEX	----	EC580/VA	100	µg/L	<100	<100	----	----	----
F2 (C10-C16)	----	E601/VA	100	µg/L	<100	<100	----	----	----
F3 (C16-C34)	----	E601/VA	250	µg/L	<250	<250	----	----	----
F4 (C34-C50)	----	E601/VA	250	µg/L	<250	<250	----	----	----
TEH (C10-C50)	n/a	E601/VA	400	µg/L	<400	<400	----	----	----
TEH (C16-C50)	----	E601/VA	400	µg/L	<400	<400	----	----	----
Hydrocarbons Surrogates									
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%	88.5	87.9	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	1.0	%	101	109	----	----	----
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%	87.6	88.2	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%	99.2	98.4	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
						YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1+2-	----	E641A/VA	0.015	µg/L		<0.015	<0.015	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L		<0.050	<0.050	----	----	----
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L		<0.020	<0.020	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	<0.050	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
PAHs, high molecular weight (BC AWQ)	n/a	E641A/VA	0.030	µg/L		<0.030	<0.030	----	----	----
PAHs, low molecular weight (BC AWQ)	n/a	E641A/VA	0.060	µg/L		<0.060	<0.060	----	----	----

Analytical Results

Sub-Matrix: Seawater
(Matrix: Water)

					Client sample ID	Field Blank ----	DUP-S ----	----	----	----
					Client sampling date / time	26-Aug-2025 10:00	26-Aug-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2500854-011	YL2500854-012	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
PAHs, total (CCME sewer 18)	n/a	E641A/VA	0.070	µg/L		<0.070	<0.070	----	----	----
PAHs, total (EPA 16)	n/a	E641A/VA	0.065	µg/L		<0.065	<0.065	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		78.1	80.9	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		100	102	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		106	106	----	----	----

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

ALS Canada Ltd.

right solutions.
right partner.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **YL2500675**		
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Contact	: Oliver Gregg
Address	: 4910 53 Street Yellowknife, NT Canada X1A 2P4	Address	: 102-487 Range Lake Road Yellowknife, Northwest Territories Canada X1A 3R9
E-mail	: conor.mccracken@stantec.com	E-mail	: oliver.gregg@ALSGlobal.com
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Facsimile	: ----	Facsimile	:
Project	: 123514868	Page	: 1 of 7
Purchase order number	: ----	Quote number	: YL2024STAC1000001 (YL24-STAC100-001)
C-O-C number	: ----	QC Level	: ALS Canada Standard Quality Control
Site	: ----		
Sampler	:		

Dates

Date Samples Received	: 28-Jul-2025 16:45	Issue Date	: 31-Jul-2025
Client Requested Due Date	: 05-Aug-2025	Scheduled Reporting Date	: 05-Aug-2025

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 3	Temperature	: 2.8 - Ice Bricks present
Receipt Detail	:	No. of samples received / analyzed	: 15 / 15

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances (if any)
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- *Where possible, ALS will store samples for the following durations, measured from date of sample submission: 30 days for Soil and Water samples; 6 months for Tissue/Biota samples; 14 days for air samples collected on re-usable media; and 3 days for water samples submitted for microbiological testing. Longer storage times are available upon request.*
- **Temperature is recorded in °C unless otherwise noted.**

Sample Container(s)/Preservation Non-Compliances (if any)

All comparisons are made against pretreatment/preservation practices published by CCME, BC ENV, Ontario MOE, Environment Canada, Health Canada, US EPA, APHA Standard Methods, ASTM, or ISO, and comply with provincial requirements for the laboratory location.

- **No sample container/preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

Matrix: **Water**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	Water - E298 Ammonia by Fluorescence	Water - E318 Total Kjeldahl Nitrogen by Fluorescence (0.05	Water - E318S Total Kjeldahl Nitrogen in Seawater by	Water - E355-L Total Organic Carbon (Non-Purgeable) by	Water - E358-L Dissolved Organic Carbon by Combustion (0.5	Water - E372-U Total Phosphorus by Colourimetry (0.002 mg/L)	Water - E375-T Total Dissolved Phosphorus by Colourimetry	Water - E641A PAHs (all calcs) in Water by LVI GC-MS	Water - S235S Anions in Seawater by IC	Water - S420S Total Metals+Hardness+Hg in Seawater (High	Water - S421S Dissolved Metals+Hardness+Hg in Seawater	Water - S665A BTEXSM/F1-F4/TEHs (AB,SK) in Water	Water - S665A.A BTEXSM/F1-F4/VPH (BC,AB) in Water
YL2500675-001	24-Jul-2025 16:10	WQ6-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-002	24-Jul-2025 16:20	WQ6-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-003	24-Jul-2025 17:05	WQ2-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-004	24-Jul-2025 17:05	WQ2-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-005	25-Jul-2025 14:36	WQ1-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-006	25-Jul-2025 14:50	WQ1-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-007	25-Jul-2025 16:00	WQ4-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-008	25-Jul-2025 16:15	WQ5-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-009	25-Jul-2025 16:45	WQ9-S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-010	25-Jul-2025 17:05	WQ-X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-011	25-Jul-2025 02:10	WQ3-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-012	25-Jul-2025 21:17	WQ3-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-013	25-Jul-2025 20:02	WQ10-D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
YL2500675-014	25-Jul-2025 20:36	WQ10-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

			Water - E298 Ammonia by Fluorescence	Water - E318 Total Kjeldahl Nitrogen by Fluorescence (0.05	Water - E318S Total Kjeldahl Nitrogen in Seawater by	Water - E355-L Total Organic Carbon (Non-Purgeable) by	Water - E358-L Dissolved Organic Carbon by Combustion (0.5	Water - E372-U Total Phosphorus by Colourimetry (0.002 mg/L)	Water - E375-T Total Dissolved Phosphorus by Colourimetry	Water - E641A PAHs (all calcs) in Water by LVI GC-MS	Water - S235S Anions in Seawater by IC	Water - S420S Total Metals+Hardness+Hg in Seawater (High	Water - S421S Dissolved Metals+Hardness+Hg in Seawater	Water - S665A BTEXSM/F1-F4/TEHs (AB,SK) in Water	Water - S665A.A BTEXSM/F1-F4/VPH (BC,AB) in Water
YL2500675-015	26-Jul-2025 13:35	Field Blank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Proactive Holding Time Report

The following sample(s) were received with less than half the recommended holding time remaining for the indicated tests. ALS cannot guarantee analysis for these tests within holding times.

Client Sample ID	Test Method	Recommended Holding Time
WQ1-D	E235S.NO2	3 days
WQ1-D	E235S.NO3	3 days
WQ1-5	E235S.NO2	3 days
WQ1-5	E235S.NO3	3 days
WQ4-D	E235S.NO2	3 days
WQ4-D	E235S.NO3	3 days
WQ5-D	E235S.NO2	3 days
WQ5-D	E235S.NO3	3 days
WQ9-S	E235S.NO2	3 days
WQ9-S	E235S.NO3	3 days
WQ-X	E235S.NO2	3 days
WQ-X	E235S.NO3	3 days
WQ3-D	E235S.NO2	3 days
WQ3-D	E235S.NO3	3 days
WQ3-5	E235S.NO2	3 days
WQ3-5	E235S.NO3	3 days
WQ10-D	E235S.NO2	3 days
WQ10-D	E235S.NO3	3 days
WQ10-5	E235S.NO2	3 days
WQ10-5	E235S.NO3	3 days
Field Blank	E235S.NO2	3 days
Field Blank	E235S.NO3	3 days

The following samples were received beyond the recommended holding times for the indicated tests.

Client Sample ID	Test Method	Recommended Holding Time
WQ6-D	E235S.NO2	3 days
WQ6-D	E235S.NO3	3 days
WQ6-5	E235S.NO2	3 days
WQ6-5	E235S.NO3	3 days
WQ2-D	E235S.NO2	3 days
WQ2-D	E235S.NO3	3 days
WQ2-5	E235S.NO2	3 days
WQ2-5	E235S.NO3	3 days

Requested Deliverables

Accounts Payable

Tax Invoice (INVOICE (CAN))	Email	SAPInvoices@stantec.com

Karson Sudlow

ALS Excel Report (ALS_MTABXL_CAN)	Email	karson.sudlow@stantec.com
Certificate of Analysis (Crosstab) (COA - CrossTab (CAN))	Email	karson.sudlow@stantec.com
Interpretive Quality Control Report (QCI (CAN))	Email	karson.sudlow@stantec.com
Quality Control (QC (CAN))	Email	karson.sudlow@stantec.com
Sample Receipt Notification (standard format) (SRN - Short (CAN))	Email	karson.sudlow@stantec.com
Stantec Canada EQuIS EFW2 format. (STANTEC_EQUIS_CAN)	Email	karson.sudlow@stantec.com

Methods with Laboratory

Sale item

Method	Laboratory	Address	City	Province	Country
Ammonia by Fluorescence					
E298	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Anions in Seawater by IC					
E235S.Br	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235S.Cl	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235S.F	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235S.NO2	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235S.NO3	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235S.SO4	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
BTEXSM/F1-F4/TEHs (AB,SK) in Water					
E581.F1	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
E601	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
E611A	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
EC580	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
BTEXSM/F1-F4/VPH (BC,AB) in Water					
E581.VH+F1	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
E601	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
E611A	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
EC580	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
EC580A	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
Dissolved Mercury Water Filtration					
EP509	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Metals Water Filtration					
EP421	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Metals+Hardness+Hg in Seawater (High LORs)					
E421S	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E509S	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC100	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Organic Carbon by Combustion (0.5 mg/L) in Water					
E358-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
PAHs (all calcs) in Water by LVI GC-MS					
E641A	Calgary	2559 29th Street NE	Calgary	Alberta	Canada
Preparation for Dissolved Organic Carbon for Combustion					
EP358	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada

Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)					
E375-T	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Kjeldahl Nitrogen by Fluorescence (0.05 mg/L)					
E318	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Kjeldahl Nitrogen in Seawater by Fluorescence (0.05 mg/L)					
E318S	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Metals+Hardness+Hg in Seawater (High LORs)					
E420S	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E508S	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC100A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Organic Carbon (Non-Purgeable) by Combustion (0.5 mg/L) in Water					
E355-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Phosphorus by Colourimetry (0.002 mg/L)					
E372-U	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada

Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -

Page 1 of 2

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Stantec
Contact:	Conor McKracken
Phone:	
	Company address below will appear on the final report
Street:	Sidney, BC
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Reports / Recipients

Select Report Format: ☐ PDF ☐ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Karsen.Sudlow@Stantec.com

Email 2: conor.mckracken@stantec.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax:

Email 2:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

ALS Client Code / QUOTE #: YL-24-STAC-100-001

Job / Project #: 123514868

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#:

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (ALS use only): ALS Contact: Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total metals + Hg	Dissolved metals + Hg (F)	PAHs	Anions	Total Nutrients	Dissolved Nutrients (F)	BTEX, PHC F1-F4, surr (F)	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	WQ6-D	24-Jul-25	16:10	Salt Water	11	X	X	X	X	X	X	X			
	WQ6-S	24-Jul-25	16:20		11	X	X	X	X	X	X	X			
	WQ2-D	24-Jul-25	17:05		11	X	X	X	X	X	X	X			
	WQ2-S	24-Jul-25	17:05		11	X	X	X	X	X	X	X			
	WQ1-D	25-Jul-25	14:36		11	X	X	X	X	X	X	X			
	WQ1-S	25-Jul-25	14:50		11	X	X	X	X	X	X	X			
	WQ4-D	25-Jul-25	16:00		11	X	X	X	X	X	X	X			
	WQ5-D	25-Jul-25	16:15		11	X	X	X	X	X	X	X			
	WQ9-S	25-Jul-25	16:45		11	X	X	X	X	X	X	X			
	WQ-X	25-Jul-25	17:05		11	X	X	X	X	X	X	X			
	WQ3-D	25-Jul-25	21:05		11	X	X	X	X	X	X	X			
	WQ3-S	25-Jul-25	21:17		11	X	X	X	X	X	X	X			

Environmental Division
Yellowknife
Work Order Reference
YL2500675

Telephone : +1 867 873 5593

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Dissolved metals, Hg, and nutrients are filtered CCME

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
2.8							

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	Jul 28/25	16:45

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

MAY 2023 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

[1] If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -

Page 2 of 2

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Stantec
Contact:	Conor McCracken
Phone:	
	Company address below will appear on the final report
Street:	Sidney, BC
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Reports / Recipients

Select Report Format: ☐ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: karson.sudlow@stantec.com

Email 2: conor.mccracken@stantec.com

Email 3:

Invoice Recipients

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax:

Email 2:

Turnaround Time (TAT) Requested

☒ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

ALS Client Code / QUOTE #:	YL-24-STAC-100-001
Job / Project #:	123514868
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only):

ALS Contact:

Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total Metals + Hg	Dissolved Metals (F)	PAHs	Anions	Total Nutrients	Dissolved Nutrients (F)	BTEX, PHC F1-F4, SVOCs	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	WQ10-D	25-Jul-25	20:02	Salt water	11	X	X	X	X	X	X	X			
	WQ10-S	25-Jul-25	20:36	↓	11	X	X	X	<	X	X	X			
	Field Blank	26-Jul-25	13:35	Lab water	11	X	X	X	<	X	X	X			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Dissolved metals, Hg, and nutrients all filtered CCME

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

A.2 QA/QC Results

Table A.2-1 Quality Assurance and Quality Control Results for Water Quality Analysis, August 2024

Parameter	Units	QA/QC						
		Aug 2024						
		DUP-X	WQ1-S	RPD	DUP-Y	WQ3-S	RPD	Field Blank
General								
Hardness (as CaCO3), dissolved	mg/L	4470	4530	1.3	4460	4520	1.3	-
Hardness (as CaCO3), total	mg/L	5080	4990	1.8	4810	4750	1.3	<1.00
Anions and Nutrients								
Chloride	mg/L	14,900	14,700	1.4	15,300	16,400	6.9	<50
Sulfate	mg/L	2,130	2,110	0.94	2,180	2,350	7.5	<30
Bromide	mg/L	49.2	49	0.41	51.1	54.8	7.0	<5.0
Fluoride	mg/L	<1.0	<1.0	-	<1.0	<1.0	-	<1.0
Nitrate (as N)	mg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Nitrite (as N)	mg/L	<0.10	<0.10	-	<0.10	<0.10	-	<0.10
Ammonia (as N) - Total	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Total Kjeldahl Nitrogen	mg/L	0.079	0.10	23	0.096	0.088	8.7	<0.050
Phosphorus - Dissolved	mg/L	0.0196	0.0234	18	0.0198	0.0205	3.5	<0.0020
Phosphorus, Total	mg/L	0.0221	0.0195	13	0.0205	0.0204	0.49	<0.0040
Organic / Inorganic Carbon								
Dissolved Organic Carbon	mg/L	2.1	1.11	62	1.02	2.06	68	1.02
Total Organic Carbon	mg/L	0.88	0.98	11	1.08	0.98	10	1.49
Total Metals								
Aluminum	mg/L	<0.050	<0.050	-	<0.050	<0.050	-	<0.050
Antimony	mg/L	<0.0030	<0.0030	-	<0.0030	<0.0030	-	<0.0030
Arsenic	mg/L	<0.0030	<0.0030	-	<0.0030	<0.0030	-	<0.0030
Barium	mg/L	0.0079	0.0081	2.5	0.0077	0.0075	2.6	<0.0025
Beryllium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050
Bismuth	mg/L	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020
Boron	mg/L	3.23	3.3	2.1	3.16	2.82	11	<0.10
Cadmium	mg/L	<0.00020	<0.00020	-	<0.00020	<0.00020	-	<0.00020
Calcium	mg/L	304	300	1.3	289	258	11	<1.0
Cesium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050
Chromium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Cobalt	mg/L	<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010
Copper	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Iron	mg/L	<0.20	<0.20	-	<0.20	<0.20	-	<0.20
Lead	mg/L	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020
Lithium	mg/L	0.134	0.135	0.74	0.128	0.114	12	<0.025
Magnesium	mg/L	1,050	1,030	1.9	994	998	0.40	<0.25
Manganese	mg/L	<0.0025	<0.0025	-	<0.0025	<0.0025	-	<0.0025
Mercury	mg/L	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	-	<0.0000050
Molybdenum	mg/L	0.0084	0.0083	1.2	0.0084	0.0073	14	<0.0025
Nickel	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Phosphorus	mg/L	<1.0	<1.0	-	<1.0	<1.0	-	<1.0
Potassium	mg/L	324	324	0	312	309	1.0	<2.5
Rubidium	mg/L	0.085	0.084	1.2	0.082	0.083	1.2	<0.010
Selenium	mg/L	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020
Silicon	mg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Silver	mg/L	<0.00025	<0.00025	-	<0.00025	<0.00025	-	<0.00025
Sodium	mg/L	8,380	8,490	1.3	8,150	8,250	1.2	<2.5
Strontium	mg/L	5.84	5.73	1.9	5.88	5.08	15	<0.0050
Sulfur	mg/L	739	753	1.9	715	697	2.5	<25.0
Tellurium	mg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Thallium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050
Thorium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050

Table A.2-1 Quality Assurance and Quality Control Results for Water Quality Analysis, August 2024

Parameter	Units	QA/QC						
		Aug 2024						
		DUP-X	WQ1-S	RPD	DUP-Y	WQ3-S	RPD	Field Blank
Tin	mg/L	<0.0025	<0.0025	-	<0.0025	<0.0025	-	<0.0025
Titanium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Tungsten	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Uranium	mg/L	0.00244	0.00231	5.5	0.00245	0.00208	16	<0.00050
Vanadium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Zinc	mg/L	<0.025	<0.025	-	<0.025	<0.025	-	<0.025
Zirconium	mg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Dissolved Metals								
Aluminum	mg/L	<0.050	<0.050	-	<0.050	<0.050	-	<0.050
Antimony	mg/L	<0.0030	<0.0030	-	<0.0030	<0.0030	-	<0.0030
Arsenic	mg/L	<0.0030	<0.0030	-	<0.0030	<0.0030	-	<0.0030
Barium	mg/L	0.0077	0.0076	1.3	0.0079	0.0070	12	<0.0025
Beryllium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050
Bismuth	mg/L	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020
Boron	mg/L	3.39	3.46	2.0	3.36	3.3	1.8	<0.10
Cadmium	mg/L	<0.00020	<0.00020	-	<0.00020	<0.00020		<0.00020
Calcium	mg/L	300	299	0.33	303	295	2.7	<1.0
Cesium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050
Chromium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Cobalt	mg/L	<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010
Copper	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Iron	mg/L	<0.20	<0.20	-	<0.20	<0.20	-	<0.20
Lead	mg/L	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020
Lithium	mg/L	0.128	0.132	3.1	0.13	0.126	3.1	<0.025
Magnesium	mg/L	904	918	1.5	900	919	2.1	<0.25
Manganese	mg/L	<0.0025	<0.0025	-	<0.0025	<0.0025	-	<0.0025
Mercury	mg/L	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	-	<0.0000050
Molybdenum	mg/L	0.0078	0.0079	1.3	0.0081	0.0084	3.6	<0.0025
Nickel	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Phosphorus	mg/L	<1.0	<1.0	-	<1.0	<1.0	-	<1.0
Potassium	mg/L	305	309	1.3	300	311	3.6	<2.5
Rubidium	mg/L	0.08	0.079	1.3	0.08	0.082	2.5	<0.010
Selenium	mg/L	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020
Silicon	mg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Silver	mg/L	<0.00025	<0.00025	-	<0.00025	<0.00025	-	<0.00025
Sodium	mg/L	7,490	7,760	3.5	7,420	7,560	1.9	<2.5
Strontium	mg/L	5.57	5.6	0.54	5.51	5.6	1.6	<0.0050
Sulfur	mg/L	681	699	2.6	660	652	1.2	<25.0
Tellurium	mg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Thallium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050
Thorium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Tin	mg/L	<0.0025	<0.0025	-	<0.0025	<0.0025	-	<0.0025
Titanium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Tungsten	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Uranium	mg/L	0.00236	0.00225	-	0.00235	0.00221	6.1	<0.00050
Vanadium	mg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Zinc	mg/L	<0.025	<0.025	-	<0.025	<0.025	-	<0.025
Zirconium	mg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Petroleum Hydrocarbons								
Benzene	µg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Ethylbenzene	µg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50

Table A.2-1 Quality Assurance and Quality Control Results for Water Quality Analysis, August 2024

Parameter	Units	QA/QC						
		Aug 2024						
		DUP-X	WQ1-S	RPD	DUP-Y	WQ3-S	RPD	Field Blank
Methyl tert-butyl ether (MTBE)	µg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Styrene	µg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Toluene	µg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Xylene, m & p-	µg/L	<0.40	<0.40	-	<0.40	<0.40	-	<0.40
Xylene, o-	µg/L	<0.30	<0.30	-	<0.30	<0.30	-	<0.30
Xylenes, Total	µg/L	<0.50	<0.50	-	<0.50	<0.50	-	<0.50
Hydrocarbons								
Volatile Petroleum Hydrocarbons (V	µg/L	<100	<100	-	<100	<100	-	<100
PHC F1 (C6-C10 range)	µg/L	<100	<100	-	<100	<100	-	<100
VH (C6-C10)	µg/L	<100	<100	-	<100	<100	-	<100
PHC F1 (C6-C10 range) minus BTE	µg/L	<100	<100	-	<100	<100	-	<100
PHC F2 (>C10-C16 range)	µg/L	<300	<300	-	<300	<300	-	<300
PHC F3 (>C16-C34 range)	µg/L	<300	<300	-	<300	<300	-	<300
PHC F4 (>C34-C50 range)	µg/L	<300	<300	-	<300	<300	-	<300
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Acenaphthylene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Acridine	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Anthracene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Benzo(a)anthracene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Benzo(a)pyrene	µg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Benzo(b)pyridine (Quinoline)	µg/L	<0.050	<0.050	-	<0.050	<0.050	-	<0.050
Benzo(b/j)fluoranthene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Benzo(b+j+k)fluoranthene	µg/L	<0.015	<0.015	-	<0.015	<0.015	-	<0.015
Benzo(g,h,i)perylene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Benzo(k)fluoranthene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Chrysene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Dibenzo(a,h)anthracene	µg/L	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Fluoranthene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Fluorene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Indeno(1,2,3-cd)pyrene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Methylnaphthalene (Total)	µg/L	<0.015	<0.015	-	<0.015	<0.015	-	<0.015
Methylnaphthalene, 1-	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Methylnaphthalene, 2-	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Naphthalene	µg/L	<0.050	<0.050	-	<0.050	<0.050	-	<0.050
PAH Toxicity Equivalency (PAH TE	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
PAHs, High Molecular Weight (BC A	µg/L	<0.030	<0.030	-	<0.030	<0.030	-	<0.030
PAHs, Low Molecular Weight (BC A	µg/L	<0.060	<0.060	-	<0.060	<0.060	-	<0.060
PAHs, Total (CCME sewer 18)	µg/L	<0.070	<0.070	-	<0.070	<0.070	-	<0.070
Phenanthrene	µg/L	<0.020	<0.020	-	<0.020	<0.020	-	<0.020
Pyrene	µg/L	<0.010	<0.010	-	<0.010	<0.010	-	<0.010
Total PAH	µg/L	<0.065	<0.065	-	<0.065	<0.065	-	<0.065

Notes:
Grey highlighted text indicates a RPD greater than 20%.
[a] The RPD was calculated using < LRL results at the LRL if one result in a duplicate pair

Table A.2-2 Quality Assurance and Quality Control Results for Water Quality Analysis, May 2025

Parameter	Units	QA/QC				
		May 2025				
		DUP-1-WRF-B4-01	WRF-B4-04	RPD	Travel Blank	Field Blank
Physical Tests						
Conductivity	µS/cm	41700	41700	0	<2.0	<2.0
Hardness (as CaCO3), total	mg/L	5730	5530	3.6	<0.60	<0.60
Total Suspended Solids	mg/L	4.1	6.6	47	<3.0	<3.0
pH	pH units	7.76	7.72	0.5	5.04	5.09
Total Metals						
Aluminum	mg/L	<0.0050	0.0061	20	<0.0030	<0.0030
Antimony	mg/L	<0.0010	<0.0010	-	<0.00010	<0.00010
Arsenic	mg/L	0.00127	0.00125	1.6	<0.00010	<0.00010
Barium	mg/L	0.0106	0.0114	7.3	<0.00010	<0.00010
Beryllium	mg/L	<0.00050	<0.00050	-	<0.000100	<0.000100
Bismuth	mg/L	<0.00050	<0.00050	-	<0.000050	<0.000050
Boron	mg/L	3.43	3.71	7.8	<0.010	<0.010
Cadmium	mg/L	0.000046	0.000042	9.1	<0.0000050	<0.0000050
Calcium	mg/L	367	353	3.9	<0.050	<0.050
Cesium	mg/L	<0.00050	<0.00050	-	<0.000010	<0.000010
Chromium	mg/L	<0.00050	<0.00050	-	<0.00050	<0.00050
Cobalt	mg/L	0.000085	0.000107	23	<0.00010	<0.00010
Copper	mg/L	<0.00050	0.00077	43	<0.00050	<0.00050
Gallium	mg/L	<0.00050	<0.00050	-	-	-
Iron	mg/L	<0.010	0.010	0	<0.010	<0.010
Lead	mg/L	<0.00010	<0.00010	-	<0.000050	<0.000050
Lithium	mg/L	0.165	0.179	8.1	<0.0010	<0.0010
Magnesium	mg/L	1170	1130	3.5	<0.0050	<0.0050
Manganese	mg/L	0.00133	0.00411	102	<0.00010	<0.00010
Mercury	mg/L	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050
Molybdenum	mg/L	0.00881	0.00848	3.8	<0.000050	<0.000050
Nickel	mg/L	0.00073	0.00099	30	<0.00050	<0.00050
Phosphorus	mg/L	<0.050	<0.050	-	<0.050	<0.050
Potassium	mg/L	303	301	0.66	<0.050	<0.050
Rhenium	mg/L	<0.00050	<0.00050	-	-	-
Rubidium	mg/L	0.0932	0.0927	0.54	<0.00020	<0.00020
Selenium	mg/L	<0.00100	<0.00090	-	<0.000050	<0.000050
Silicon	mg/L	<1.0	<1.0	-	<0.10	<0.10
Silver	mg/L	<0.00010	<0.00010	-	<0.000010	<0.000010
Sodium	mg/L	8920	8580	3.9	<0.050	<0.050
Strontium	mg/L	6.27	6.06	3.4	<0.00020	<0.00020
Sulfur	mg/L	713	696	2.4	<0.50	<0.50
Tellurium	mg/L	<0.00050	<0.00050	-	<0.00020	<0.00020
Thallium	mg/L	<0.000050	<0.000050	-	<0.000010	<0.000010
Thorium	mg/L	<0.00050	<0.00050	-	<0.00010	<0.00010
Tin	mg/L	<0.0010	<0.0010	-	<0.00010	<0.00010
Titanium	mg/L	<0.0050	<0.0050	-	<0.00030	<0.00030
Tungsten	mg/L	<0.0010	<0.0010	-	<0.00010	<0.00010
Uranium	mg/L	0.00227	0.00227	0	<0.000010	<0.000010
Vanadium	mg/L	0.00075	0.00069	8.3	<0.00050	<0.00050
Yttrium	mg/L	<0.00050	<0.00050	-	-	-
Zinc	mg/L	<0.0030	<0.0030	-	<0.0030	<0.0030
Zirconium	mg/L	<0.00050	<0.00050	-	<0.00020	<0.00020

Notes:
Grey highlighted text indicates a RPD greater than 20%.
[a] The RPD was calculated using < LRL results at the LRL if one result in a duplicate pair was

Table A.2-3 Quality Assurance and Quality Control Results for Water Quality Analysis, July 2025

Parameter	Units	QA/QC			
		July 2025			
		WQ9-S	WQ10-D	RPD	Field Blank
General					
Hardness (as CaCO3), dissolved	mg/L	4,380	4,350	0.7	<1.00
Hardness (as CaCO3), total	mg/L	4,350	4,610	5.8	<1.00
Anions and Nutrients					
Chloride	mg/L	10,700	11,700	8.9	<50
Sulfate	mg/L	1,400	1,550	10	<30
Bromide	mg/L	38.3	41.6	8.3	<5.0
Fluoride	mg/L	<1.0	<1.0	-	<1.0
Nitrate (as N)	mg/L	<0.50	<0.50	-	<0.50
Nitrite (as N)	mg/L	<0.10	<0.10	-	<0.10
Ammonia (as N) - Total	mg/L	<0.0050	<0.0050	-	<0.0050
Total Kjeldahl Nitrogen	mg/L	0.099	0.084	16	<0.050
Phosphorus - Dissolved	mg/L	0.0192	0.0196	2.1	<0.0020
Phosphorus, Total	mg/L	0.0216	0.0212	1.9	<0.0020
Organic / Inorganic Carbon					
Dissolved Organic Carbon	mg/L	1.24	1.20	3.3	<0.50
Total Organic Carbon	mg/L	1.01	0.96	5.1	<0.50
Total Metals					
Aluminum	mg/L	<0.050	<0.050	-	<0.050
Antimony	mg/L	<0.0030	<0.0030	-	<0.0030
Arsenic	mg/L	<0.0030	<0.0030	-	<0.0030
Barium	mg/L	0.0108	0.0111	2.7	<0.0025
Beryllium	mg/L	<0.00050	<0.00050	-	<0.00050
Bismuth	mg/L	<0.0020	<0.0020	-	<0.0020
Boron	mg/L	3.10	3.21	3.5	<0.10
Cadmium	mg/L	<0.00020	<0.00020	-	<0.00020
Calcium	mg/L	275	287	4.3	<1.0
Cesium	mg/L	<0.00050	<0.00050	-	<0.00050
Chromium	mg/L	<0.0050	<0.0050	-	<0.0050
Cobalt	mg/L	<0.0010	<0.0010	-	<0.0010
Copper	mg/L	<0.0050	<0.0050	-	<0.0050
Iron	mg/L	<0.20	<0.20	-	<0.20
Lead	mg/L	<0.0020	<0.0020	-	<0.0020
Lithium	mg/L	0.116	0.12	3.4	<0.025
Magnesium	mg/L	890	945	6.0	<0.25
Manganese	mg/L	0.003	0.0032	6.5	<0.0025
Mercury	mg/L	<0.0000050	<0.0000050	-	<0.0000050
Molybdenum	mg/L	0.0074	0.0087	16	<0.0025
Nickel	mg/L	<0.0050	<0.0050	-	<0.0050
Phosphorus	mg/L	<1.0	<1.0	-	<1.0
Potassium	mg/L	278	284	2.1	<2.5
Rubidium	mg/L	0.071	0.076	6.8	<0.010
Selenium	mg/L	<0.0020	<0.0020	-	<0.0020
Silicon	mg/L	<0.50	<0.50	-	<0.50
Silver	mg/L	<0.00025	<0.00025	-	<0.00025
Sodium	mg/L	7230	7410	2.5	<2.5
Strontium	mg/L	5.45	5.27	3.4	<0.0050
Sulfur	mg/L	674	697	3.4	<25.0
Tellurium	mg/L	<0.010	<0.010	-	<0.010
Thallium	mg/L	<0.00050	<0.00050	-	<0.00050
Thorium	mg/L	<0.0050	<0.0050	-	<0.0050

Table A.2-3 Quality Assurance and Quality Control Results for Water Quality Analysis, July 2025

Parameter	Units	QA/QC			
		July 2025			
		WQ9-S	WQ10-D	RPD	Field Blank
Tin	mg/L	<0.0025	<0.0025	-	<0.0025
Titanium	mg/L	<0.0050	<0.0050	-	<0.0050
Tungsten	mg/L	<0.0050	<0.0050	-	<0.0050
Uranium	mg/L	0.00228	0.00229	0.4	<0.00050
Vanadium	mg/L	<0.0050	<0.0050	-	<0.0050
Zinc	mg/L	<0.025	<0.025	-	<0.025
Zirconium	mg/L	<0.010	<0.010	-	<0.010
Dissolved Metals					
Aluminum	mg/L	<0.050	<0.050	-	<0.050
Antimony	mg/L	<0.0030	<0.0030	-	<0.0030
Arsenic	mg/L	<0.0030	<0.0030	-	<0.0030
Barium	mg/L	0.0101	0.0107	5.8	<0.0025
Beryllium	mg/L	<0.00050	<0.00050	-	<0.00050
Bismuth	mg/L	<0.0020	<0.0020	-	<0.0020
Boron	mg/L	2.85	2.87	0.7	<0.10
Cadmium	mg/L	<0.00020	<0.00020	-	<0.00020
Calcium	mg/L	273	270	1.1	<1.0
Cesium	mg/L	<0.00050	<0.00050	-	<0.00050
Chromium	mg/L	<0.0050	<0.0050	-	<0.0050
Cobalt	mg/L	<0.0010	<0.0010	-	<0.0010
Copper	mg/L	<0.0050	<0.0050	-	<0.0050
Iron	mg/L	<0.20	<0.20	-	<0.20
Lead	mg/L	<0.0020	<0.0020	-	<0.0020
Lithium	mg/L	0.113	0.113	0.0	<0.025
Magnesium	mg/L	897	892	0.6	<0.25
Manganese	mg/L	0.0033	<0.0025	28	<0.0025
Mercury	mg/L	<0.0000050	<0.0000050	-	<0.0000050
Molybdenum	mg/L	0.0074	0.0074	0	<0.0025
Nickel	mg/L	<0.0050	<0.0050	-	<0.0050
Phosphorus	mg/L	<1.0	<1.0	-	<1.0
Potassium	mg/L	275	280	1.8	<2.5
Rubidium	mg/L	0.079	0.079	0	<0.010
Selenium	mg/L	<0.0020	<0.0020	-	<0.0020
Silicon	mg/L	<0.50	<0.50	-	<0.50
Silver	mg/L	<0.00025	<0.00025	-	<0.00025
Sodium	mg/L	7,130	7,190	0.8	<2.5
Strontium	mg/L	5.30	5.15	2.9	<0.0050
Sulfur	mg/L	655	696	6.1	<25.0
Tellurium	mg/L	<0.010	<0.010	-	<0.010
Thallium	mg/L	<0.00050	<0.00050	-	<0.00050
Thorium	mg/L	<0.0050	<0.0050	-	<0.0050
Tin	mg/L	<0.0025	<0.0025	-	<0.0025
Titanium	mg/L	<0.0050	<0.0050	-	<0.0050
Tungsten	mg/L	<0.0050	<0.0050	-	<0.0050
Uranium	mg/L	0.00215	0.00222	3.2	<0.00050
Vanadium	mg/L	<0.0050	<0.0050	-	<0.0050
Zinc	mg/L	<0.025	<0.025	-	<0.025
Zirconium	mg/L	<0.010	<0.010	-	<0.010
Volatile Organic Compounds					
Benzene	µg/L	<0.50	<0.50	-	<0.50
Ethylbenzene	µg/L	<0.50	<0.50	-	<0.50

Table A.2-3 Quality Assurance and Quality Control Results for Water Quality Analysis, July 2025

Parameter	Units	QA/QC			
		July 2025			
		WQ9-S	WQ10-D	RPD	Field Blank
Methyl tert-butyl ether (MTBE)	µg/L	<0.50	<0.50	-	<0.50
Styrene	µg/L	<0.50	<0.50	-	<0.50
Toluene	µg/L	<0.50	<0.50	-	<0.50
Xylene, m & p-	µg/L	<0.40	<0.40	-	<0.40
Xylene, o-	µg/L	<0.30	<0.30	-	<0.30
Xylenes, Total	µg/L	<0.50	<0.50	-	<0.50
Hydrocarbons					
F2 (C10-C16)	µg/L	<300	<300	-	<300
F3 (C16-C34)	µg/L	<300	<300	-	<300
F4 (C34-C50)	µg/L	<300	<300	-	<300
F1-BTEX	µg/L	<100	<100	-	<100
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	µg/L	<0.010	<0.010	-	<0.010
Acenaphthylene	µg/L	<0.010	<0.010	-	<0.010
Acridine	µg/L	<0.010	<0.010	-	<0.010
Anthracene	µg/L	<0.010	<0.010	-	<0.010
Benzo(a)anthracene	µg/L	<0.010	<0.010	-	<0.010
Benzo(a)pyrene	µg/L	<0.0050	<0.0050	-	<0.0050
Benzo(b/j)fluoranthene	µg/L	<0.010	<0.010	-	<0.010
Benzo(b+j+k)fluoranthene	µg/L	<0.015	<0.015	-	<0.015
Benzo(g,h,i)perylene	µg/L	<0.010	<0.010	-	<0.010
Benzo(k)fluoranthene	µg/L	<0.010	<0.010	-	<0.010
Chrysene	µg/L	<0.010	<0.010	-	<0.010
Dibenzo(a,h)anthracene	µg/L	<0.0050	<0.0050	-	<0.0050
Fluoranthene	µg/L	<0.010	<0.010	-	<0.010
Fluorene	µg/L	<0.010	<0.010	-	<0.010
Indeno(1,2,3-cd)pyrene	µg/L	<0.010	<0.010	-	<0.010
Methylnaphthalene (Total)	µg/L	<0.015	<0.015	-	<0.015
Methylnaphthalene, 1-	µg/L	<0.010	<0.010	-	<0.010
Methylnaphthalene, 2-	µg/L	<0.010	<0.010	-	<0.010
Naphthalene	µg/L	<0.050	<0.050	-	<0.050
Phenanthrene	µg/L	<0.020	<0.020	-	<0.020
Pyrene	µg/L	<0.010	<0.010	-	<0.010
Quinoline	µg/L	<0.050	<0.050	-	<0.050
PAH Toxicity Equivalency (PAH TEQ)	µg/L	<0.010	<0.010	-	<0.010
PAHs, High Molecular Weight (BC AWQ)	µg/L	<0.030	<0.030	-	<0.030
PAHs, Low Molecular Weight (BC AWQ)	µg/L	<0.060	<0.060	-	<0.060
PAHs, Total (CCME sewer 18)	µg/L	<0.070	<0.070	-	<0.070
Total PAH	µg/L	<0.065	<0.065	-	<0.065

Notes:
Grey highlighted text indicates a RPD greater than 20%.
[a] The RPD was calculated using < LRL results at the LRL if one result in a duplicate pair was below the

Table A.2-4 Quality Assurance and Quality Control Results for Water Quality Analysis, August 2025

Parameter	Units	QA/QC			
		August 2025			
		WQ4	DUP-S	RPD	Field Blank
General					
Hardness (as CaCO3), dissolved	mg/L	4,240	4,310	1.6	<1.00
Hardness (as CaCO3), total	mg/L	4,620	4,520	2.2	<1.00
Anions and Nutrients					
Bromide	mg/L	49.4	44.5	10	<5.0
Chloride	mg/L	13,500	12,800	5.3	<50
Sulfate (as SO4)	mg/L	1,870	1,800	3.8	<30
Fluoride	mg/L	<1.0	<1.0	-	<1.0
Nitrate (as N)	mg/L	0.67	<0.50	-	<0.50
Nitrite (as N)	mg/L	<0.10	<0.10	-	<0.10
Ammonia, total (as N)	mg/L	0.0050	<0.0050	0	<0.0050
Total Kjeldahl Nitrogen	mg/L	0.092	0.092	0	<0.050
Phosphorus, total	mg/L	0.0176	0.0167	5.2	<0.0040
Phosphorus, total dissolved	mg/L	0.0177	0.0172	2.9	<0.0020
Organic / Inorganic Carbon					
Dissolved Organic Carbon	mg/L	1.07	1.41	27	<0.50
Total Organic Carbon	mg/L	1.22	1.03	17	<0.50
Metals					
Aluminum, dissolved	mg/L	<0.050	<0.050	-	<0.050
Aluminum, total	mg/L	0.050	<0.050	0	<0.050
Antimony, dissolved	mg/L	<0.0030	<0.0030	-	<0.0030
Antimony, total	mg/L	<0.0030	<0.0030	-	<0.0030
Arsenic, dissolved	mg/L	<0.0030	<0.0030	-	<0.0030
Arsenic, total	mg/L	<0.0030	<0.0030	-	<0.0030
Barium, dissolved	mg/L	0.0088	0.0094	6.6	<0.0025
Barium, total	mg/L	0.0096	0.009	6.5	<0.0025
Beryllium, dissolved	mg/L	<0.00050	<0.00050	-	<0.00050
Beryllium, total	mg/L	<0.00050	<0.00050	-	<0.00050
Bismuth, dissolved	mg/L	<0.0020	<0.0020	-	<0.0020
Bismuth, total	mg/L	<0.0020	<0.0020	-	<0.0020
Boron, dissolved	mg/L	2.78	2.86	2.8	<0.10
Boron, total	mg/L	3.15	3.10	1.6	<0.10
Cadmium, dissolved	mg/L	<0.00020	<0.00020	-	<0.00020
Cadmium, total	mg/L	<0.00020	<0.00020	-	<0.00020
Calcium, dissolved	mg/L	278	284	2.1	<1.0
Calcium, total	mg/L	294	302	2.7	<1.0
Cesium, dissolved	mg/L	<0.00050	<0.00050	-	<0.00050
Cesium, total	mg/L	<0.00050	<0.00050	-	<0.00050
Chromium, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Chromium, total	mg/L	<0.0050	<0.0050	-	<0.0050
Cobalt, dissolved	mg/L	<0.0010	<0.0010	-	<0.0010
Cobalt, total	mg/L	<0.0010	<0.0010	-	<0.0010
Copper, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Copper, total	mg/L	<0.0050	<0.0050	-	<0.0050
Iron, dissolved	mg/L	<0.20	<0.20	-	<0.20
Iron, total	mg/L	<0.20	<0.20	-	<0.20
Lead, dissolved	mg/L	<0.0020	<0.0020	-	<0.0020
Lead, total	mg/L	<0.0020	<0.0020	-	<0.0020
Lithium, dissolved	mg/L	0.115	0.116	0.9	<0.025
Lithium, total	mg/L	0.119	0.118	0.8	<0.025
Magnesium, dissolved	mg/L	861	875	1.6	<0.25
Magnesium, total	mg/L	944	915	3.1	<0.25

Table A.2-4 Quality Assurance and Quality Control Results for Water Quality Analysis, August 2025

Parameter	Units	QA/QC			
		August 2025			
		WQ4	DUP-S	RPD	Field Blank
Manganese, dissolved	mg/L	<0.0025	<0.0025	-	<0.0025
Manganese, total	mg/L	<0.0025	<0.0025	-	<0.0025
Mercury, dissolved	mg/L	<0.0000050	<0.0000050	-	<0.0000050
Mercury, total	mg/L	<0.0000050	<0.0000050	-	<0.0000050
Molybdenum, dissolved	mg/L	0.0078	0.0074	5.3	<0.0025
Molybdenum, total	mg/L	0.0083	0.0086	3.6	<0.0025
Nickel, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Nickel, total	mg/L	<0.0050	<0.0050	-	<0.0050
Phosphorus, dissolved	mg/L	<1.0	<1.0	-	<1.0
Phosphorus, total	mg/L	<1.3	<1.0	-	<1.0
Potassium, dissolved	mg/L	260	273	4.9	<2.5
Potassium, total	mg/L	291	308	5.7	<2.5
Rubidium, dissolved	mg/L	0.075	0.076	1.3	<0.010
Rubidium, total	mg/L	0.08	0.081	1.2	<0.010
Selenium, dissolved	mg/L	<0.0020	<0.0020	-	<0.0020
Selenium, total	mg/L	<0.0020	<0.0020	-	<0.0020
Silicon, dissolved	mg/L	<0.50	<0.50	-	<0.50
Silicon, total	mg/L	<0.50	<0.50	-	<0.50
Silver, dissolved	mg/L	<0.00025	<0.00025	-	<0.00025
Silver, total	mg/L	<0.00025	<0.00025	-	<0.00025
Sodium, dissolved	mg/L	7,260	7,410	2.0	<2.5
Sodium, total	mg/L	7,330	7,250	1.1	<2.5
Strontium, dissolved	mg/L	5.49	5.32	3.1	<0.0050
Strontium, total	mg/L	5.43	5.63	3.6	<0.0050
Sulfur, dissolved	mg/L	627	612	2.4	<25.0
Sulfur, total	mg/L	727	740	1.8	<25.0
Tellurium, dissolved	mg/L	<0.010	<0.010	-	<0.010
Tellurium, total	mg/L	<0.010	<0.010	-	<0.010
Thallium, dissolved	mg/L	<0.00050	<0.00050	-	<0.00050
Thallium, total	mg/L	<0.00050	<0.00050	-	<0.00050
Thorium, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Thorium, total	mg/L	<0.0050	<0.0050	-	<0.0050
Tin, dissolved	mg/L	<0.0025	<0.0025	-	<0.0025
Tin, total	mg/L	<0.0025	<0.0025	-	<0.0025
Titanium, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Titanium, total	mg/L	<0.0050	<0.0050	-	<0.0050
Tungsten, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Tungsten, total	mg/L	<0.0050	<0.0050	-	<0.0050
Uranium, dissolved	mg/L	0.00202	0.00207	2.4	<0.00050
Uranium, total	mg/L	0.00224	0.00241	7.3	<0.00050
Vanadium, dissolved	mg/L	<0.0050	<0.0050	-	<0.0050
Vanadium, total	mg/L	<0.0050	<0.0050	-	<0.0050
Zinc, dissolved	mg/L	<0.025	<0.025	-	<0.025
Zinc, total	mg/L	<0.025	<0.025	-	<0.025
Zirconium, dissolved	mg/L	<0.010	<0.010	-	<0.010
Zirconium, total	mg/L	<0.010	<0.010	-	<0.010
Volatile Organic Compounds					
Benzene	µg/L	<0.50	<0.50	-	<0.50
Ethylbenzene	µg/L	<0.50	<0.50	-	<0.50
Methyl-tert-butyl ether [MTBE]	µg/L	<0.50	<0.50	-	<0.50
Styrene	µg/L	<0.50	<0.50	-	<0.50
Toluene	µg/L	<0.50	<0.50	-	<0.50

Table A.2-4 Quality Assurance and Quality Control Results for Water Quality Analysis, August 2025

Parameter	Units	QA/QC			
		August 2025			
		WQ4	DUP-S	RPD	Field Blank
Xylene, m+p-	µg/L	<0.40	<0.40	-	<0.40
Xylene, o-	µg/L	<0.30	<0.30	-	<0.30
Xylenes, total	µg/L	<0.50	<0.50	-	<0.50
BTEX+Styrene, total	µg/L	<1.5	<1.5	-	<1.5
BTEX, total	µg/L	<1.0	<1.0	-	<1.0
Hydrocarbons					
F1 (C6-C10)	µg/L	<100	<100	-	<100
F1-BTEX	µg/L	<100	<100	-	<100
F2 (C10-C16)	µg/L	<100	<100	-	<100
F3 (C16-C34)	µg/L	<250	<250	-	<250
F4 (C34-C50)	µg/L	<250	<250	-	<250
TEH (C10-C50)	µg/L	<400	<400	-	<400
TEH (C16-C50)	µg/L	<400	<400	-	<400
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	µg/L	<0.010	<0.010	-	<0.010
Acenaphthylene	µg/L	<0.010	<0.010	-	<0.010
Acridine	µg/L	<0.010	<0.010	-	<0.010
Anthracene	µg/L	<0.010	<0.010	-	<0.010
B(a)P total potency equivalents [B(a)P TPE	µg/L	<0.010	<0.010	-	<0.010
Benz(a)anthracene	µg/L	<0.010	<0.010	-	<0.010
Benzo(a)pyrene	µg/L	<0.0050	<0.0050	-	<0.0050
Benzo(b+j)fluoranthene	µg/L	<0.010	<0.010	-	<0.010
Benzo(b+j+k)fluoranthene	µg/L	<0.015	<0.015	-	<0.015
Benzo(g,h,i)perylene	µg/L	<0.010	<0.010	-	<0.010
Benzo(k)fluoranthene	µg/L	<0.010	<0.010	-	<0.010
Chrysene	µg/L	<0.010	<0.010	-	<0.010
Dibenz(a,h)anthracene	µg/L	<0.0050	<0.0050	-	<0.0050
Fluoranthene	µg/L	<0.010	<0.010	-	<0.010
Fluorene	µg/L	<0.010	<0.010	-	<0.010
Indeno(1,2,3-c,d)pyrene	µg/L	<0.010	<0.010	-	<0.010
Methylnaphthalene, 1+2-	µg/L	<0.015	<0.015	-	<0.015
Methylnaphthalene, 1-	µg/L	<0.010	<0.010	-	<0.010
Methylnaphthalene, 2-	µg/L	<0.010	<0.010	-	<0.010
Naphthalene	µg/L	<0.050	<0.050	-	<0.050
PAHs, high molecular weight (BC AWQ)	µg/L	<0.030	<0.030	-	<0.030
PAHs, low molecular weight (BC AWQ)	µg/L	<0.060	<0.060	-	<0.060
PAHs, total (CCME sewer 18)	µg/L	<0.070	<0.070	-	<0.070
PAHs, total (EPA 16)	µg/L	<0.065	<0.065	-	<0.065
Phenanthrene	µg/L	<0.020	<0.020	-	<0.020
Pyrene	µg/L	<0.010	<0.010	-	<0.010
Quinoline	µg/L	<0.050	<0.050	-	<0.050

Notes:
Grey highlighted text indicates a RPD greater than 20%.
[a] The RPD was calculated using < LRL results at the LRL if one result in a duplicate pair was below the LRL. The RPD was not calculated if both results were <LDL.

A.3 CTD Profiles

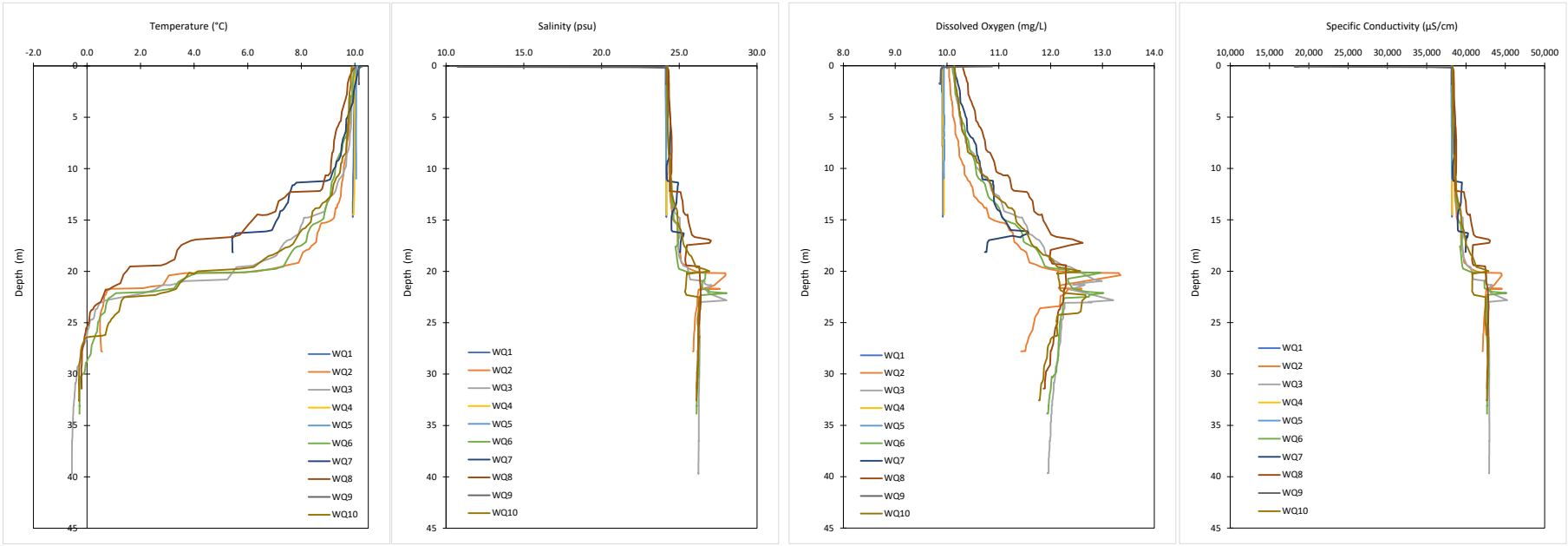
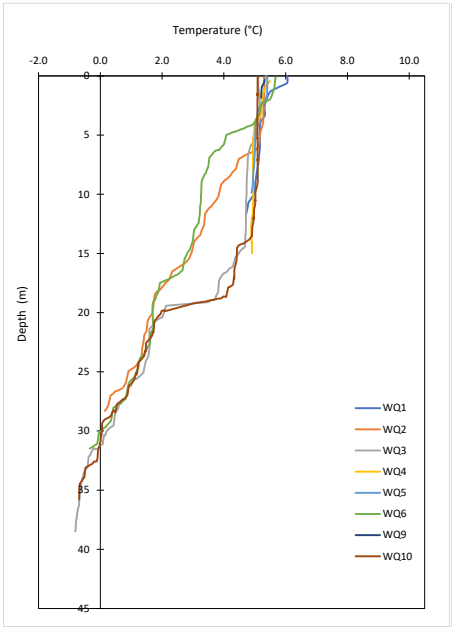


Figure A.3-1 Vertical Water Column Profiles for the Water Quality Sampling Locations in Grays Bay, August 2024

Figure A.3-1 Vertical Water Column Profiles for the Water Quality Sampling Locations in Grays Bay, August 2024



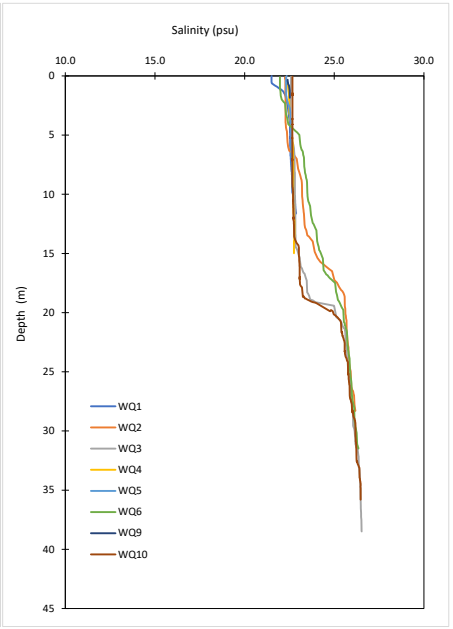
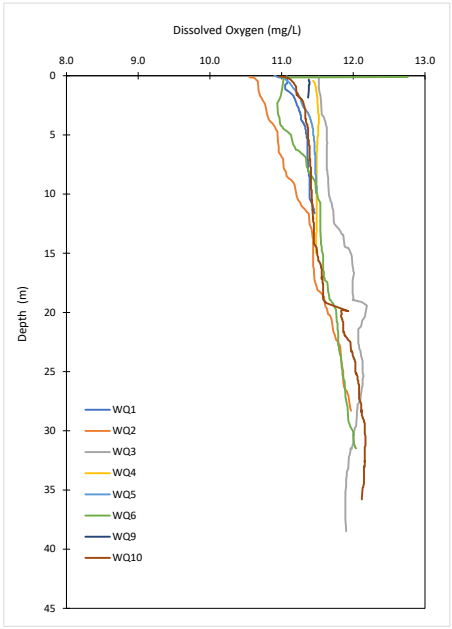


Figure A.3-2 Vertical Water Column Profiles for the Water Quality Sampling Locations in Grays Bay, July 2025



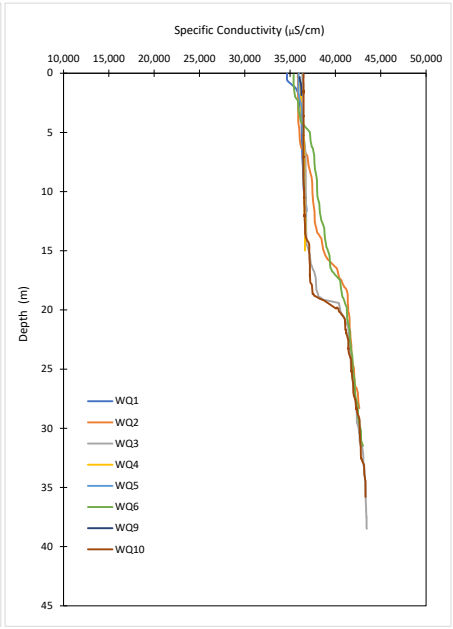


Figure A.3-2 Vertical Water Column Profiles for the Water Quality Sampling Locations in Grays Bay, July 2025

Summary of Sea Water Monitoring Data
GBRP

Table A.3-1 CTD Profiles for WQ1 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:32:05	14.673	9.919	7.96	102.4	9.92	171.3	24.17	38218	27210	1.18
2024-08-25	13:32:06	14.674	9.919	7.96	102.4	9.92	171.4	24.17	38219	27210	1.20
2024-08-25	13:32:07	14.679	9.919	7.96	102.4	9.92	171.4	24.17	38219	27210	1.20
2024-08-25	13:32:08	14.683	9.920	7.96	102.4	9.92	171.4	24.17	38219	27211	1.22
2024-08-25	13:32:09	14.686	9.920	7.96	102.4	9.92	171.4	24.17	38219	27211	1.23
2024-08-25	13:32:10	14.686	9.921	7.96	102.4	9.92	171.4	24.17	38219	27211	1.23
2024-08-25	13:32:11	14.680	9.921	7.96	102.4	9.92	171.5	24.17	38219	27212	1.56
2024-08-25	13:32:12	13.777	9.921	7.96	102.4	9.92	171.5	24.17	38219	27212	2.47
2024-08-25	13:32:13	13.311	9.922	7.96	102.4	9.92	171.5	24.17	38218	27212	3.97
2024-08-25	13:32:14	12.890	9.923	7.96	102.4	9.92	171.5	24.17	38218	27212	5.32
2024-08-25	13:32:15	12.639	9.924	7.96	102.4	9.92	171.6	24.17	38217	27213	6.85
2024-08-25	13:32:16	12.440	9.926	7.96	102.4	9.92	171.6	24.17	38216	27212	12.92
2024-08-25	13:32:17	12.269	9.926	7.96	102.4	9.92	171.6	24.17	38214	27212	17.24
2024-08-25	13:32:18	12.098	9.929	7.96	102.4	9.92	171.6	24.17	38212	27212	19.23
2024-08-25	13:32:19	11.143	9.930	7.96	102.4	9.92	171.6	24.17	38209	27211	22.12
2024-08-25	13:32:20	10.857	9.932	7.96	102.4	9.92	171.7	24.16	38206	27211	11.38
2024-08-25	13:32:21	10.674	9.934	7.96	102.4	9.92	171.7	24.16	38203	27210	12.19
2024-08-25	13:32:22	10.494	9.937	7.96	102.4	9.92	171.7	24.16	38201	27210	8.72
2024-08-25	13:32:23	10.362	9.939	7.96	102.4	9.92	171.7	24.16	38197	27209	14.46
2024-08-25	13:32:24	10.136	9.941	7.96	102.4	9.92	171.7	24.16	38194	27209	12.83
2024-08-25	13:32:25	9.963	9.944	7.96	102.4	9.92	171.8	24.15	38191	27208	11.11
2024-08-25	13:32:26	9.808	9.946	7.96	102.4	9.92	171.8	24.15	38188	27207	11.36
2024-08-25	13:32:27	8.826	9.948	7.96	102.4	9.92	171.8	24.15	38185	27207	11.66
2024-08-25	13:32:28	8.429	9.950	7.96	102.4	9.92	171.8	24.15	38182	27206	10.95
2024-08-25	13:32:29	8.320	9.951	7.96	102.4	9.92	171.8	24.15	38181	27206	11.07
2024-08-25	13:32:30	8.157	9.952	7.96	102.4	9.92	171.8	24.15	38179	27206	11.18
2024-08-25	13:32:31	7.930	9.953	7.96	102.4	9.92	171.8	24.15	38177	27205	12.93
2024-08-25	13:32:32	7.769	9.953	7.96	102.4	9.91	171.9	24.15	38177	27205	13.39
2024-08-25	13:32:33	7.047	9.954	7.96	102.4	9.91	171.9	24.15	38177	27205	15.46
2024-08-25	13:32:34	6.586	9.954	7.96	102.4	9.91	171.9	24.15	38177	27206	16.51
2024-08-25	13:32:35	6.326	9.955	7.96	102.4	9.91	171.9	24.15	38175	27205	17.43
2024-08-25	13:32:36	6.229	9.956	7.96	102.4	9.91	171.9	24.14	38174	27205	17.55
2024-08-25	13:32:37	6.048	9.957	7.96	102.4	9.91	171.9	24.14	38172	27205	17.41
2024-08-25	13:32:38	5.959	9.960	7.96	102.3	9.91	171.9	24.14	38170	27205	16.87
2024-08-25	13:32:39	5.842	9.962	7.96	102.3	9.91	171.9	24.14	38168	27205	17.95
2024-08-25	13:32:40	4.920	9.964	7.96	102.3	9.91	172.0	24.14	38165	27205	17.61
2024-08-25	13:32:41	4.835	9.967	7.96	102.3	9.91	172.0	24.14	38162	27204	17.77
2024-08-25	13:32:42	4.473	9.970	7.96	102.4	9.91	172.0	24.13	38158	27204	17.28
2024-08-25	13:32:43	4.147	9.974	7.96	102.4	9.91	172.0	24.13	38155	27204	18.94
2024-08-25	13:32:44	4.006	9.977	7.96	102.4	9.91	172.0	24.13	38152	27205	19.91
2024-08-25	13:32:45	3.818	9.982	7.96	102.4	9.91	172.0	24.13	38148	27205	20.09
2024-08-25	13:32:46	3.600	9.986	7.96	102.4	9.91	172.0	24.13	38144	27205	20.14
2024-08-25	13:32:47	2.746	9.990	7.96	102.4	9.91	172.0	24.12	38138	27204	20.21
2024-08-25	13:32:48	2.464	9.994	7.96	102.4	9.90	172.0	24.12	38134	27204	20.25
2024-08-25	13:32:49	2.100	9.998	7.96	102.4	9.90	172.0	24.12	38132	27205	19.95
2024-08-25	13:32:50	2.052	10.001	7.96	102.4	9.90	172.0	24.12	38130	27207	19.56
2024-08-25	13:32:51	1.855	10.005	7.96	102.4	9.90	172.0	24.12	38128	27208	19.72
2024-08-25	13:32:52	1.711	10.009	7.96	102.4	9.90	172.1	24.12	38128	27211	20.09
2024-08-25	13:32:53	1.559	10.013	7.96	102.4	9.90	172.1	24.12	38130	27215	20.71
2024-08-25	13:32:54	1.430	10.018	7.96	102.4	9.90	172.1	24.12	38132	27220	19.95

Summary of Sea Water Monitoring Data
GBRP

Table A.3-1 CTD Profiles for WQ1 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:32:55	0.600	10.025	7.96	102.4	9.90	172.1	24.12	38135	27227	19.68
2024-08-25	13:32:56	0.355	10.032	7.96	102.4	9.90	172.1	24.12	38138	27235	20.47
2024-08-25	13:32:57	0.019	10.043	7.97	102.5	9.91	172.1	24.13	38141	27243	20.27
2024-08-25	13:32:58	0.077	10.054	7.97	102.5	9.91	172.1	24.13	38151	27260	19.09

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Table A.3-2 CTD Profiles for WQ2 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:41:52	27.802	0.565	7.98	95.1	11.43	201.0	25.88	42082	22444	2.58
2024-08-25	13:41:53	27.791	0.554	7.98	95.3	11.45	201.1	25.89	42100	22443	2.68
2024-08-25	13:41:54	27.783	0.541	7.98	95.5	11.48	201.1	25.90	42119	22443	2.38
2024-08-25	13:41:55	27.777	0.531	7.98	95.7	11.51	201.1	25.91	42134	22442	2.38
2024-08-25	13:41:56	27.168	0.520	7.98	95.9	11.53	201.2	25.92	42149	22442	2.38
2024-08-25	13:41:57	26.958	0.512	7.98	96.0	11.55	201.2	25.92	42164	22443	2.39
2024-08-25	13:41:58	26.364	0.502	7.98	96.2	11.58	201.3	25.94	42183	22445	2.48
2024-08-25	13:41:59	26.161	0.495	7.98	96.4	11.60	201.3	25.95	42202	22449	2.55
2024-08-25	13:42:00	25.906	0.489	7.98	96.6	11.63	201.3	25.96	42228	22458	2.43
2024-08-25	13:42:01	25.722	0.486	7.98	96.8	11.65	201.4	25.98	42253	22470	2.35
2024-08-25	13:42:02	24.946	0.487	7.98	97.0	11.68	201.4	26.00	42276	22482	2.34
2024-08-25	13:42:03	24.489	0.490	7.98	97.2	11.70	201.4	26.02	42307	22501	2.26
2024-08-25	13:42:04	24.205	0.499	7.98	97.5	11.73	201.5	26.04	42343	22528	2.23
2024-08-25	13:42:05	23.997	0.516	7.97	97.8	11.76	201.5	26.06	42370	22553	2.04
2024-08-25	13:42:06	23.805	0.536	7.97	98.0	11.77	201.5	26.09	42398	22587	1.73
2024-08-25	13:42:07	23.603	0.565	7.97	98.3	11.80	201.5	26.11	42430	22624	1.58
2024-08-25	13:42:08	23.389	0.599	7.97	101.6	12.18	201.6	26.15	42468	22675	1.48
2024-08-25	13:42:09	22.419	0.648	7.97	101.8	12.19	201.6	26.17	42490	22721	1.48
2024-08-25	13:42:10	22.264	0.699	7.97	102.6	12.27	201.6	26.20	42525	22787	1.46
2024-08-25	13:42:11	21.769	0.767	7.97	103.4	12.33	201.6	26.24	42569	22859	1.45
2024-08-25	13:42:12	21.699	0.841	7.97	107.1	12.60	201.7	27.62	44577	24007	1.41
2024-08-25	13:42:13	21.642	2.101	7.97	105.5	12.15	201.7	26.63	42833	24067	1.32
2024-08-25	13:42:14	21.498	2.365	7.97	106.7	12.18	201.7	27.02	43326	24595	1.30
2024-08-25	13:42:15	21.349	2.836	7.96	108.0	12.20	201.8	27.25	43575	25072	1.28
2024-08-25	13:42:16	20.391	3.059	7.96	119.8	13.35	201.8	27.98	44576	25895	1.30
2024-08-25	13:42:17	20.173	3.667	7.96	121.1	13.31	201.8	27.96	44451	26267	1.30
2024-08-25	13:42:18	20.149	5.461	7.96	118.0	12.50	201.8	26.61	42181	26440	1.27
2024-08-25	13:42:19	20.011	6.312	7.95	116.9	12.20	201.9	26.09	41327	26504	1.26
2024-08-25	13:42:20	19.772	6.879	7.95	116.0	11.95	201.9	25.67	40639	26573	1.26
2024-08-25	13:42:21	19.556	7.229	7.95	115.5	11.80	202.0	25.48	40331	26631	1.25
2024-08-25	13:42:22	19.405	7.456	7.95	115.3	11.74	202.0	25.37	40142	26691	1.24
2024-08-25	13:42:23	19.259	7.724	7.95	115.1	11.66	202.0	25.24	39933	26734	1.23
2024-08-25	13:42:24	19.158	7.901	7.95	114.9	11.59	202.1	25.13	39762	26776	1.22
2024-08-25	13:42:25	18.144	8.062	7.95	114.7	11.53	202.1	25.06	39644	26805	1.21
2024-08-25	13:42:26	17.938	8.178	7.95	114.4	11.47	202.1	24.99	39533	26831	1.18
2024-08-25	13:42:27	17.847	8.288	7.95	114.2	11.43	202.1	24.94	39457	26853	1.17
2024-08-25	13:42:28	17.522	8.376	7.96	114.0	11.38	202.1	24.89	39374	26872	1.17
2024-08-25	13:42:29	17.346	8.466	7.96	113.8	11.35	202.1	24.90	39380	26936	1.15
2024-08-25	13:42:30	17.155	8.553	7.96	113.5	11.30	202.1	24.90	39364	26998	1.14
2024-08-25	13:42:31	16.238	8.603	7.96	113.3	11.27	202.1	24.88	39342	27015	1.12
2024-08-25	13:42:32	15.975	8.656	7.96	112.9	11.20	202.1	24.88	39328	27051	1.11
2024-08-25	13:42:33	15.478	8.711	7.97	112.5	11.16	202.1	24.87	39307	27072	1.11
2024-08-25	13:42:34	15.287	8.755	7.97	112.1	11.10	202.0	24.85	39274	27088	1.11
2024-08-25	13:42:35	15.260	8.901	7.97	111.6	11.03	202.0	24.75	39128	27096	1.11
2024-08-25	13:42:36	15.167	9.001	7.97	111.2	10.97	202.0	24.69	39030	27103	1.12
2024-08-25	13:42:37	15.054	9.094	7.97	110.9	10.91	201.9	24.63	38935	27107	1.12
2024-08-25	13:42:38	14.932	9.169	7.98	110.5	10.86	201.9	24.59	38871	27112	1.13
2024-08-25	13:42:39	14.781	9.225	7.98	110.1	10.81	201.8	24.55	38812	27118	1.13
2024-08-25	13:42:40	13.820	9.284	7.98	109.7	10.76	201.8	24.51	38754	27121	1.13
2024-08-25	13:42:41	13.837	9.324	7.98	109.4	10.72	201.7	24.49	38724	27127	1.14
2024-08-25	13:42:42	13.460	9.355	7.98	109.1	10.68	201.6	24.48	38695	27132	1.13
2024-08-25	13:42:43	13.359	9.387	7.99	108.8	10.65	201.5	24.46	38670	27135	1.12
2024-08-25	13:42:44	13.211	9.411	7.99	108.4	10.61	201.4	24.44	38644	27138	1.12
2024-08-25	13:42:45	12.980	9.436	7.99	108.2	10.58	201.3	24.43	38625	27140	1.11
2024-08-25	13:42:46	12.814	9.455	7.99	107.9	10.55	201.3	24.42	38605	27142	1.11
2024-08-25	13:42:47	12.695	9.473	7.99	107.6	10.52	201.2	24.41	38586	27143	1.11
2024-08-25	13:42:48	11.801	9.490	7.99	107.4	10.49	201.1	24.40	38572	27144	1.13
2024-08-25	13:42:49	11.686	9.502	7.99	107.1	10.47	201.0	24.39	38559	27146	1.12

Table A.3-2 CTD Profiles for WQ2 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:42:50	11.283	9.515	7.99	106.9	10.44	200.9	24.38	38551	27148	1.13
2024-08-25	13:42:51	11.237	9.526	7.99	106.8	10.42	200.9	24.38	38542	27151	1.11
2024-08-25	13:42:52	11.144	9.538	7.99	106.6	10.40	200.8	24.37	38533	27152	1.12
2024-08-25	13:42:53	10.972	9.548	7.99	106.4	10.39	200.7	24.37	38524	27154	1.12
2024-08-25	13:42:54	10.821	9.559	7.99	106.3	10.37	200.7	24.36	38515	27155	1.10
2024-08-25	13:42:55	10.674	9.568	7.99	106.1	10.35	200.6	24.36	38509	27158	1.11
2024-08-25	13:42:56	10.584	9.577	7.99	106.0	10.34	200.5	24.35	38502	27160	1.11
2024-08-25	13:42:57	9.731	9.586	7.99	105.9	10.33	200.5	24.35	38498	27163	1.12
2024-08-25	13:42:58	9.645	9.596	8.00	105.8	10.31	200.4	24.35	38492	27166	1.13
2024-08-25	13:42:59	9.527	9.605	8.00	105.7	10.30	200.3	24.34	38484	27168	1.14
2024-08-25	13:43:00	9.364	9.616	8.00	105.6	10.29	200.3	24.34	38478	27171	1.16
2024-08-25	13:43:01	9.245	9.626	8.00	105.5	10.28	200.2	24.33	38471	27174	1.15
2024-08-25	13:43:02	9.136	9.638	8.00	105.4	10.27	200.2	24.33	38465	27177	1.14
2024-08-25	13:43:03	9.028	9.648	8.00	105.4	10.26	200.1	24.33	38458	27181	1.14
2024-08-25	13:43:04	8.923	9.661	8.00	105.3	10.25	200.1	24.32	38452	27185	1.16
2024-08-25	13:43:05	8.802	9.672	8.00	105.2	10.24	200.0	24.32	38443	27189	1.15
2024-08-25	13:43:06	7.989	9.685	8.00	105.1	10.23	200.0	24.31	38435	27191	1.15
2024-08-25	13:43:07	7.734	9.697	8.00	105.1	10.22	199.9	24.31	38427	27195	1.15
2024-08-25	13:43:08	7.374	9.710	8.00	105.0	10.22	199.9	24.30	38417	27197	1.13
2024-08-25	13:43:09	7.238	9.721	8.00	105.0	10.21	199.8	24.30	38408	27199	1.14
2024-08-25	13:43:10	7.121	9.734	8.00	104.9	10.20	199.8	24.29	38399	27201	1.13
2024-08-25	13:43:11	6.995	9.745	8.00	104.8	10.19	199.7	24.28	38389	27203	1.12
2024-08-25	13:43:12	6.892	9.757	8.00	104.7	10.18	199.7	24.28	38380	27206	1.12
2024-08-25	13:43:13	6.731	9.767	8.00	104.7	10.17	199.6	24.27	38373	27208	1.11
2024-08-25	13:43:14	6.644	9.779	8.00	104.6	10.16	199.6	24.27	38364	27211	1.11
2024-08-25	13:43:15	5.826	9.788	8.00	104.6	10.16	199.5	24.26	38356	27212	1.11
2024-08-25	13:43:16	5.531	9.799	8.00	104.5	10.15	199.5	24.26	38348	27214	1.11
2024-08-25	13:43:17	5.355	9.808	8.00	104.4	10.14	199.5	24.25	38342	27216	1.12
2024-08-25	13:43:18	5.239	9.818	8.00	104.4	10.13	199.4	24.25	38334	27218	1.12
2024-08-25	13:43:19	5.117	9.826	8.00	104.3	10.13	199.4	24.25	38328	27219	1.11
2024-08-25	13:43:20	4.984	9.835	8.00	104.3	10.12	199.3	24.24	38322	27221	1.12
2024-08-25	13:43:21	4.874	9.844	8.00	104.2	10.11	199.3	24.24	38315	27224	1.11
2024-08-25	13:43:22	4.048	9.853	8.00	104.2	10.11	199.2	24.23	38310	27226	1.12
2024-08-25	13:43:23	3.783	9.861	8.00	104.1	10.10	199.2	24.23	38304	27228	1.11
2024-08-25	13:43:24	3.491	9.870	8.00	104.1	10.10	199.2	24.23	38298	27231	1.12
2024-08-25	13:43:25	3.361	9.880	8.00	104.1	10.09	199.1	24.22	38292	27233	1.11
2024-08-25	13:43:26	3.238	9.887	8.00	104.0	10.08	199.1	24.22	38287	27235	1.11
2024-08-25	13:43:27	3.004	9.896	8.00	104.0	10.08	199.0	24.22	38282	27237	1.10
2024-08-25	13:43:28	2.828	9.903	8.00	103.9	10.07	199.0	24.21	38277	27240	1.11
2024-08-25	13:43:29	1.830	9.911	8.00	103.9	10.06	199.0	24.21	38273	27242	1.10
2024-08-25	13:43:30	1.677	9.917	8.00	103.8	10.06	198.9	24.21	38268	27244	1.10
2024-08-25	13:43:31	1.433	9.925	8.00	103.8	10.05	198.9	24.21	38266	27247	1.11
2024-08-25	13:43:32	1.460	9.931	8.00	103.8	10.05	198.8	24.21	38266	27253	1.10
2024-08-25	13:43:33	1.341	9.938	8.00	103.7	10.05	198.8	24.21	38265	27256	1.10
2024-08-25	13:43:34	1.148	9.945	8.00	103.7	10.04	198.8	24.21	38266	27262	1.09
2024-08-25	13:43:35	0.205	9.953	8.00	103.7	10.04	198.7	24.21	38267	27269	1.08
2024-08-25	13:43:36	0.217	9.961	8.00	103.7	10.04	198.7	24.22	38276	27281	1.09

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-3 CTD Profiles for WQ3 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:50:13	39.671	-0.556	7.93	96.7	11.94	193.9	26.23	42930	21975	8.05
2024-08-25	13:50:14	39.645	-0.557	7.93	96.7	11.94	193.9	26.23	42931	21975	8.86
2024-08-25	13:50:15	39.654	-0.559	7.93	96.7	11.95	194.0	26.23	42933	21974	7.41
2024-08-25	13:50:16	39.665	-0.560	7.93	96.7	11.95	194.0	26.23	42934	21974	6.19
2024-08-25	13:50:17	39.670	-0.561	7.93	96.8	11.95	194.0	26.23	42936	21974	5.71
2024-08-25	13:50:18	39.635	-0.562	7.93	96.8	11.96	194.0	26.23	42940	21976	6.20
2024-08-25	13:50:19	38.655	-0.563	7.93	96.8	11.96	194.0	26.23	42941	21975	5.89
2024-08-25	13:50:20	38.592	-0.563	7.93	96.8	11.96	194.1	26.24	42944	21976	5.72
2024-08-25	13:50:21	38.294	-0.563	7.93	96.8	11.96	194.1	26.24	42947	21977	5.36
2024-08-25	13:50:22	38.005	-0.563	7.93	96.9	11.97	194.1	26.24	42948	21978	5.05
2024-08-25	13:50:23	37.902	-0.563	7.93	96.9	11.97	194.1	26.24	42951	21980	4.85
2024-08-25	13:50:24	37.661	-0.562	7.93	96.9	11.97	194.1	26.24	42954	21983	4.68
2024-08-25	13:50:25	37.289	-0.561	7.93	97.0	11.98	194.1	26.25	42958	21985	4.61
2024-08-25	13:50:26	36.721	-0.559	7.93	97.0	11.98	194.2	26.25	42961	21988	4.50
2024-08-25	13:50:27	36.525	-0.557	7.93	97.0	11.98	194.2	26.25	42964	21991	4.37
2024-08-25	13:50:28	36.540	-0.555	7.93	97.1	11.99	194.2	26.25	42966	21995	4.05
2024-08-25	13:50:29	36.432	-0.551	7.93	97.1	11.99	194.2	26.26	42968	21998	3.64
2024-08-25	13:50:30	36.223	-0.548	7.93	97.1	11.99	194.2	26.26	42970	22002	3.40
2024-08-25	13:50:31	36.037	-0.543	7.93	97.2	12.00	194.2	26.26	42970	22005	3.28
2024-08-25	13:50:32	34.819	-0.539	7.93	97.2	12.00	194.2	26.26	42968	22009	3.12
2024-08-25	13:50:33	34.699	-0.534	7.93	97.2	12.00	194.3	26.26	42968	22012	2.84
2024-08-25	13:50:34	34.650	-0.529	7.93	97.3	12.01	194.3	26.26	42966	22016	2.73
2024-08-25	13:50:35	34.203	-0.523	7.93	97.3	12.01	194.3	26.26	42965	22020	2.61
2024-08-25	13:50:36	33.997	-0.517	7.93	97.4	12.01	194.3	26.26	42963	22023	2.67
2024-08-25	13:50:37	33.835	-0.511	7.93	97.4	12.02	194.3	26.26	42959	22026	2.66
2024-08-25	13:50:38	33.182	-0.505	7.93	97.5	12.02	194.3	26.26	42958	22031	2.75
2024-08-25	13:50:39	33.072	-0.498	7.93	97.5	12.02	194.3	26.26	42957	22035	2.88
2024-08-25	13:50:40	33.068	-0.492	7.93	97.6	12.03	194.3	26.26	42954	22040	2.94
2024-08-25	13:50:41	32.561	-0.484	7.93	97.6	12.03	194.3	26.26	42952	22045	2.90
2024-08-25	13:50:42	32.439	-0.477	7.93	97.7	12.04	194.3	26.26	42951	22051	2.95
2024-08-25	13:50:43	32.307	-0.468	7.93	97.7	12.04	194.3	26.26	42950	22057	2.97
2024-08-25	13:50:44	31.881	-0.461	7.93	97.8	12.05	194.3	26.26	42950	22063	3.22
2024-08-25	13:50:45	31.565	-0.450	7.93	97.9	12.06	194.3	26.27	42950	22071	3.50
2024-08-25	13:50:46	30.870	-0.438	7.93	98.0	12.06	194.4	26.27	42948	22080	3.58
2024-08-25	13:50:47	30.911	-0.426	7.93	98.0	12.07	194.4	26.27	42947	22090	3.63
2024-08-25	13:50:48	30.822	-0.412	7.93	98.1	12.07	194.4	26.27	42947	22101	3.68
2024-08-25	13:50:49	30.594	-0.398	7.93	98.3	12.08	194.4	26.28	42954	22117	3.64
2024-08-25	13:50:50	29.972	-0.378	7.94	98.4	12.09	194.4	26.29	42960	22134	3.68
2024-08-25	13:50:51	29.275	-0.358	7.94	98.5	12.10	194.4	26.29	42961	22153	3.67
2024-08-25	13:50:52	29.213	-0.332	7.94	98.7	12.11	194.4	26.3	42961	22172	3.87
2024-08-25	13:50:53	29.125	-0.308	7.94	98.8	12.12	194.4	26.3	42959	22193	3.77
2024-08-25	13:50:54	28.922	-0.278	7.94	99.0	12.13	194.4	26.3	42954	22213	3.67
2024-08-25	13:50:55	28.015	-0.241	7.94	99.1	12.14	194.4	26.31	42953	22241	3.50
2024-08-25	13:50:56	27.606	-0.215	7.94	99.3	12.15	194.4	26.31	42950	22261	3.48
2024-08-25	13:50:57	27.492	-0.182	7.94	99.5	12.16	194.4	26.32	42943	22288	3.36
2024-08-25	13:50:58	27.238	-0.142	7.94	99.6	12.17	194.4	26.32	42934	22312	3.30
2024-08-25	13:50:59	27.067	-0.105	7.94	99.8	12.18	194.4	26.32	42921	22340	2.86
2024-08-25	13:51:00	26.834	-0.061	7.94	100.0	12.19	194.4	26.32	42909	22365	2.73
2024-08-25	13:51:01	26.631	-0.021	7.94	100.2	12.19	194.4	26.31	42890	22393	2.66
2024-08-25	13:51:02	25.725	0.026	7.95	100.3	12.20	194.4	26.31	42867	22414	2.56
2024-08-25	13:51:03	25.485	0.067	7.95	100.5	12.21	194.4	26.3	42844	22441	2.45
2024-08-25	13:51:04	24.794	0.113	7.95	100.6	12.21	194.4	26.29	42825	22464	2.41
2024-08-25	13:51:05	24.692	0.154	7.95	100.8	12.22	194.4	26.3	42817	22498	2.30

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-3 CTD Profiles for WQ3 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:51:06	24.686	0.205	7.95	101.0	12.23	194.4	26.31	42821	22536	2.17
2024-08-25	13:51:07	24.558	0.255	7.95	101.3	12.24	194.4	26.32	42816	22580	1.98
2024-08-25	13:51:08	23.713	0.317	7.95	101.5	12.25	194.4	26.32	42809	22620	1.82
2024-08-25	13:51:09	23.637	0.376	7.95	101.8	12.27	194.4	26.32	42792	22666	1.73
2024-08-25	13:51:10	23.084	0.466	7.95	102.0	12.27	194.4	26.32	42768	22719	1.70
2024-08-25	13:51:11	23.037	0.512	7.95	106.5	12.79	194.4	26.35	42790	22776	1.69
2024-08-25	13:51:12	22.985	0.599	7.95	106.3	12.73	194.3	26.37	42805	22845	1.69
2024-08-25	13:51:13	22.819	0.691	7.95	110.6	13.21	194.3	28.04	45246	24238	1.68
2024-08-25	13:51:14	22.147	2.079	7.95	110.3	12.69	194.3	26.89	43209	24246	1.67
2024-08-25	13:51:15	21.786	2.526	7.95	108.4	12.38	194.3	26.71	42841	24451	1.66
2024-08-25	13:51:16	21.329	2.824	7.95	112.4	12.66	194.3	27.08	43317	24970	1.64
2024-08-25	13:51:17	21.333	3.086	7.95	111.1	12.43	194.3	26.82	42895	24941	1.62
2024-08-25	13:51:18	21.175	3.385	7.95	112.9	12.58	194.3	26.61	42520	24966	1.61
2024-08-25	13:51:19	20.949	3.632	7.95	117.4	12.99	194.3	26.64	42528	25171	1.61
2024-08-25	13:51:20	20.788	5.234	7.95	116.8	12.83	194.3	25.7	40907	25405	1.58
2024-08-25	13:51:21	19.589	5.581	7.95	116.4	12.38	194.3	25.52	40589	25534	1.56
2024-08-25	13:51:22	19.448	6.191	7.95	116.4	12.24	194.4	25.25	40114	25703	1.54
2024-08-25	13:51:23	18.957	6.585	7.95	116.1	12.07	194.4	25.1	39852	25835	1.56
2024-08-25	13:51:24	18.776	6.792	7.95	115.9	12.03	194.4	25.06	39770	25920	1.56
2024-08-25	13:51:25	18.626	6.951	7.95	115.8	11.96	194.4	25.01	39679	26000	1.54
2024-08-25	13:51:26	18.463	7.071	7.95	115.7	11.91	194.4	24.98	39626	26057	1.53
2024-08-25	13:51:27	17.676	7.244	7.95	115.6	11.87	194.4	24.94	39550	26137	1.50
2024-08-25	13:51:28	17.259	7.352	7.95	115.5	11.82	194.4	24.91	39497	26184	1.50
2024-08-25	13:51:29	16.980	7.484	7.95	115.4	11.78	194.4	24.88	39442	26234	1.49
2024-08-25	13:51:30	16.872	7.619	7.96	115.3	11.73	194.4	24.94	39517	26387	1.48
2024-08-25	13:51:31	16.652	7.715	7.96	115.2	11.68	194.4	25.02	39612	26534	1.48
2024-08-25	13:51:32	16.486	7.814	7.96	115.0	11.64	194.4	25.03	39628	26611	1.49
2024-08-25	13:51:33	16.375	7.894	7.96	114.7	11.58	194.4	25.05	39643	26691	1.48
2024-08-25	13:51:34	15.590	7.979	7.96	114.5	11.54	194.4	25.04	39627	26736	1.48
2024-08-25	13:51:35	15.241	8.055	7.97	114.2	11.49	194.4	25.03	39601	26777	1.49
2024-08-25	13:51:36	14.777	8.100	7.97	114.0	11.45	194.3	25.03	39591	26812	1.49
2024-08-25	13:51:37	14.759	8.264	7.97	113.7	11.39	194.3	24.97	39492	26852	1.48
2024-08-25	13:51:38	14.634	8.408	7.97	113.5	11.33	194.3	24.89	39370	26893	1.47
2024-08-25	13:51:39	14.468	8.556	7.97	113.2	11.27	194.2	24.83	39274	26926	1.48
2024-08-25	13:51:40	14.348	8.702	7.97	112.9	11.21	194.2	24.75	39145	26960	1.50
2024-08-25	13:51:41	14.248	8.791	7.98	112.5	11.15	194.2	24.72	39089	26976	1.50
2024-08-25	13:51:42	14.148	8.884	7.98	112.2	11.10	194.1	24.67	39006	27000	1.51
2024-08-25	13:51:43	13.128	8.981	7.98	111.9	11.04	194.1	24.63	38947	27022	1.51
2024-08-25	13:51:44	12.680	9.080	7.98	111.6	11.00	194.0	24.59	38873	27052	1.50
2024-08-25	13:51:45	12.560	9.161	7.98	111.3	10.95	193.9	24.56	38828	27074	1.50
2024-08-25	13:51:46	12.404	9.226	7.98	111.0	10.90	193.9	24.53	38788	27102	1.49
2024-08-25	13:51:47	12.167	9.279	7.98	110.7	10.86	193.8	24.52	38765	27119	1.48
2024-08-25	13:51:48	11.370	9.356	7.99	110.4	10.82	193.7	24.49	38719	27150	1.46
2024-08-25	13:51:49	11.059	9.406	7.99	110.1	10.77	193.6	24.48	38693	27162	1.46
2024-08-25	13:51:50	10.854	9.473	7.99	109.8	10.73	193.6	24.44	38635	27177	1.46
2024-08-25	13:51:51	10.665	9.525	7.99	109.5	10.69	193.5	24.42	38603	27188	1.47
2024-08-25	13:51:52	10.448	9.567	7.99	109.2	10.65	193.4	24.4	38563	27195	1.47
2024-08-25	13:51:53	10.150	9.607	7.99	108.9	10.62	193.3	24.38	38536	27203	1.47
2024-08-25	13:51:54	9.929	9.639	7.99	108.6	10.58	193.2	24.36	38511	27212	1.47
2024-08-25	13:51:55	9.757	9.672	7.99	108.4	10.55	193.2	24.35	38490	27218	1.47
2024-08-25	13:51:56	8.568	9.698	7.99	108.1	10.52	193.1	24.34	38467	27224	1.48
2024-08-25	13:51:57	8.421	9.723	8.00	107.9	10.49	193.0	24.33	38450	27229	1.48
2024-08-25	13:51:58	8.281	9.743	8.00	107.6	10.46	192.9	24.31	38430	27232	1.48

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-3 CTD Profiles for WQ3 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:51:59	8.116	9.764	8.00	107.4	10.44	192.8	24.3	38415	27234	1.48
2024-08-25	13:52:00	7.892	9.780	8.00	107.2	10.41	192.8	24.29	38395	27233	1.48
2024-08-25	13:52:01	7.656	9.795	8.00	107.0	10.39	192.7	24.28	38382	27234	1.49
2024-08-25	13:52:02	7.478	9.806	8.00	106.8	10.36	192.6	24.27	38368	27233	1.49
2024-08-25	13:52:03	6.401	9.818	8.00	106.6	10.35	192.5	24.27	38359	27235	1.49
2024-08-25	13:52:04	6.408	9.827	8.00	106.4	10.33	192.4	24.26	38349	27236	1.47
2024-08-25	13:52:05	6.292	9.837	8.00	106.2	10.31	192.3	24.26	38341	27236	1.47
2024-08-25	13:52:06	6.171	9.845	8.00	106.1	10.29	192.3	24.25	38331	27236	1.45
2024-08-25	13:52:07	5.959	9.854	8.00	105.9	10.28	192.2	24.24	38322	27235	1.44
2024-08-25	13:52:08	5.705	9.861	8.00	105.8	10.26	192.1	24.24	38316	27237	1.44
2024-08-25	13:52:09	4.584	9.868	8.01	105.7	10.25	192.0	24.24	38310	27237	1.44
2024-08-25	13:52:10	4.299	9.874	8.01	105.5	10.23	192.0	24.23	38303	27238	1.42
2024-08-25	13:52:11	3.900	9.882	8.01	105.4	10.22	191.9	24.23	38297	27237	1.42
2024-08-25	13:52:12	3.732	9.888	8.01	105.3	10.21	191.8	24.22	38292	27239	1.41
2024-08-25	13:52:13	3.607	9.893	8.01	105.2	10.20	191.8	24.22	38287	27239	1.40
2024-08-25	13:52:14	3.375	9.898	8.01	105.1	10.19	191.7	24.22	38284	27241	1.40
2024-08-25	13:52:15	3.206	9.903	8.01	105.0	10.18	191.7	24.22	38279	27242	1.40
2024-08-25	13:52:16	2.342	9.908	8.01	104.9	10.17	191.6	24.21	38276	27243	1.39
2024-08-25	13:52:17	2.091	9.913	8.01	104.9	10.16	191.5	24.21	38271	27243	1.40
2024-08-25	13:52:18	1.550	9.919	8.01	104.8	10.15	191.5	24.21	38269	27245	1.38
2024-08-25	13:52:19	1.603	9.924	8.01	104.7	10.14	191.4	24.21	38269	27250	1.39
2024-08-25	13:52:20	1.425	9.932	8.01	104.7	10.14	191.4	24.21	38269	27255	1.40
2024-08-25	13:52:21	1.234	9.940	8.01	104.6	10.13	191.3	24.21	38268	27261	1.42
2024-08-25	13:52:22	0.067	9.951	8.01	104.6	10.13	191.3	24.21	38269	27268	1.42
2024-08-25	13:52:23	0.076	9.961	8.01	104.6	10.12	191.3	24.21	38271	27278	1.40

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-4 CTD Profiles for WQ4 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	13:57:04	14.484	9.926	8.02	102.6	9.94	187.2	24.19	38248	27235	1.31
2024-08-25	13:57:05	14.479	9.940	8.02	102.6	9.94	187.2	24.18	38235	27236	1.25
2024-08-25	13:57:06	14.474	9.949	8.02	102.6	9.94	187.2	24.18	38227	27237	1.21
2024-08-25	13:57:07	14.459	9.955	8.02	102.7	9.94	187.2	24.18	38222	27238	1.13
2024-08-25	13:57:08	13.475	9.959	8.02	102.7	9.94	187.2	24.17	38219	27238	1.07
2024-08-25	13:57:09	13.158	9.964	8.02	102.7	9.94	187.2	24.17	38215	27240	0.99
2024-08-25	13:57:10	13.027	9.968	8.02	102.7	9.94	187.2	24.17	38212	27241	0.93
2024-08-25	13:57:11	12.910	9.972	8.02	102.7	9.94	187.2	24.17	38210	27242	0.83
2024-08-25	13:57:12	12.659	9.975	8.02	102.7	9.94	187.2	24.17	38207	27243	0.76
2024-08-25	13:57:13	12.404	9.978	8.02	102.7	9.94	187.2	24.16	38204	27243	0.66
2024-08-25	13:57:14	12.165	9.981	8.02	102.7	9.94	187.2	24.16	38202	27243	0.59
2024-08-25	13:57:15	11.091	9.983	8.02	102.7	9.94	187.2	24.16	38198	27242	0.56
2024-08-25	13:57:16	10.599	9.986	8.02	102.7	9.94	187.2	24.16	38196	27242	0.50
2024-08-25	13:57:17	10.188	9.987	8.02	102.7	9.93	187.2	24.16	38194	27242	0.46
2024-08-25	13:57:18	10.120	9.989	8.02	102.7	9.93	187.2	24.16	38193	27242	0.42
2024-08-25	13:57:19	9.829	9.990	8.02	102.7	9.93	187.2	24.16	38190	27242	0.39
2024-08-25	13:57:20	9.627	9.992	8.02	102.6	9.93	187.2	24.15	38188	27241	0.35
2024-08-25	13:57:21	8.618	9.993	8.02	102.6	9.93	187.2	24.15	38185	27240	0.32
2024-08-25	13:57:22	8.386	9.993	8.02	102.6	9.93	187.2	24.15	38183	27239	0.31
2024-08-25	13:57:23	8.159	9.994	8.02	102.6	9.93	187.2	24.15	38182	27238	0.32
2024-08-25	13:57:24	7.804	9.994	8.02	102.6	9.93	187.2	24.15	38181	27238	0.31
2024-08-25	13:57:25	7.667	9.994	8.02	102.6	9.92	187.2	24.15	38180	27237	0.30
2024-08-25	13:57:26	7.437	9.994	8.02	102.6	9.92	187.2	24.15	38179	27236	0.28
2024-08-25	13:57:27	7.339	9.994	8.02	102.6	9.92	187.2	24.15	38178	27236	0.28
2024-08-25	13:57:28	7.199	9.994	8.02	102.6	9.92	187.2	24.15	38178	27235	0.28
2024-08-25	13:57:29	6.248	9.994	8.02	102.5	9.92	187.2	24.15	38177	27235	0.27
2024-08-25	13:57:30	6.076	9.994	8.02	102.5	9.92	187.1	24.15	38177	27235	0.27
2024-08-25	13:57:31	5.540	9.994	8.02	102.5	9.92	187.1	24.15	38176	27235	0.26
2024-08-25	13:57:32	5.472	9.994	8.02	102.5	9.92	187.1	24.15	38177	27235	0.26
2024-08-25	13:57:33	5.254	9.994	8.02	102.5	9.92	187.1	24.15	38177	27235	0.26
2024-08-25	13:57:34	5.064	9.995	8.02	102.5	9.92	187.1	24.15	38177	27235	0.26
2024-08-25	13:57:35	4.834	9.995	8.02	102.5	9.92	187.1	24.15	38177	27236	0.27
2024-08-25	13:57:36	3.820	9.996	8.02	102.5	9.92	187.1	24.15	38176	27236	0.27
2024-08-25	13:57:37	3.510	9.996	8.02	102.5	9.92	187.1	24.15	38176	27236	0.26
2024-08-25	13:57:38	3.185	9.997	8.02	102.5	9.92	187.1	24.15	38176	27236	0.27
2024-08-25	13:57:39	3.057	9.998	8.02	102.5	9.92	187.1	24.15	38176	27237	0.26
2024-08-25	13:57:40	2.790	9.998	8.02	102.5	9.92	187.1	24.15	38176	27237	0.28
2024-08-25	13:57:41	2.581	9.999	8.02	102.5	9.92	187.1	24.15	38176	27238	0.27
2024-08-25	13:57:42	2.401	10.000	8.02	102.5	9.92	187.1	24.15	38177	27239	0.28
2024-08-25	13:57:43	1.524	10.001	8.02	102.5	9.92	187.1	24.15	38180	27242	0.29
2024-08-25	13:57:44	1.145	10.003	8.02	102.5	9.92	187.0	24.16	38186	27248	0.30
2024-08-25	13:57:45	1.032	10.007	8.02	102.6	9.92	187.0	24.16	38193	27255	0.30
2024-08-25	13:57:46	0.740	10.012	8.02	102.6	9.92	187.0	24.17	38200	27265	0.30
2024-08-25	13:57:47	0.639	10.019	8.02	102.6	9.92	187.0	24.17	38206	27273	0.29
2024-08-25	13:57:48	0.475	10.028	8.02	102.7	9.92	187.0	24.18	38215	27287	0.29
2024-08-25	13:57:49	0.360	10.040	8.02	102.7	9.93	187.0	24.19	38225	27301	0.31
2024-08-25	13:57:50	0.272	10.052	8.02	102.8	9.93	187.0	24.19	38236	27320	0.33
2024-08-25	13:57:51	0.200	10.070	8.02	102.8	9.93	187.0	24.20	38248	27339	0.38

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Summary of Sea Water Monitoring Data
GBRP

Table A.3-5 CTD Profiles for WQ5 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	14:02:09	10.982	10.045	8.02	102.8	9.94	185.2	24.15	38181	27275	3.67
2024-08-25	14:02:10	10.973	10.046	8.02	102.9	9.94	185.2	24.15	38181	27275	3.80
2024-08-25	14:02:11	10.964	10.046	8.02	102.9	9.94	185.2	24.15	38181	27276	3.87
2024-08-25	14:02:12	10.954	10.047	8.02	102.9	9.94	185.2	24.15	38181	27276	4.13
2024-08-25	14:02:13	10.942	10.047	8.02	102.9	9.94	185.2	24.15	38181	27276	4.08
2024-08-25	14:02:14	10.113	10.048	8.02	102.9	9.94	185.2	24.15	38180	27276	4.98
2024-08-25	14:02:15	9.635	10.048	8.02	102.9	9.94	185.2	24.15	38180	27276	4.92
2024-08-25	14:02:16	9.349	10.048	8.02	102.9	9.94	185.2	24.15	38180	27276	4.33
2024-08-25	14:02:17	9.110	10.047	8.02	102.9	9.95	185.2	24.15	38180	27276	4.03
2024-08-25	14:02:18	8.981	10.047	8.02	102.9	9.95	185.2	24.15	38180	27276	3.81
2024-08-25	14:02:19	8.793	10.047	8.02	102.9	9.95	185.2	24.15	38180	27275	3.24
2024-08-25	14:02:20	8.624	10.047	8.02	102.9	9.95	185.2	24.15	38180	27275	3.10
2024-08-25	14:02:21	7.781	10.046	8.02	102.9	9.95	185.2	24.15	38180	27275	2.97
2024-08-25	14:02:22	7.621	10.046	8.02	102.9	9.95	185.2	24.15	38180	27275	2.85
2024-08-25	14:02:23	7.235	10.045	8.02	102.9	9.95	185.2	24.15	38180	27275	2.75
2024-08-25	14:02:24	7.092	10.045	8.02	102.9	9.94	185.2	24.15	38180	27275	2.56
2024-08-25	14:02:25	6.959	10.045	8.02	102.9	9.94	185.2	24.15	38181	27275	2.29
2024-08-25	14:02:26	6.729	10.044	8.02	102.9	9.95	185.2	24.15	38182	27275	1.99
2024-08-25	14:02:27	6.564	10.045	8.02	102.9	9.94	185.2	24.15	38182	27275	1.61
2024-08-25	14:02:28	6.455	10.045	8.02	102.9	9.95	185.2	24.15	38183	27276	1.24
2024-08-25	14:02:29	6.371	10.045	8.02	102.9	9.94	185.2	24.15	38183	27276	0.54
2024-08-25	14:02:30	5.583	10.046	8.02	102.9	9.95	185.2	24.15	38182	27276	0.45
2024-08-25	14:02:31	5.403	10.046	8.02	102.9	9.95	185.2	24.15	38182	27277	0.42
2024-08-25	14:02:32	4.954	10.047	8.02	102.9	9.95	185.2	24.15	38181	27277	0.40
2024-08-25	14:02:33	4.650	10.047	8.02	102.9	9.94	185.2	24.15	38180	27276	0.40
2024-08-25	14:02:34	4.409	10.048	8.02	102.9	9.94	185.2	24.15	38179	27275	0.41
2024-08-25	14:02:35	4.273	10.048	8.02	102.9	9.94	185.2	24.15	38177	27274	0.40
2024-08-25	14:02:36	4.092	10.047	8.02	102.9	9.94	185.2	24.15	38176	27273	0.40
2024-08-25	14:02:37	3.936	10.047	8.02	102.9	9.94	185.2	24.15	38176	27273	0.40
2024-08-25	14:02:38	2.854	10.047	8.02	102.9	9.94	185.2	24.15	38177	27273	0.39
2024-08-25	14:02:39	2.416	10.047	8.02	102.9	9.94	185.1	24.15	38178	27274	0.40
2024-08-25	14:02:40	2.218	10.047	8.02	102.9	9.94	185.1	24.15	38179	27275	0.39
2024-08-25	14:02:41	2.162	10.048	8.02	102.9	9.94	185.1	24.15	38181	27277	0.39
2024-08-25	14:02:42	1.992	10.049	8.02	102.9	9.94	185.1	24.16	38182	27279	0.39
2024-08-25	14:02:43	1.778	10.051	8.02	102.9	9.94	185.1	24.16	38183	27281	0.39
2024-08-25	14:02:44	1.614	10.054	8.02	102.9	9.94	185.1	24.16	38185	27284	0.40
2024-08-25	14:02:45	1.469	10.057	8.02	102.9	9.94	185.1	24.16	38189	27289	0.38
2024-08-25	14:02:46	0.364	10.062	8.02	102.9	9.94	185.1	24.17	38195	27297	0.37
2024-08-25	14:02:47	0.119	10.068	8.02	103.0	9.95	185.1	24.18	38212	27314	0.36
2024-08-25	14:02:48	0.070	10.080	8.02	103.1	9.95	185.1	24.20	38236	27339	0.35
2024-08-25	14:02:49	0.037	10.097	8.02	103.2	9.96	185.1	24.22	38274	27379	0.34
2024-08-25	14:02:50	0.012	10.125	8.02	103.3	9.96	185.1	24.24	38298	27414	0.35
2024-08-25	14:02:51	0.012	10.155	8.02	103.5	9.97	185.1	24.26	38320	27455	0.33

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Summary of Sea Water Monitoring Data
GBRP

Table A.3-6 CTD Profiles for WQ6 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	14:07:48	33.850	-0.281	7.97	97.2	11.93	185.3	26.11	42663	22063	2.25
2024-08-25	14:07:48	33.852	-0.280	7.97	97.3	11.94	185.4	26.11	42660	22062	2.80
2024-08-25	14:07:49	33.853	-0.280	7.97	97.3	11.94	185.4	26.11	42661	22062	4.66
2024-08-25	14:07:50	33.853	-0.281	7.97	97.4	11.95	185.4	26.11	42666	22064	5.14
2024-08-25	14:07:51	33.056	-0.280	7.97	97.4	11.96	185.5	26.12	42674	22069	5.48
2024-08-25	14:07:52	33.123	-0.280	7.97	97.5	11.96	185.5	26.12	42681	22072	9.25
2024-08-25	14:07:53	32.502	-0.280	7.97	97.6	11.97	185.5	26.13	42688	22076	10.01
2024-08-25	14:07:54	32.320	-0.279	7.97	97.6	11.98	185.5	26.13	42697	22081	10.89
2024-08-25	14:07:55	32.062	-0.279	7.97	97.7	11.98	185.6	26.14	42708	22087	10.96
2024-08-25	14:07:56	31.815	-0.277	7.97	97.7	11.99	185.6	26.15	42724	22097	10.92
2024-08-25	14:07:57	31.563	-0.275	7.97	97.8	12.00	185.6	26.16	42742	22108	10.82
2024-08-25	14:07:58	30.890	-0.271	7.97	97.9	12.01	185.6	26.18	42771	22127	10.75
2024-08-25	14:07:59	30.251	-0.262	7.97	98.1	12.02	185.7	26.20	42796	22145	10.45
2024-08-25	14:08:00	30.329	-0.250	7.97	98.2	12.03	185.7	26.22	42821	22170	10.41
2024-08-25	14:08:01	30.276	-0.230	7.97	98.4	12.05	185.7	26.24	42838	22192	10.34
2024-08-25	14:08:02	30.129	-0.209	7.97	98.5	12.06	185.7	26.25	42851	22219	10.17
2024-08-25	14:08:03	30.086	-0.179	7.97	98.7	12.08	185.8	26.26	42854	22241	7.85
2024-08-25	14:08:04	29.976	-0.151	7.97	98.9	12.09	185.8	26.26	42846	22263	6.82
2024-08-25	14:08:05	29.902	-0.116	7.97	99.1	12.10	185.8	26.26	42842	22286	6.53
2024-08-25	14:08:06	29.784	-0.084	7.97	99.2	12.11	185.8	26.26	42833	22311	5.45
2024-08-25	14:08:07	28.885	-0.045	7.97	99.4	12.12	185.8	26.26	42822	22334	2.99
2024-08-25	14:08:08	28.825	-0.010	7.97	99.6	12.13	185.8	26.26	42808	22359	2.27
2024-08-25	14:08:09	28.524	0.030	7.97	99.8	12.14	185.9	26.26	42792	22379	1.71
2024-08-25	14:08:10	28.359	0.066	7.97	99.9	12.14	185.9	26.25	42773	22403	1.56
2024-08-25	14:08:11	28.244	0.106	7.97	100.1	12.15	185.9	26.24	42751	22420	1.50
2024-08-25	14:08:12	28.051	0.141	7.97	100.2	12.15	185.9	26.23	42728	22440	1.48
2024-08-25	14:08:13	27.122	0.179	7.97	100.3	12.15	185.9	26.23	42706	22456	1.45
2024-08-25	14:08:14	26.989	0.211	7.97	100.4	12.15	185.9	26.22	42685	22475	1.40
2024-08-25	14:08:15	26.658	0.246	7.97	100.5	12.16	185.9	26.21	42664	22493	1.25
2024-08-25	14:08:16	26.488	0.276	7.98	100.6	12.16	186.0	26.21	42651	22510	1.10
2024-08-25	14:08:17	26.237	0.310	7.98	100.7	12.16	186.0	26.21	42642	22529	1.06
2024-08-25	14:08:18	26.034	0.340	7.98	100.8	12.17	186.0	26.21	42639	22556	1.00
2024-08-25	14:08:19	25.862	0.376	7.98	100.9	12.17	186.0	26.22	42637	22580	0.96
2024-08-25	14:08:20	24.961	0.410	7.98	101.1	12.18	186.0	26.23	42644	22615	0.86
2024-08-25	14:08:21	24.806	0.453	7.98	101.3	12.19	186.0	26.24	42650	22649	0.75
2024-08-25	14:08:22	24.371	0.495	7.98	101.5	12.20	186.0	26.25	42655	22691	0.70
2024-08-25	14:08:23	24.218	0.549	7.98	101.7	12.21	186.0	26.26	42653	22728	0.65
2024-08-25	14:08:24	24.104	0.601	7.98	102.0	12.22	186.1	26.27	42647	22773	0.63
2024-08-25	14:08:25	23.969	0.666	7.98	102.2	12.23	186.1	26.27	42642	22823	0.61
2024-08-25	14:08:26	23.093	0.727	7.98	102.5	12.24	186.1	26.28	42636	22869	0.62
2024-08-25	14:08:27	22.617	0.803	7.98	102.8	12.26	186.1	26.30	42640	22933	0.64
2024-08-25	14:08:28	22.492	0.888	7.98	107.1	12.74	186.1	26.32	42651	22999	0.65
2024-08-25	14:08:29	22.320	0.972	7.98	107.3	12.74	186.1	26.35	42673	23089	0.67
2024-08-25	14:08:30	22.121	1.083	7.98	110.0	13.02	186.1	28.05	45159	24516	0.67
2024-08-25	14:08:31	21.993	2.410	7.98	110.8	12.68	186.1	26.87	43094	24500	0.66
2024-08-25	14:08:32	21.814	2.820	7.98	110.4	12.50	186.1	26.91	43087	24781	0.65
2024-08-25	14:08:33	21.659	3.252	7.98	110.6	12.42	186.1	26.48	42356	24762	0.64
2024-08-25	14:08:34	21.017	3.409	7.98	110.6	12.34	186.1	26.47	42323	24851	0.64
2024-08-25	14:08:35	20.724	3.601	7.98	111.1	12.33	186.1	26.67	42565	25168	0.64
2024-08-25	14:08:36	20.350	3.897	7.98	116.0	12.78	186.2	26.68	42540	25362	0.63
2024-08-25	14:08:37	20.147	4.157	7.98	118.5	12.97	186.2	26.69	42506	25584	0.63
2024-08-25	14:08:38	20.086	5.898	7.97	116.6	12.38	186.2	25.58	40642	25743	0.63
2024-08-25	14:08:39	19.903	6.489	7.97	117.6	12.33	186.2	25.24	40071	25903	0.63
2024-08-25	14:08:40	19.761	7.053	7.97	117.1	12.11	186.2	24.97	39625	26005	0.62
2024-08-25	14:08:41	19.647	7.155	7.97	116.3	11.96	186.3	24.96	39594	26099	0.58
2024-08-25	14:08:42	19.528	7.327	7.97	116.0	11.89	186.3	24.93	39524	26165	0.57
2024-08-25	14:08:43	18.813	7.485	7.98	115.8	11.83	186.3	24.86	39415	26229	0.57
2024-08-25	14:08:44	18.120	7.637	7.98	115.5	11.76	186.3	24.81	39333	26276	0.57
2024-08-25	14:08:45	17.757	7.747	7.98	115.3	11.71	186.3	24.77	39263	26325	0.60
2024-08-25	14:08:46	17.572	7.858	7.98	115.2	11.66	186.3	24.75	39212	26364	0.63
2024-08-25	14:08:47	17.549	7.943	7.98	115.0	11.62	186.3	24.84	39342	26525	0.66
2024-08-25	14:08:48	17.410	8.033	7.98	114.8	11.57	186.3	24.89	39405	26627	0.70
2024-08-25	14:08:49	17.279	8.105	7.98	114.6	11.52	186.3	24.93	39452	26721	0.72
2024-08-25	14:08:50	17.119	8.180	7.99	114.4	11.48	186.3	24.94	39454	26772	0.78
2024-08-25	14:08:51	16.301	8.239	7.99	114.2	11.45	186.3	24.93	39441	26814	0.79
2024-08-25	14:08:52	15.934	8.300	7.99	114.0	11.41	186.3	24.91	39410	26839	0.79
2024-08-25	14:08:53	15.669	8.350	7.99	113.6	11.36	186.3	24.90	39388	26862	0.82
2024-08-25	14:08:54	15.402	8.452	7.99	113.2	11.31	186.3	24.85	39308	26884	0.86
2024-08-25	14:08:55	15.288	8.567	7.99	112.9	11.24	186.2	24.79	39203	26898	0.91

Summary of Sea Water Monitoring Data
GBRP

Table A.3-6 CTD Profiles for WQ6 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	14:08:56	15.146	8.675	8.00	112.5	11.18	186.2	24.73	39118	26912	0.93
2024-08-25	14:08:57	15.018	8.754	8.00	112.1	11.12	186.2	24.68	39036	26923	0.93
2024-08-25	14:08:58	14.873	8.830	8.00	111.7	11.07	186.1	24.64	38971	26929	0.88
2024-08-25	14:08:59	13.893	8.894	8.00	111.3	11.01	186.1	24.60	38911	26935	0.88
2024-08-25	14:09:00	13.555	8.941	8.00	110.9	10.97	186.0	24.57	38862	26937	0.84
2024-08-25	14:09:01	13.242	8.980	8.00	110.5	10.91	186.0	24.54	38816	26939	0.81
2024-08-25	14:09:02	13.106	9.018	8.00	110.2	10.87	185.9	24.52	38787	26944	0.79
2024-08-25	14:09:03	12.959	9.046	8.01	109.8	10.83	185.9	24.50	38757	26947	0.73
2024-08-25	14:09:04	12.756	9.076	8.01	109.5	10.80	185.8	24.49	38735	26951	0.74
2024-08-25	14:09:05	12.121	9.102	8.01	109.2	10.76	185.8	24.47	38711	26954	0.70
2024-08-25	14:09:06	11.504	9.122	8.01	108.9	10.73	185.7	24.46	38692	26958	0.71
2024-08-25	14:09:07	11.244	9.143	8.01	108.6	10.69	185.6	24.46	38681	26964	0.73
2024-08-25	14:09:08	11.193	9.161	8.01	108.4	10.66	185.6	24.45	38671	26972	0.72
2024-08-25	14:09:09	11.084	9.183	8.01	108.1	10.64	185.5	24.44	38662	26980	0.66
2024-08-25	14:09:10	10.953	9.202	8.01	107.9	10.61	185.5	24.44	38656	26992	0.61
2024-08-25	14:09:11	10.798	9.225	8.01	107.8	10.59	185.4	24.44	38651	27004	0.61
2024-08-25	14:09:12	10.609	9.248	8.01	107.6	10.57	185.4	24.44	38646	27019	0.61
2024-08-25	14:09:13	9.763	9.275	8.01	107.5	10.55	185.3	24.44	38643	27034	0.61
2024-08-25	14:09:14	9.374	9.303	8.01	107.4	10.54	185.3	24.43	38633	27051	0.62
2024-08-25	14:09:15	9.104	9.339	8.01	107.3	10.52	185.2	24.42	38620	27064	0.62
2024-08-25	14:09:16	8.934	9.372	8.01	107.2	10.51	185.2	24.41	38601	27078	0.62
2024-08-25	14:09:17	8.741	9.410	8.01	107.1	10.49	185.1	24.40	38580	27089	0.61
2024-08-25	14:09:18	8.548	9.444	8.01	107.1	10.47	185.1	24.39	38558	27102	0.62
2024-08-25	14:09:19	8.382	9.483	8.01	107.0	10.46	185.0	24.37	38537	27112	0.63
2024-08-25	14:09:20	8.241	9.516	8.01	106.9	10.44	185.0	24.36	38512	27122	0.62
2024-08-25	14:09:21	7.512	9.554	8.01	106.8	10.42	184.9	24.35	38491	27132	0.63
2024-08-25	14:09:22	7.280	9.586	8.01	106.7	10.41	184.9	24.33	38467	27142	0.61
2024-08-25	14:09:23	7.034	9.623	8.01	106.6	10.39	184.9	24.32	38444	27150	0.61
2024-08-25	14:09:24	7.010	9.653	8.01	106.5	10.38	184.8	24.30	38417	27156	0.61
2024-08-25	14:09:25	6.807	9.686	8.01	106.4	10.36	184.8	24.28	38391	27159	0.61
2024-08-25	14:09:26	5.971	9.711	8.02	106.2	10.34	184.8	24.27	38366	27162	0.60
2024-08-25	14:09:27	5.654	9.735	8.02	106.1	10.32	184.7	24.26	38348	27165	0.59
2024-08-25	14:09:28	5.547	9.753	8.02	106.0	10.30	184.7	24.24	38331	27168	0.56
2024-08-25	14:09:29	5.274	9.770	8.02	105.8	10.28	184.7	24.24	38320	27172	0.54
2024-08-25	14:09:30	5.100	9.784	8.02	105.7	10.27	184.6	24.23	38309	27175	0.54
2024-08-25	14:09:31	5.027	9.798	8.02	105.6	10.25	184.6	24.23	38300	27179	0.54
2024-08-25	14:09:32	4.825	9.809	8.02	105.5	10.24	184.6	24.22	38294	27183	0.54
2024-08-25	14:09:33	3.823	9.821	8.02	105.3	10.23	184.5	24.22	38289	27188	0.53
2024-08-25	14:09:34	3.383	9.832	8.02	105.3	10.22	184.5	24.22	38285	27193	0.52
2024-08-25	14:09:35	3.065	9.844	8.02	105.2	10.21	184.5	24.22	38281	27200	0.52
2024-08-25	14:09:36	2.911	9.855	8.02	105.1	10.20	184.4	24.21	38278	27206	0.53
2024-08-25	14:09:37	2.992	9.869	8.02	105.0	10.19	184.4	24.21	38275	27212	0.54
2024-08-25	14:09:38	2.949	9.881	8.02	104.9	10.18	184.4	24.21	38271	27220	0.53
2024-08-25	14:09:39	2.858	9.895	8.02	104.9	10.17	184.4	24.21	38267	27225	0.51
2024-08-25	14:09:40	2.725	9.907	8.02	104.8	10.16	184.3	24.20	38261	27231	0.52
2024-08-25	14:09:41	1.659	9.920	8.02	104.8	10.15	184.3	24.20	38256	27236	0.51
2024-08-25	14:09:42	1.228	9.932	8.02	104.7	10.14	184.3	24.20	38252	27243	0.53
2024-08-25	14:09:43	1.044	9.944	8.02	104.7	10.14	184.3	24.20	38248	27249	0.54
2024-08-25	14:09:44	0.937	9.956	8.02	104.6	10.13	184.2	24.20	38244	27254	0.54
2024-08-25	14:09:45	0.767	9.967	8.02	104.6	10.12	184.2	24.19	38239	27260	0.53
2024-08-25	14:09:46	0.587	9.979	8.02	104.5	10.11	184.2	24.19	38240	27268	0.52
2024-08-25	14:09:47	0.417	9.990	8.02	104.5	10.11	184.2	24.20	38247	27282	0.51
2024-08-25	14:09:48	0.330	10.004	8.02	104.5	10.11	184.2	24.20	38255	27296	0.51
2024-08-25	14:09:49	0.282	10.019	8.02	104.5	10.10	184.1	24.21	38263	27314	0.50

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Summary of Sea Water Monitoring Data
GBRP

Table A.3-7 CTD Profiles for WQ7 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-27	12:31:13	18.137	5.451	8.03	100.4	10.73	172.5	25.04	39912	25011	7.63
2024-08-27	12:31:15	18.129	5.431	8.03	100.7	10.76	172.6	25.06	39942	25014	7.31
2024-08-27	12:31:16	17.206	5.423	8.03	100.8	10.78	172.6	25.08	39970	25024	7.10
2024-08-27	12:31:17	16.975	5.418	8.03	101.1	10.81	172.7	25.11	40010	25046	7.43
2024-08-27	12:31:18	16.557	5.421	8.03	105.4	11.26	172.8	25.16	40079	25091	7.15
2024-08-27	12:31:19	16.702	5.444	8.03	106.9	11.42	172.8	25.21	40154	25152	8.65
2024-08-27	12:31:20	16.574	5.487	8.02	107.2	11.44	172.9	25.25	40212	25225	8.59
2024-08-27	12:31:21	16.291	5.559	8.02	108.6	11.57	172.9	25.29	40256	25300	8.56
2024-08-27	12:31:22	16.114	6.694	8.02	108.6	11.55	173.0	24.55	39046	25393	8.21
2024-08-27	12:31:23	15.994	6.906	8.02	108.1	11.23	173.1	24.50	38956	25477	7.95
2024-08-27	12:31:24	15.154	7.050	8.02	107.6	11.13	173.1	24.49	38917	25574	7.56
2024-08-27	12:31:25	14.687	7.162	8.02	107.3	11.06	173.2	24.50	38920	25660	7.27
2024-08-27	12:31:26	14.141	7.214	8.02	107.1	11.02	173.3	24.57	39017	25762	6.97
2024-08-27	12:31:27	14.069	7.289	8.02	107.0	10.99	173.3	24.62	39082	25856	6.49
2024-08-27	12:31:28	13.922	7.345	8.02	107.0	10.96	173.4	24.68	39170	25961	6.17
2024-08-27	12:31:29	13.683	7.404	8.02	106.9	10.94	173.4	24.75	39252	26060	5.84
2024-08-27	12:31:30	13.461	7.452	8.02	106.9	10.92	173.5	24.79	39311	26135	5.53
2024-08-27	12:31:31	13.299	7.502	8.02	106.9	10.91	173.5	24.82	39352	26195	5.30
2024-08-27	12:31:32	12.398	7.551	8.02	107.0	10.90	173.5	24.85	39387	26256	4.44
2024-08-27	12:31:33	12.169	7.600	8.02	107.1	10.90	173.6	24.88	39426	26323	3.36
2024-08-27	12:31:34	11.621	7.667	8.02	107.2	10.90	173.6	24.90	39445	26380	1.99
2024-08-27	12:31:35	11.593	7.734	8.02	107.4	10.89	173.6	24.92	39467	26452	1.71
2024-08-27	12:31:36	11.356	7.820	8.02	107.5	10.89	173.7	24.93	39481	26518	1.33
2024-08-27	12:31:37	11.203	8.921	8.02	107.8	10.89	173.7	24.24	38381	26594	1.12
2024-08-27	12:31:38	11.050	9.079	8.02	108.0	10.68	173.7	24.21	38328	26660	1.01
2024-08-27	12:31:39	10.117	9.198	8.02	108.1	10.66	173.8	24.19	38290	26734	0.95
2024-08-27	12:31:40	9.771	9.284	8.02	108.2	10.64	173.8	24.19	38292	26798	0.91
2024-08-27	12:31:41	9.270	9.319	8.02	108.2	10.63	173.8	24.24	38358	26869	0.91
2024-08-27	12:31:42	9.230	9.371	8.02	108.3	10.62	173.8	24.27	38399	26932	0.90
2024-08-27	12:31:43	9.089	9.406	8.02	108.3	10.61	173.8	24.31	38454	27001	0.87
2024-08-27	12:31:44	8.849	9.447	8.02	108.3	10.60	173.9	24.36	38518	27073	0.84
2024-08-27	12:31:45	8.687	9.475	8.02	108.2	10.58	173.9	24.39	38556	27123	0.79
2024-08-27	12:31:46	7.683	9.505	8.02	108.1	10.56	173.9	24.40	38577	27157	0.75
2024-08-27	12:31:47	7.419	9.531	8.02	107.9	10.53	173.9	24.41	38588	27186	0.72
2024-08-27	12:31:48	7.076	9.559	8.02	107.6	10.50	173.9	24.42	38592	27208	0.70
2024-08-27	12:31:49	6.945	9.583	8.03	107.3	10.46	173.9	24.42	38594	27230	0.71
2024-08-27	12:31:50	6.712	9.610	8.03	107.0	10.43	173.9	24.42	38596	27249	0.71
2024-08-27	12:31:51	6.540	9.634	8.03	106.9	10.41	173.9	24.42	38597	27269	0.71
2024-08-27	12:31:52	6.344	9.659	8.03	106.8	10.39	173.9	24.43	38598	27286	0.71
2024-08-27	12:31:53	5.166	9.682	8.03	106.7	10.38	173.9	24.43	38597	27304	0.73
2024-08-27	12:31:54	4.931	9.734	8.03	106.6	10.36	173.9	24.41	38569	27318	0.73
2024-08-27	12:31:55	4.562	9.777	8.03	106.5	10.34	173.9	24.39	38537	27332	0.71
2024-08-27	12:31:56	4.289	9.822	8.03	106.3	10.32	173.9	24.37	38512	27343	0.68
2024-08-27	12:31:57	3.967	9.858	8.03	106.2	10.30	173.9	24.36	38486	27355	0.68
2024-08-27	12:31:58	3.750	9.896	8.03	106.1	10.28	173.9	24.34	38464	27364	0.69
2024-08-27	12:31:59	3.590	9.926	8.03	106.0	10.26	173.9	24.33	38440	27373	0.69
2024-08-27	12:32:00	2.483	9.958	8.03	105.9	10.25	173.9	24.32	38420	27380	0.68
2024-08-27	12:32:01	2.110	9.984	8.03	105.8	10.23	173.8	24.30	38400	27387	0.66
2024-08-27	12:32:02	1.786	10.012	8.03	105.7	10.21	173.8	24.29	38381	27391	0.66
2024-08-27	12:32:03	1.499	10.033	8.03	105.6	10.20	173.8	24.28	38362	27396	0.65
2024-08-27	12:32:04	1.294	10.056	8.03	105.5	10.19	173.8	24.27	38347	27400	0.64
2024-08-27	12:32:05	1.028	10.075	8.03	105.4	10.17	173.8	24.26	38335	27407	0.62
2024-08-27	12:32:06	0.794	10.097	8.03	105.3	10.16	173.8	24.26	38327	27415	0.62
2024-08-27	12:32:09	0.000	10.162	7.96	105.2	10.14	173.8	24.23	38279	27430	0.92

Notes

Summary of Sea Water Monitoring Data
GBRP

Table A.3-7 CTD Profiles for WQ7 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Summary of Sea Water Monitoring Data
GBRP

Table A.3-8 CTD Profiles for WQ8 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-27	12:05:09	31.430	-0.200	8.02	96.9	11.86	201.5	26.13	42667	22131	3.99
2024-08-27	12:05:10	31.426	-0.200	8.02	97.0	11.87	201.5	26.13	42666	22130	3.61
2024-08-27	12:05:11	31.416	-0.201	8.02	97.0	11.88	201.5	26.13	42670	22132	2.77
2024-08-27	12:05:12	31.407	-0.201	8.02	97.1	11.89	201.5	26.13	42673	22133	2.32
2024-08-27	12:05:13	30.766	-0.203	8.02	97.1	11.89	201.5	26.13	42670	22131	2.05
2024-08-27	12:05:14	30.316	-0.207	8.02	97.2	11.90	201.5	26.14	42680	22132	1.90
2024-08-27	12:05:15	29.772	-0.209	8.02	97.2	11.91	201.5	26.14	42688	22134	1.81
2024-08-27	12:05:16	29.677	-0.212	8.02	97.3	11.92	201.5	26.15	42701	22138	1.72
2024-08-27	12:05:17	29.658	-0.213	8.02	97.4	11.93	201.5	26.16	42714	22144	1.68
2024-08-27	12:05:18	29.513	-0.214	8.02	97.5	11.94	201.5	26.16	42725	22149	1.81
2024-08-27	12:05:19	29.425	-0.213	8.02	97.6	11.95	201.6	26.17	42730	22152	1.80
2024-08-27	12:05:20	29.376	-0.210	8.02	97.7	11.96	201.6	26.17	42739	22160	1.82
2024-08-27	12:05:21	29.279	-0.206	8.02	97.8	11.97	201.6	26.18	42746	22167	1.83
2024-08-27	12:05:22	29.193	-0.199	8.02	97.9	11.98	201.6	26.18	42749	22174	1.84
2024-08-27	12:05:23	29.109	-0.194	8.02	98.0	11.99	201.6	26.19	42753	22180	1.84
2024-08-27	12:05:24	27.734	-0.185	8.02	98.1	12.00	201.6	26.19	42758	22190	1.83
2024-08-27	12:05:25	27.710	-0.178	8.02	98.2	12.01	201.6	26.20	42763	22198	1.89
2024-08-27	12:05:26	27.583	-0.167	8.02	98.3	12.02	201.6	26.21	42771	22210	1.88
2024-08-27	12:05:27	27.370	-0.155	8.02	98.4	12.03	201.6	26.21	42775	22224	1.88
2024-08-27	12:05:28	27.213	-0.138	8.02	98.6	12.04	201.6	26.21	42776	22236	1.86
2024-08-27	12:05:29	27.047	-0.122	8.02	98.7	12.05	201.6	26.22	42779	22252	1.80
2024-08-27	12:05:30	26.435	-0.096	8.02	98.8	12.06	201.6	26.23	42782	22272	1.75
2024-08-27	12:05:31	26.291	-0.083	8.02	98.9	12.07	201.6	26.23	42783	22287	1.73
2024-08-27	12:05:32	25.902	-0.052	8.02	99.1	12.08	201.6	26.24	42785	22310	1.61
2024-08-27	12:05:33	25.543	-0.036	8.02	99.2	12.09	201.6	26.24	42785	22326	1.46
2024-08-27	12:05:34	25.424	0.001	8.02	99.4	12.10	201.6	26.25	42786	22353	1.43
2024-08-27	12:05:35	25.241	0.029	8.02	99.6	12.11	201.6	26.26	42796	22385	1.41
2024-08-27	12:05:36	25.066	0.067	8.02	99.8	12.13	201.6	26.28	42817	22422	1.38
2024-08-27	12:05:37	24.021	0.107	8.02	100.0	12.14	201.6	26.31	42844	22474	1.36
2024-08-27	12:05:38	23.770	0.163	8.02	100.3	12.16	201.6	26.33	42861	22522	1.36
2024-08-27	12:05:39	23.713	0.219	8.02	100.6	12.18	201.7	26.35	42874	22581	1.34
2024-08-27	12:05:40	23.417	0.274	8.02	100.9	12.19	201.7	26.36	42879	22620	1.31
2024-08-27	12:05:41	23.247	0.344	8.02	101.2	12.21	201.7	26.37	42874	22683	1.29
2024-08-27	12:05:42	23.090	0.431	8.02	101.6	12.23	201.7	26.38	42861	22739	1.29
2024-08-27	12:05:43	22.975	0.512	8.02	101.9	12.24	201.7	26.38	42838	22801	1.26
2024-08-27	12:05:44	22.359	0.609	8.02	102.3	12.25	201.7	26.38	42813	22857	1.25
2024-08-27	12:05:45	21.772	0.698	8.02	102.6	12.26	201.8	26.37	42779	22922	1.25
2024-08-27	12:05:46	21.785	0.804	8.02	103.0	12.27	201.8	26.37	42750	22982	1.26
2024-08-27	12:05:47	21.616	0.900	8.02	103.3	12.28	201.8	26.37	42720	23055	1.25
2024-08-27	12:05:48	21.443	1.016	8.02	103.7	12.29	201.8	26.37	42692	23123	1.27
2024-08-27	12:05:49	21.301	1.122	8.02	104.0	12.29	201.8	26.36	42643	23195	1.25
2024-08-27	12:05:50	21.156	1.247	8.02	104.3	12.30	201.8	26.34	42590	23255	1.24
2024-08-27	12:05:51	20.307	1.360	8.02	104.6	12.29	201.8	26.32	42530	23327	1.25
2024-08-27	12:05:52	19.942	1.492	8.02	104.9	12.30	201.8	26.30	42476	23390	1.25
2024-08-27	12:05:53	19.527	1.608	8.02	105.2	12.29	201.8	26.29	42428	23471	1.25
2024-08-27	12:05:54	19.422	2.765	8.02	105.6	12.30	201.8	25.45	40951	23559	1.25
2024-08-27	12:05:55	19.263	2.951	8.02	105.8	12.03	201.8	25.42	40865	23640	1.26
2024-08-27	12:05:56	19.011	3.125	8.02	106.1	12.01	201.8	25.39	40782	23743	1.25
2024-08-27	12:05:57	18.835	3.273	8.02	106.4	11.98	201.9	25.38	40750	23840	1.26
2024-08-27	12:05:58	17.931	3.370	8.02	106.8	12.00	201.9	25.45	40835	23965	1.27
2024-08-27	12:05:59	17.450	3.520	8.02	110.7	12.39	201.9	25.49	40869	24085	1.27
2024-08-27	12:06:00	17.238	3.685	8.02	113.2	12.62	201.9	26.95	42960	25470	1.27
2024-08-27	12:06:01	17.001	3.890	8.02	113.5	12.48	201.9	27.04	43056	25674	1.25
2024-08-27	12:06:02	16.894	4.079	8.02	113.5	12.42	201.9	26.89	42799	25697	1.25
2024-08-27	12:06:03	16.658	5.418	8.02	113.5	12.11	201.8	25.98	41284	25810	1.23
2024-08-27	12:06:04	16.447	5.706	8.02	113.2	12.01	201.8	25.81	40982	25880	1.22
2024-08-27	12:06:05	15.402	6.037	8.02	113.0	11.90	201.8	25.63	40686	25917	1.23
2024-08-27	12:06:06	15.090	6.146	8.02	113.1	11.86	201.8	25.59	40620	25992	1.21
2024-08-27	12:06:07	14.457	6.358	8.02	113.2	11.83	201.8	25.53	40499	26058	1.20

Summary of Sea Water Monitoring Data
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Table A.3-8 CTD Profiles for WQ8 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-27	12:06:08	14.530	6.529	8.02	113.4	11.80	201.8	25.47	40386	26138	1.21
2024-08-27	12:06:09	14.503	6.724	8.02	113.5	11.76	201.8	25.40	40268	26193	1.22
2024-08-27	12:06:10	14.349	6.883	8.02	113.5	11.72	201.8	25.32	40132	26245	1.22
2024-08-27	12:06:11	14.169	7.038	8.02	113.5	11.68	201.7	25.26	40037	26287	1.22
2024-08-27	12:06:12	13.144	7.157	8.02	113.5	11.65	201.7	25.21	39954	26337	1.20
2024-08-27	12:06:13	12.961	7.280	8.02	113.5	11.62	201.7	25.18	39893	26380	1.20
2024-08-27	12:06:14	12.787	7.382	8.03	113.5	11.59	201.6	25.14	39826	26424	1.19
2024-08-27	12:06:15	12.477	7.491	8.03	113.5	11.57	201.6	25.11	39770	26459	1.18
2024-08-27	12:06:16	12.283	7.582	8.03	113.5	11.54	201.6	25.08	39721	26506	1.19
2024-08-27	12:06:17	12.169	8.699	8.03	113.4	11.29	201.5	24.38	38614	26581	1.19
2024-08-27	12:06:18	11.976	8.777	8.03	113.3	11.25	201.5	24.40	38636	26664	1.18
2024-08-27	12:06:19	10.934	8.878	8.03	113.1	11.21	201.4	24.41	38630	26724	1.16
2024-08-27	12:06:20	10.649	8.907	8.03	112.8	11.17	201.4	24.44	38672	26785	1.17
2024-08-27	12:06:21	10.668	8.968	8.03	112.5	11.13	201.3	24.44	38677	26829	1.17
2024-08-27	12:06:22	10.659	9.007	8.03	112.2	11.08	201.2	24.46	38695	26875	1.16
2024-08-27	12:06:23	10.536	9.042	8.04	111.9	11.04	201.2	24.47	38713	26911	1.14
2024-08-27	12:06:24	10.459	9.068	8.04	111.5	11.00	201.1	24.49	38731	26945	1.13
2024-08-27	12:06:25	10.315	9.093	8.04	111.1	10.95	201.1	24.50	38741	26968	1.11
2024-08-27	12:06:26	9.322	9.113	8.04	110.8	10.91	201.0	24.50	38749	26990	1.09
2024-08-27	12:06:27	8.892	9.135	8.04	110.4	10.87	200.9	24.51	38755	27010	1.09
2024-08-27	12:06:28	8.456	9.154	8.04	110.1	10.83	200.8	24.51	38760	27029	1.09
2024-08-27	12:06:29	8.380	9.177	8.04	109.7	10.79	200.8	24.52	38762	27045	1.08
2024-08-27	12:06:30	8.136	9.202	8.05	109.4	10.75	200.7	24.52	38761	27063	1.07
2024-08-27	12:06:31	7.229	9.224	8.05	109.2	10.73	200.6	24.51	38753	27076	1.06
2024-08-27	12:06:32	6.978	9.249	8.05	109.0	10.71	200.5	24.51	38742	27085	1.06
2024-08-27	12:06:33	6.401	9.286	8.05	108.8	10.68	200.4	24.49	38712	27093	1.06
2024-08-27	12:06:34	6.047	9.330	8.05	108.6	10.65	200.4	24.47	38680	27099	1.05
2024-08-27	12:06:35	5.882	9.366	8.05	108.4	10.62	200.3	24.45	38652	27110	1.04
2024-08-27	12:06:36	5.641	9.405	8.05	108.3	10.60	200.2	24.44	38632	27122	1.04
2024-08-27	12:06:37	5.453	9.440	8.05	108.2	10.58	200.1	24.43	38613	27137	1.04
2024-08-27	12:06:38	5.348	9.479	8.05	108.0	10.56	200.1	24.42	38595	27150	1.04
2024-08-27	12:06:39	4.448	9.514	8.05	107.9	10.54	200.0	24.40	38572	27163	1.05
2024-08-27	12:06:40	4.114	9.553	8.05	107.7	10.52	199.9	24.39	38550	27173	1.04
2024-08-27	12:06:41	3.810	9.586	8.05	107.6	10.49	199.9	24.37	38526	27184	1.05
2024-08-27	12:06:42	3.479	9.620	8.05	107.4	10.47	199.8	24.36	38505	27191	1.05
2024-08-27	12:06:43	3.295	9.648	8.05	107.3	10.45	199.7	24.35	38486	27200	1.05
2024-08-27	12:06:44	2.984	9.677	8.06	107.2	10.43	199.6	24.34	38476	27212	1.05
2024-08-27	12:06:45	2.786	9.702	8.06	107.0	10.41	199.6	24.34	38468	27228	1.06
2024-08-27	12:06:46	1.693	9.731	8.06	106.9	10.40	199.5	24.34	38463	27243	1.07
2024-08-27	12:06:47	1.471	9.757	8.06	106.8	10.38	199.4	24.33	38457	27261	1.07
2024-08-27	12:06:48	1.182	9.787	8.06	106.8	10.37	199.4	24.33	38452	27276	1.08
2024-08-27	12:06:49	0.960	9.814	8.06	106.7	10.35	199.3	24.33	38442	27292	1.07
2024-08-27	12:06:50	0.811	9.845	8.06	106.6	10.34	199.2	24.32	38434	27306	1.08
2024-08-27	12:06:51	0.623	9.872	8.06	106.6	10.33	199.2	24.32	38426	27323	1.10
2024-08-27	12:06:52	0.440	9.905	8.06	106.5	10.32	199.1	24.31	38408	27332	1.16
2024-08-27	12:06:53	0.287	9.938	8.06	106.5	10.31	199.1	24.28	38371	27333	1.25
2024-08-27	12:06:54	0.218	9.982	8.06	106.6	10.31	199.1	24.26	38331	27332	1.42

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Summary of Sea Water Monitoring Data
GBRP

Table A.3-9 CTD Profiles for WQ9 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-27	11:40:51	1.706	10.152	8.12	102.2	9.85	171.1	24.16	38185	27356	4.97
2024-08-27	11:40:52	1.722	10.151	8.12	102.2	9.85	171.3	24.16	38186	27356	4.39
2024-08-27	11:40:53	1.753	10.151	8.11	102.2	9.86	171.5	24.16	38186	27355	4.57
2024-08-27	11:40:54	1.768	10.150	8.11	102.3	9.86	171.6	24.16	38186	27355	4.62
2024-08-27	11:40:55	1.785	10.149	8.11	102.3	9.86	171.8	24.16	38187	27355	4.81
2024-08-27	11:40:56	1.790	10.149	8.11	102.4	9.87	172.0	24.16	38187	27355	4.80
2024-08-27	11:40:57	1.788	10.149	8.11	102.4	9.87	172.1	24.16	38187	27355	5.29
2024-08-27	11:40:58	1.781	10.148	8.11	102.4	9.87	172.3	24.16	38187	27355	5.60
2024-08-27	11:40:59	1.776	10.148	8.11	102.4	9.87	172.4	24.16	38187	27354	5.59
2024-08-27	11:41:00	0.631	10.147	8.11	102.5	9.88	172.6	24.17	38191	27356	5.36
2024-08-27	11:41:01	0.446	10.147	8.11	102.5	9.88	172.7	24.17	38194	27359	5.22
2024-08-27	11:41:02	0.248	10.148	8.11	102.6	9.89	172.8	24.17	38189	27356	4.63
2024-08-27	11:41:03	0.248	10.155	8.11	102.7	9.90	173.0	24.16	38178	27352	3.73
2024-08-27	11:41:04	0.240	10.162	8.11	102.7	9.90	173.0	24.15	38164	27349	3.53
2024-08-27	11:41:05	0.181	10.182	8.11	102.9	9.91	173.2	24.13	38141	27345	3.27
2024-08-27	11:41:06	0.137	10.196	8.10	102.9	9.92	173.3	22.27	35457	25431	3.29
2024-08-27	11:41:07	0.088	10.231	8.43	105.7	10.55	163.8	10.75	18168	13041	5.88
2024-08-27	11:41:08	0.069	10.269	8.35	105.9	10.87	159.4	11.07	18665	13413	6.49

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-10 CTD Profiles for WQ10 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	14:14:51	32.570	-0.293	7.96	95.8	11.77	186.6	26.11	42665	22054	1.72
2024-08-25	14:14:52	32.572	-0.292	7.96	95.9	11.77	186.6	26.11	42661	22052	1.61
2024-08-25	14:14:53	32.576	-0.292	7.96	96.0	11.78	186.7	26.10	42658	22050	1.57
2024-08-25	14:14:54	32.572	-0.293	7.96	96.0	11.79	186.7	26.10	42658	22050	1.52
2024-08-25	14:14:55	32.019	-0.296	7.96	96.1	11.80	186.8	26.11	42665	22051	1.93
2024-08-25	14:14:56	31.340	-0.300	7.96	96.2	11.81	186.8	26.11	42675	22054	2.11
2024-08-25	14:14:57	30.893	-0.303	7.96	96.3	11.82	186.8	26.12	42691	22059	2.16
2024-08-25	14:14:58	30.878	-0.304	7.96	96.4	11.83	186.9	26.13	42706	22066	2.15
2024-08-25	14:14:59	30.636	-0.304	7.96	96.5	11.85	186.9	26.15	42725	22076	2.15
2024-08-25	14:15:00	30.392	-0.300	7.96	96.6	11.86	186.9	26.16	42741	22086	2.20
2024-08-25	14:15:01	29.356	-0.294	7.96	96.7	11.87	187.0	26.17	42756	22100	2.22
2024-08-25	14:15:02	29.142	-0.284	7.96	96.9	11.88	187.0	26.18	42767	22112	2.22
2024-08-25	14:15:03	28.855	-0.273	7.96	97.0	11.90	187.0	26.19	42781	22130	2.24
2024-08-25	14:15:04	28.697	-0.257	7.96	97.2	11.91	187.0	26.20	42794	22148	2.24
2024-08-25	14:15:05	28.416	-0.240	7.96	97.3	11.93	187.1	26.21	42806	22170	2.25
2024-08-25	14:15:06	27.588	-0.218	7.96	97.5	11.94	187.1	26.22	42815	22190	2.12
2024-08-25	14:15:07	27.277	-0.195	7.96	97.7	11.95	187.1	26.23	42820	22214	2.13
2024-08-25	14:15:08	27.086	-0.166	7.96	97.9	11.97	187.1	26.24	42823	22236	2.11
2024-08-25	14:15:09	26.910	-0.135	7.96	98.1	11.99	187.1	26.26	42840	22273	2.11
2024-08-25	14:15:10	26.628	-0.093	7.96	98.3	12.00	187.2	26.27	42851	22309	1.63
2024-08-25	14:15:11	26.481	-0.049	7.96	98.6	12.02	187.2	26.29	42863	22356	1.51
2024-08-25	14:15:12	26.418	0.010	7.96	98.9	12.04	187.2	26.30	42858	22395	1.46
2024-08-25	14:15:13	26.382	0.073	7.96	99.2	12.05	187.2	26.30	42848	22441	1.46
2024-08-25	14:15:14	26.359	0.131	7.96	99.5	12.07	187.2	26.31	42837	22483	1.44
2024-08-25	14:15:15	26.334	0.202	7.96	99.8	12.08	187.2	26.30	42813	22527	1.42
2024-08-25	14:15:16	26.320	0.264	7.96	100.0	12.09	187.3	26.30	42792	22568	1.43
2024-08-25	14:15:17	26.307	0.338	7.97	100.3	12.11	187.3	26.29	42761	22611	1.41
2024-08-25	14:15:18	26.291	0.403	7.97	100.5	12.11	187.3	26.29	42734	22650	1.43
2024-08-25	14:15:19	26.285	0.470	7.97	100.8	12.12	187.3	26.28	42699	22693	1.43
2024-08-25	14:15:20	26.264	0.546	7.97	101.0	12.13	187.3	26.27	42665	22730	1.44
2024-08-25	14:15:21	26.232	0.612	7.97	101.2	12.13	187.3	26.25	42618	22767	1.43
2024-08-25	14:15:22	26.194	0.685	7.97	101.4	12.13	187.3	26.23	42573	22794	1.43
2024-08-25	14:15:23	25.445	0.753	7.97	101.5	12.12	187.3	26.21	42520	22821	1.43
2024-08-25	14:15:24	25.056	0.807	7.97	101.6	12.12	187.4	26.18	42470	22845	1.42
2024-08-25	14:15:25	24.886	0.865	7.97	101.7	12.11	187.4	26.18	42446	22874	1.41
2024-08-25	14:15:26	24.620	0.915	7.97	101.9	12.12	187.4	26.18	42442	22918	1.41
2024-08-25	14:15:27	24.481	0.976	7.97	102.1	12.12	187.4	26.19	42445	22963	1.41
2024-08-25	14:15:28	24.244	1.037	7.97	102.4	12.14	187.4	26.21	42452	23022	1.40
2024-08-25	14:15:29	24.073	1.116	7.97	105.9	12.53	187.4	26.22	42453	23079	1.40
2024-08-25	14:15:30	23.911	1.193	7.97	106.6	12.58	187.4	26.24	42464	23155	1.39
2024-08-25	14:15:31	22.859	1.290	7.98	107.0	12.61	187.4	26.27	42473	23228	1.37
2024-08-25	14:15:32	22.518	1.386	7.98	108.0	12.68	187.4	26.29	42482	23321	1.37
2024-08-25	14:15:33	22.303	2.568	7.98	108.2	12.67	187.4	25.45	40994	23410	1.37
2024-08-25	14:15:34	22.127	2.747	7.97	107.6	12.29	187.5	25.42	40901	23517	1.37
2024-08-25	14:15:35	21.982	3.012	7.97	107.7	12.24	187.5	25.36	40777	23623	1.36
2024-08-25	14:15:36	21.854	3.156	7.97	108.0	12.19	187.5	25.38	40770	23760	1.36
2024-08-25	14:15:37	21.711	3.321	7.97	108.2	12.18	187.5	25.41	40795	23885	1.35
2024-08-25	14:15:38	21.047	3.485	7.97	108.7	12.17	187.5	25.44	40793	24030	1.35
2024-08-25	14:15:39	20.676	3.666	7.97	109.0	12.15	187.5	25.46	40798	24156	1.36
2024-08-25	14:15:40	20.112	3.820	7.97	109.4	12.14	187.5	25.49	40814	24303	1.35
2024-08-25	14:15:41	20.248	3.986	7.98	109.7	12.12	187.5	25.53	40848	24437	1.36
2024-08-25	14:15:42	19.993	4.131	7.98	114.1	12.57	187.5	26.94	42868	25782	1.36
2024-08-25	14:15:43	19.764	5.632	7.97	116.8	12.34	187.5	26.59	42136	26483	1.37
2024-08-25	14:15:44	19.582	6.218	7.97	115.9	12.13	187.5	26.08	41314	26493	1.38
2024-08-25	14:15:45	18.508	6.772	7.97	115.6	11.97	187.5	25.77	40812	26554	1.39
2024-08-25	14:15:46	18.390	6.936	7.97	115.2	11.85	187.5	25.65	40603	26594	1.40
2024-08-25	14:15:47	18.014	7.209	7.97	115.1	11.78	187.5	25.51	40385	26638	1.39
2024-08-25	14:15:48	17.708	7.394	7.97	115.0	11.73	187.5	25.41	40208	26687	1.38
2024-08-25	14:15:49	17.582	7.561	7.97	114.9	11.67	187.6	25.34	40092	26723	1.37
2024-08-25	14:15:50	17.333	7.692	7.97	114.8	11.63	187.6	25.26	39971	26757	1.35
2024-08-25	14:15:51	16.733	7.828	7.98	114.6	11.58	187.6	25.20	39867	26779	1.35
2024-08-25	14:15:52	16.242	7.936	7.98	114.5	11.54	187.6	25.13	39754	26797	1.36
2024-08-25	14:15:53	15.893	8.045	7.98	114.2	11.48	187.5	25.08	39667	26812	1.34
2024-08-25	14:15:54	15.799	8.141	7.98	114.0	11.45	187.5	25.02	39578	26825	1.34
2024-08-25	14:15:55	15.579	8.215	7.98	113.8	11.41	187.5	24.98	39510	26836	1.33

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-10 CTD Profiles for WQ10 (August 2024)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (mS/cm)	C (µS/cm)	NTU
2024-08-25	14:15:56	15.382	8.291	7.98	113.6	11.37	187.5	24.94	39444	26849	1.32
2024-08-25	14:15:57	15.194	8.352	7.99	113.4	11.34	187.5	24.90	39392	26860	1.32
2024-08-25	14:15:58	14.157	8.418	7.99	113.2	11.30	187.4	24.87	39337	26872	1.31
2024-08-25	14:15:59	13.869	8.528	7.99	112.9	11.25	187.4	24.82	39253	26903	1.31
2024-08-25	14:16:00	13.824	8.679	7.99	112.6	11.18	187.4	24.75	39148	26931	1.31
2024-08-25	14:16:01	13.355	8.793	7.99	112.2	11.12	187.3	24.70	39055	26954	1.31
2024-08-25	14:16:02	13.207	8.907	7.99	111.8	11.06	187.3	24.64	38964	26977	1.31
2024-08-25	14:16:03	12.946	8.993	7.99	111.4	11.00	187.3	24.59	38885	26997	1.32
2024-08-25	14:16:04	12.751	9.077	7.99	111.1	10.95	187.2	24.56	38831	27014	1.33
2024-08-25	14:16:05	12.592	9.141	8.00	110.8	10.90	187.2	24.52	38778	27032	1.35
2024-08-25	14:16:06	11.524	9.206	8.00	110.4	10.85	187.1	24.50	38741	27048	1.36
2024-08-25	14:16:07	11.204	9.259	8.00	110.1	10.81	187.1	24.48	38705	27068	1.36
2024-08-25	14:16:08	10.832	9.314	8.00	109.8	10.77	187.0	24.46	38676	27083	1.37
2024-08-25	14:16:09	10.750	9.358	8.00	109.5	10.73	187.0	24.44	38645	27099	1.38
2024-08-25	14:16:10	10.568	9.404	8.00	109.2	10.69	186.9	24.43	38622	27113	1.40
2024-08-25	14:16:11	10.402	9.441	8.00	108.9	10.65	186.8	24.41	38598	27128	1.40
2024-08-25	14:16:12	9.460	9.480	8.00	108.6	10.62	186.8	24.40	38577	27138	1.40
2024-08-25	14:16:13	9.434	9.512	8.00	108.3	10.58	186.7	24.39	38552	27148	1.39
2024-08-25	14:16:14	8.796	9.545	8.01	108.1	10.55	186.6	24.37	38529	27153	1.41
2024-08-25	14:16:15	8.800	9.571	8.01	107.8	10.52	186.6	24.36	38506	27159	1.40
2024-08-25	14:16:16	8.683	9.598	8.01	107.6	10.49	186.5	24.35	38488	27163	1.39
2024-08-25	14:16:17	8.614	9.618	8.01	107.4	10.47	186.5	24.33	38471	27169	1.40
2024-08-25	14:16:18	8.561	9.645	8.01	107.2	10.44	186.4	24.32	38451	27173	1.38
2024-08-25	14:16:19	8.472	9.657	8.01	107.0	10.42	186.3	24.31	38439	27174	1.38
2024-08-25	14:16:20	8.384	9.673	8.01	106.9	10.40	186.3	24.31	38426	27176	1.38
2024-08-25	14:16:21	7.574	9.687	8.01	106.7	10.38	186.2	24.30	38412	27177	1.36
2024-08-25	14:16:22	7.174	9.700	8.01	106.5	10.37	186.2	24.29	38399	27177	1.35
2024-08-25	14:16:23	6.843	9.711	8.01	106.4	10.35	186.1	24.28	38387	27177	1.34
2024-08-25	14:16:24	6.729	9.724	8.01	106.2	10.33	186.1	24.27	38374	27176	1.33
2024-08-25	14:16:25	6.576	9.729	8.01	106.1	10.32	186.0	24.27	38366	27176	1.31
2024-08-25	14:16:26	6.424	9.738	8.01	106.0	10.30	186.0	24.26	38357	27175	1.31
2024-08-25	14:16:27	6.281	9.742	8.01	105.8	10.29	186.0	24.26	38353	27176	1.31
2024-08-25	14:16:28	5.317	9.749	8.01	105.7	10.28	185.9	24.25	38346	27176	1.31
2024-08-25	14:16:29	5.057	9.753	8.01	105.6	10.27	185.9	24.25	38342	27176	1.30
2024-08-25	14:16:30	4.958	9.758	8.01	105.5	10.26	185.8	24.25	38338	27177	1.29
2024-08-25	14:16:31	4.496	9.763	8.01	105.4	10.25	185.8	24.25	38335	27178	1.29
2024-08-25	14:16:32	4.479	9.770	8.01	105.3	10.24	185.7	24.25	38330	27179	1.28
2024-08-25	14:16:33	4.239	9.775	8.01	105.2	10.23	185.7	24.24	38328	27181	1.28
2024-08-25	14:16:34	3.595	9.783	8.01	105.2	10.22	185.7	24.24	38324	27184	1.27
2024-08-25	14:16:35	3.124	9.788	8.01	105.1	10.21	185.6	24.24	38322	27187	1.24
2024-08-25	14:16:36	2.985	9.798	8.01	105.0	10.20	185.6	24.24	38318	27191	1.24
2024-08-25	14:16:37	2.487	9.804	8.01	105.0	10.19	185.6	24.24	38314	27193	1.24
2024-08-25	14:16:38	2.427	9.815	8.01	104.9	10.19	185.5	24.23	38308	27197	1.23
2024-08-25	14:16:39	2.214	9.823	8.01	104.9	10.18	185.5	24.23	38304	27199	1.24
2024-08-25	14:16:40	2.022	9.835	8.01	104.8	10.17	185.4	24.23	38298	27204	1.23
2024-08-25	14:16:41	1.868	9.844	8.01	104.8	10.16	185.4	24.22	38294	27207	1.21
2024-08-25	14:16:42	0.789	9.854	8.01	104.7	10.16	185.4	24.22	38291	27214	1.21
2024-08-25	14:16:43	0.453	9.867	8.01	104.7	10.15	185.3	24.22	38289	27221	1.19
2024-08-25	14:16:44	0.133	9.879	8.01	104.7	10.15	185.3	24.23	38293	27234	1.19
2024-08-25	14:16:45	0.080	9.896	8.01	104.7	10.14	185.3	24.23	38302	27251	1.19
2024-08-25	14:16:46	0.027	9.919	8.01	104.7	10.14	185.2	24.25	38321	27283	1.20

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-11 CTD Profiles for WQ1 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	14:26:45	0.009	6.054	7.99	102.7	11.07	272.9	21.51	34661.1	22118.6	2.74
2025-07-25	14:26:46	0.026	6.055	7.99	102.7	11.07	272.8	21.51	34659	22118	2.76
2025-07-25	14:26:47	0.048	6.056	7.99	102.7	11.07	272.7	21.5	34656.8	22117.1	2.76
2025-07-25	14:26:48	0.082	6.057	7.99	102.7	11.08	272.6	21.5	34654.8	22116.2	2.73
2025-07-25	14:26:49	0.116	6.057	7.99	102.7	11.08	272.5	21.5	34652.9	22115.4	2.73
2025-07-25	14:26:50	0.151	6.058	7.99	102.7	11.08	272.4	21.5	34650.6	22114.2	2.72
2025-07-25	14:26:51	0.194	6.058	7.99	102.7	11.08	272.3	21.5	34649.4	22113.5	2.72
2025-07-25	14:26:52	0.254	6.059	7.99	102.7	11.08	272.2	21.5	34648.8	22113.6	2.73
2025-07-25	14:26:53	0.304	6.059	7.99	102.7	11.08	272.1	21.5	34648.6	22113.4	2.72
2025-07-25	14:26:54	0.349	6.059	7.99	102.7	11.08	272	21.5	34647.4	22113	2.73
2025-07-25	14:26:55	0.388	6.06	7.99	102.8	11.08	271.8	21.5	34646.2	22112.6	2.74
2025-07-25	14:26:56	0.431	6.06	8	102.8	11.08	271.8	21.5	34644.4	22112	2.72
2025-07-25	14:26:57	0.465	6.06	8	102.8	11.08	271.7	21.5	34645.2	22112	2.71
2025-07-25	14:26:58	0.498	6.058	8	102.8	11.08	271.6	21.5	34646.3	22111.9	2.72
2025-07-25	14:26:59	0.524	6.057	8	102.7	11.08	271.5	21.5	34649.2	22112.7	2.72
2025-07-25	14:27:00	0.558	6.05	8	102.7	11.08	271.3	21.51	34660.6	22115.7	2.69
2025-07-25	14:27:01	0.586	6.046	8	102.7	11.08	271.2	21.51	34667.7	22117	2.69
2025-07-25	14:27:02	0.622	6.036	8	102.7	11.08	271.1	21.52	34680.1	22120.3	2.67
2025-07-25	14:27:03	0.663	6.01	8	102.6	11.07	271	21.55	34735.1	22136.1	2.64
2025-07-25	14:27:04	0.707	5.973	8	102.5	11.06	270.9	21.59	34796.7	22153.9	2.6
2025-07-25	14:27:05	0.766	5.933	8	102.4	11.05	270.9	21.65	34879.6	22177.1	2.53
2025-07-25	14:27:06	0.817	5.884	8	102.3	11.05	270.8	21.7	34959.2	22199.2	2.5
2025-07-25	14:27:07	0.873	5.839	8	102.1	11.05	270.7	21.76	35055.4	22226.2	2.44
2025-07-25	14:27:08	0.929	5.785	8.01	102	11.05	270.7	21.82	35144.4	22251	2.37
2025-07-25	14:27:09	1.005	5.737	8.01	102	11.05	270.6	21.88	35247.1	22278.9	2.28
2025-07-25	14:27:10	1.062	5.682	8.01	101.9	11.05	270.5	21.94	35336.2	22303.4	2.18
2025-07-25	14:27:11	1.122	5.63	8.01	101.8	11.05	270.5	22.01	35447.9	22333.2	2.1
2025-07-25	14:27:12	1.179	5.582	8.01	101.8	11.06	270.4	22.06	35527	22353.9	2.01
2025-07-25	14:27:13	1.231	5.556	8.01	101.9	11.08	270.3	22.1	35583.3	22368.2	1.94
2025-07-25	14:27:14	1.28	5.526	8.01	101.9	11.08	270.2	22.13	35639.5	22383	1.84
2025-07-25	14:27:15	1.324	5.504	8.01	102	11.1	270.2	22.16	35676.9	22393.7	1.76
2025-07-25	14:27:16	1.375	5.487	8.01	102.1	11.11	270.1	22.18	35716.3	22405.2	1.7
2025-07-25	14:27:17	1.439	5.471	8.01	102.2	11.12	270	22.2	35747.3	22414.9	1.67
2025-07-25	14:27:18	1.489	5.459	8.01	102.2	11.13	269.9	22.22	35780	22425.5	1.63
2025-07-25	14:27:19	1.541	5.445	8.01	102.3	11.14	269.8	22.24	35807.4	22434.5	1.59
2025-07-25	14:27:20	1.595	5.437	8.02	102.4	11.15	269.7	22.26	35833.2	22443.7	1.59
2025-07-25	14:27:21	1.669	5.425	8.02	102.5	11.16	269.6	22.27	35855.3	22451	1.57
2025-07-25	14:27:22	1.736	5.416	8.02	102.5	11.17	269.6	22.29	35878.8	22458.2	1.57
2025-07-25	14:27:23	1.819	5.404	8.02	102.6	11.17	269.5	22.3	35898.7	22463.8	1.54
2025-07-25	14:27:24	1.901	5.393	8.02	102.6	11.18	269.4	22.31	35921.1	22469.2	1.51
2025-07-25	14:27:25	1.998	5.379	8.02	102.6	11.19	269.3	22.33	35941.5	22473.5	1.49
2025-07-25	14:27:26	2.085	5.366	8.02	102.7	11.19	269.3	22.34	35964.8	22477.8	1.45
2025-07-25	14:27:27	2.17	5.353	8.02	102.7	11.2	269.2	22.35	35983.9	22481.5	1.38
2025-07-25	14:27:28	2.259	5.341	8.02	102.7	11.2	269.2	22.37	36004.2	22485.3	1.35
2025-07-25	14:27:29	2.359	5.33	8.02	102.7	11.21	269.2	22.38	36022.8	22490	1.3
2025-07-25	14:27:30	2.463	5.324	8.02	102.8	11.21	269.1	22.39	36039.3	22495.9	1.26
2025-07-25	14:27:31	2.545	5.319	8.02	102.8	11.22	269.1	22.4	36055	22502	1.21
2025-07-25	14:27:32	2.613	5.316	8.02	102.9	11.23	269	22.41	36067.9	22507.7	1.18
2025-07-25	14:27:33	2.682	5.315	8.02	102.9	11.23	268.9	22.41	36080.3	22514.5	1.13
2025-07-25	14:27:34	2.772	5.314	8.02	103	11.24	268.9	22.42	36090.9	22521	1.11
2025-07-25	14:27:35	2.844	5.316	8.02	103	11.24	268.8	22.43	36101.7	22528.5	1.1
2025-07-25	14:27:36	2.912	5.319	8.02	103.1	11.24	268.7	22.43	36108.6	22534.6	1.11
2025-07-25	14:27:37	2.98	5.321	8.02	103.1	11.25	268.6	22.44	36117.2	22541.9	1.09
2025-07-25	14:27:38	3.04	5.324	8.02	103.2	11.25	268.6	22.44	36122.8	22547.4	1.06
2025-07-25	14:27:39	3.078	5.327	8.02	103.2	11.26	268.5	22.45	36127.3	22552.1	1.04
2025-07-25	14:27:40	3.12	5.329	8.02	103.2	11.26	268.4	22.45	36131.4	22556.1	1.02
2025-07-25	14:27:41	3.165	5.331	8.02	103.3	11.26	268.4	22.45	36135.8	22560.1	1
2025-07-25	14:27:42	3.207	5.332	8.02	103.3	11.26	268.3	22.46	36139.4	22563.2	0.98
2025-07-25	14:27:43	3.242	5.332	8.02	103.3	11.26	268.3	22.46	36143.7	22566.3	0.96
2025-07-25	14:27:44	3.266	5.332	8.03	103.3	11.26	268.2	22.46	36147.4	22568.2	0.95
2025-07-25	14:27:45	3.294	5.331	8.03	103.3	11.26	268.2	22.46	36151.5	22570	0.94
2025-07-25	14:27:46	3.332	5.328	8.03	103.3	11.27	268.1	22.47	36156.1	22570.7	0.93

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-11 CTD Profiles for WQ1 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	14:27:47	3.377	5.319	8.03	103.3	11.27	268	22.47	36162.1	22569.3	0.93
2025-07-25	14:27:48	3.428	5.308	8.03	103.3	11.27	268	22.48	36172.6	22567.2	0.93
2025-07-25	14:27:49	3.479	5.291	8.03	103.3	11.27	267.9	22.48	36183.6	22564.3	0.94
2025-07-25	14:27:50	3.545	5.277	8.03	103.2	11.27	267.8	22.49	36196.5	22560.6	0.94
2025-07-25	14:27:51	3.593	5.26	8.03	103.2	11.27	267.8	22.5	36206.1	22556.9	0.96
2025-07-25	14:27:52	3.652	5.246	8.03	103.2	11.27	267.7	22.5	36217.7	22552.7	0.95
2025-07-25	14:27:53	3.701	5.23	8.03	103.2	11.27	267.7	22.51	36226.8	22548.7	0.95
2025-07-25	14:27:54	3.762	5.216	8.03	103.2	11.28	267.7	22.51	36237	22544.1	0.96
2025-07-25	14:27:55	3.805	5.201	8.03	103.2	11.28	267.6	22.52	36245.4	22540.1	0.97
2025-07-25	14:27:56	3.845	5.19	8.03	103.2	11.29	267.6	22.52	36255	22536.8	0.95
2025-07-25	14:27:57	3.872	5.183	8.03	103.2	11.29	267.5	22.52	36257.9	22534.9	0.96
2025-07-25	14:27:58	3.92	5.179	8.03	103.3	11.3	267.4	22.53	36261.1	22533.2	0.95
2025-07-25	14:27:59	3.955	5.177	8.03	103.3	11.3	267.4	22.53	36261.5	22532.3	0.94
2025-07-25	14:28:00	3.996	5.175	8.03	103.3	11.3	267.3	22.53	36261.9	22530.9	0.95
2025-07-25	14:28:01	4.039	5.172	8.03	103.4	11.31	267.2	22.53	36263.4	22530.2	0.94
2025-07-25	14:28:02	4.091	5.17	8.03	103.4	11.31	267.1	22.53	36264.5	22529.5	0.95
2025-07-25	14:28:03	4.135	5.169	8.03	103.4	11.32	267.1	22.53	36265.4	22528.9	0.96
2025-07-25	14:28:04	4.181	5.167	8.03	103.4	11.32	267	22.53	36266.3	22528.3	0.96
2025-07-25	14:28:05	4.233	5.166	8.03	103.5	11.32	266.9	22.53	36266.6	22527.6	0.96
2025-07-25	14:28:06	4.28	5.165	8.03	103.5	11.33	266.9	22.53	36266.3	22527.3	0.97
2025-07-25	14:28:07	4.346	5.164	8.03	103.5	11.33	266.8	22.53	36267.7	22527	0.98
2025-07-25	14:28:08	4.392	5.163	8.03	103.5	11.33	266.7	22.53	36268.2	22526.9	0.99
2025-07-25	14:28:09	4.453	5.162	8.03	103.5	11.33	266.7	22.53	36269.8	22526.8	0.98
2025-07-25	14:28:10	4.505	5.161	8.03	103.6	11.33	266.6	22.53	36271	22527.2	0.99
2025-07-25	14:28:11	4.56	5.161	8.03	103.6	11.34	266.6	22.53	36271.3	22527.1	1.01
2025-07-25	14:28:12	4.616	5.16	8.03	103.6	11.34	266.5	22.53	36272.6	22527.2	1.01
2025-07-25	14:28:13	4.666	5.159	8.03	103.6	11.34	266.5	22.53	36273.6	22527.6	1.02
2025-07-25	14:28:14	4.721	5.159	8.03	103.6	11.34	266.4	22.53	36275	22528	1.02
2025-07-25	14:28:15	4.788	5.158	8.03	103.6	11.34	266.3	22.53	36276.3	22528.4	1.02
2025-07-25	14:28:16	4.831	5.157	8.03	103.6	11.34	266.3	22.54	36278.1	22528.9	1
2025-07-25	14:28:17	4.888	5.158	8.03	103.7	11.34	266.2	22.54	36278.2	22529.3	1
2025-07-25	14:28:18	4.931	5.158	8.03	103.7	11.35	266.2	22.54	36278.6	22529.6	1.01
2025-07-25	14:28:19	4.974	5.158	8.03	103.7	11.35	266.1	22.54	36278.8	22529.7	1.03
2025-07-25	14:28:20	5.032	5.158	8.03	103.7	11.35	266	22.54	36280	22530.2	1.02
2025-07-25	14:28:21	5.085	5.158	8.03	103.7	11.35	266	22.54	36280.7	22531	1.01
2025-07-25	14:28:22	5.128	5.159	8.03	103.7	11.35	265.9	22.54	36280.5	22531.5	1.02
2025-07-25	14:28:23	5.174	5.16	8.03	103.7	11.35	265.8	22.54	36281.1	22532.3	1.01
2025-07-25	14:28:24	5.206	5.161	8.03	103.7	11.35	265.8	22.54	36280.9	22533.3	1
2025-07-25	14:28:25	5.226	5.163	8.03	103.7	11.35	265.7	22.54	36280.3	22534.3	1
2025-07-25	14:28:26	5.222	5.165	8.03	103.7	11.35	265.6	22.54	36280.4	22535.3	1
2025-07-25	14:28:27	5.22	5.165	8.03	103.7	11.35	265.5	22.54	36281.2	22536.2	1
2025-07-25	14:28:28	5.219	5.166	8.03	103.8	11.35	265.4	22.54	36281.8	22537.3	0.99
2025-07-25	14:28:29	5.219	5.167	8.03	103.8	11.35	265.3	22.54	36282.1	22538.3	0.98
2025-07-25	14:28:30	5.203	5.168	8.03	103.8	11.35	265.2	22.54	36282	22539	0.98
2025-07-25	14:28:31	5.204	5.168	8.03	103.8	11.36	265.2	22.54	36282.6	22539.2	0.96
2025-07-25	14:28:32	5.203	5.169	8.03	103.8	11.36	265.1	22.54	36282.9	22539.7	0.94
2025-07-25	14:28:33	5.187	5.169	8.03	103.8	11.36	265	22.54	36282.5	22539.9	0.94
2025-07-25	14:28:34	5.191	5.169	8.03	103.8	11.36	264.9	22.54	36282.7	22539.6	0.94
2025-07-25	14:28:35	5.242	5.168	8.03	103.8	11.36	264.9	22.54	36283.3	22539.4	0.92
2025-07-25	14:28:36	5.298	5.168	8.03	103.8	11.36	264.8	22.54	36283.3	22539.3	0.93
2025-07-25	14:28:37	5.396	5.168	8.03	103.8	11.36	264.7	22.54	36283.2	22539.3	0.92
2025-07-25	14:28:38	5.479	5.167	8.03	103.8	11.36	264.6	22.54	36283.8	22539.4	0.91
2025-07-25	14:28:39	5.55	5.167	8.03	103.8	11.36	264.6	22.54	36284.2	22539.6	0.89
2025-07-25	14:28:40	5.63	5.167	8.03	103.8	11.36	264.5	22.54	36284.6	22540	0.89
2025-07-25	14:28:41	5.673	5.168	8.03	103.8	11.36	264.5	22.54	36285	22540.3	0.9
2025-07-25	14:28:42	5.735	5.167	8.03	103.8	11.36	264.4	22.54	36285.5	22540.5	0.9
2025-07-25	14:28:43	5.788	5.167	8.03	103.8	11.36	264.4	22.54	36286.6	22541	0.88
2025-07-25	14:28:44	5.814	5.167	8.03	103.8	11.36	264.4	22.54	36287.3	22541.6	0.88
2025-07-25	14:28:45	5.847	5.167	8.03	103.8	11.36	264.3	22.54	36288.4	22542.1	0.88
2025-07-25	14:28:46	5.868	5.167	8.03	103.8	11.36	264.3	22.54	36289.3	22542.8	0.89

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-11 CTD Profiles for WQ1 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	14:28:47	5.899	5.167	8.03	103.8	11.36	264.3	22.54	36290.4	22543.4	0.88
2025-07-25	14:28:48	5.929	5.167	8.03	103.8	11.36	264.2	22.54	36290.9	22543.5	0.88
2025-07-25	14:28:49	5.971	5.165	8.03	103.8	11.36	264.2	22.55	36292.8	22543.7	0.9
2025-07-25	14:28:50	6.042	5.164	8.03	103.8	11.36	264.2	22.55	36294.9	22543.9	0.9
2025-07-25	14:28:51	6.103	5.163	8.03	103.8	11.36	264.1	22.55	36296.8	22544.4	0.91
2025-07-25	14:28:52	6.175	5.161	8.03	103.8	11.36	264.1	22.55	36299.6	22544.5	0.91
2025-07-25	14:28:53	6.262	5.158	8.03	103.8	11.36	264	22.55	36301.9	22544.5	0.93
2025-07-25	14:28:54	6.379	5.155	8.03	103.8	11.36	264	22.55	36306.2	22544.9	0.94
2025-07-25	14:28:55	6.469	5.151	8.04	103.8	11.36	263.9	22.56	36310.4	22545.1	0.95
2025-07-25	14:28:56	6.552	5.148	8.04	103.8	11.36	263.9	22.56	36315.1	22545.1	0.93
2025-07-25	14:28:57	6.639	5.143	8.04	103.8	11.36	263.9	22.56	36319.4	22545.1	0.92
2025-07-25	14:28:58	6.743	5.14	8.04	103.8	11.36	263.8	22.56	36324.4	22545.6	0.92
2025-07-25	14:28:59	6.834	5.137	8.04	103.8	11.36	263.8	22.57	36328.7	22546.2	0.9
2025-07-25	14:29:00	6.919	5.134	8.04	103.8	11.36	263.8	22.57	36333.2	22546.8	0.91
2025-07-25	14:29:01	7.02	5.13	8.04	103.8	11.36	263.8	22.57	36338	22547.2	0.89
2025-07-25	14:29:02	7.097	5.127	8.04	103.8	11.36	263.7	22.58	36342.9	22548	0.89
2025-07-25	14:29:03	7.173	5.123	8.04	103.8	11.37	263.7	22.58	36348.1	22549.1	0.87
2025-07-25	14:29:04	7.24	5.122	8.04	103.8	11.37	263.7	22.58	36351.3	22549.7	0.86
2025-07-25	14:29:05	7.314	5.118	8.04	103.8	11.37	263.6	22.58	36356.5	22550.6	0.84
2025-07-25	14:29:06	7.411	5.114	8.04	103.8	11.37	263.6	22.59	36361.8	22551.5	0.85
2025-07-25	14:29:07	7.489	5.11	8.04	103.8	11.37	263.6	22.59	36368.9	22552.4	0.85
2025-07-25	14:29:08	7.56	5.105	8.04	103.8	11.37	263.5	22.6	36375.2	22553.1	0.85
2025-07-25	14:29:09	7.635	5.098	8.04	103.8	11.37	263.5	22.6	36385.4	22554.3	0.85
2025-07-25	14:29:10	7.73	5.092	8.04	103.8	11.37	263.4	22.61	36391.9	22554.8	0.84
2025-07-25	14:29:11	7.813	5.087	8.04	103.8	11.37	263.4	22.61	36400.1	22555.5	0.84
2025-07-25	14:29:12	7.895	5.081	8.04	103.8	11.37	263.3	22.61	36405.7	22555.9	0.83
2025-07-25	14:29:13	7.97	5.076	8.04	103.8	11.37	263.3	22.62	36412.8	22556.2	0.83
2025-07-25	14:29:14	8.048	5.07	8.04	103.8	11.37	263.2	22.62	36419.8	22556.6	0.83
2025-07-25	14:29:15	8.116	5.065	8.04	103.8	11.38	263.2	22.63	36426.2	22556.8	0.83
2025-07-25	14:29:16	8.192	5.062	8.04	103.8	11.38	263.1	22.63	36429.7	22556.9	0.82
2025-07-25	14:29:17	8.267	5.059	8.04	103.8	11.38	263	22.63	36433.6	22557	0.82
2025-07-25	14:29:18	8.342	5.055	8.04	103.8	11.38	262.9	22.63	36437.8	22557.1	0.81
2025-07-25	14:29:19	8.396	5.052	8.04	103.8	11.38	262.9	22.64	36440.5	22556.8	0.8
2025-07-25	14:29:20	8.454	5.049	8.04	103.8	11.38	262.8	22.64	36444.4	22556.9	0.8
2025-07-25	14:29:21	8.504	5.048	8.04	103.8	11.39	262.8	22.64	36445.3	22556.7	0.79
2025-07-25	14:29:22	8.579	5.044	8.04	103.8	11.39	262.7	22.64	36449.1	22556.3	0.79
2025-07-25	14:29:23	8.67	5.04	8.04	103.8	11.39	262.7	22.64	36452.4	22555.9	0.79
2025-07-25	14:29:24	8.765	5.034	8.04	103.8	11.39	262.7	22.65	36458.6	22555.2	0.78
2025-07-25	14:29:25	8.855	5.024	8.04	103.8	11.39	262.6	22.65	36469.2	22555.3	0.79
2025-07-25	14:29:26	8.942	5.018	8.04	103.8	11.39	262.6	22.66	36476.5	22554.9	0.79
2025-07-25	14:29:27	9.771	5.005	8.04	103.7	11.39	262.6	22.66	36488	22554.6	0.79
2025-07-25	14:29:28	9.878	4.991	8.04	103.7	11.39	262.6	22.67	36506.4	22554.7	0.8
2025-07-25	14:29:29	9.938	4.974	8.04	103.7	11.39	262.6	22.68	36522.9	22554.6	0.78
2025-07-25	14:29:30	10.111	4.959	8.04	103.7	11.39	262.6	22.7	36542	22554.7	0.76
2025-07-25	14:29:31	10.15	4.939	8.04	103.6	11.39	262.6	22.71	36562.4	22555	0.75
2025-07-25	14:29:32	10.214	4.922	8.04	103.6	11.39	262.5	22.72	36585	22554.8	0.72
2025-07-25	14:29:33	10.3	4.898	8.04	103.6	11.39	262.5	22.74	36613.1	22555.4	0.71
2025-07-25	14:29:34	10.368	4.877	8.04	103.6	11.39	262.5	22.75	36633.6	22555.5	0.73
2025-07-25	14:29:35	10.462	4.858	8.04	103.5	11.4	262.4	22.77	36658.4	22555.6	0.73
2025-07-25	14:29:36	10.518	4.841	8.04	103.5	11.4	262.4	22.78	36677.1	22556.3	0.72
2025-07-25	14:29:37	10.57	4.828	8.04	103.6	11.41	262.3	22.79	36693.7	22556	0.72
2025-07-25	14:29:38	10.618	4.815	8.04	103.6	11.41	262.3	22.79	36706.5	22555.9	0.68
2025-07-25	14:29:39	10.68	4.802	8.04	103.6	11.42	262.2	22.8	36723	22555.8	0.7
2025-07-25	14:29:40	10.749	4.79	8.04	103.6	11.42	262.2	22.81	36736	22556.1	0.72
2025-07-25	14:29:41	10.857	4.782	8.04	103.7	11.43	262.1	22.82	36746.6	22556.3	0.73
2025-07-25	14:29:42	10.953	4.776	8.04	103.7	11.43	262.1	22.82	36753	22556.7	0.74
2025-07-25	14:29:43	11.075	4.771	8.04	103.7	11.44	262	22.83	36760.1	22556.8	0.74
2025-07-25	14:29:44	11.165	4.764	8.04	103.7	11.44	262	22.83	36769.4	22558.1	0.72
2025-07-25	14:29:45	11.254	4.758	8.04	103.8	11.45	262	22.84	36779.7	22559.6	0.71
2025-07-25	14:29:46	11.344	4.748	8.04	103.8	11.45	261.9	22.85	36791.9	22561	0.77
2025-07-25	14:29:47	11.424	4.742	8.04	103.8	11.45	261.9	22.85	36803.7	22563.5	0.9
2025-07-25	14:29:48	11.516	4.736	8.04	103.8	11.45	261.9	22.86	36813.5	22565.4	1.05

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-11 CTD Profiles for WQ1 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	14:29:49	11.574	4.73	8.04	103.8	11.46	261.9	22.87	36823.8	22567.8	1.77
2025-07-25	14:29:50	11.632	4.724	8.04	103.9	11.46	261.8	22.87	36834.5	22569.6	3.33

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-12 CTD Profiles for WQ2 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-24	19:55:05	28.301	0.144	8	98.8	11.97	210.6	26.18	42647.8	22400.4	2.16
2025-07-24	19:55:04	28.168	0.194	8	98.8	11.96	210.5	26.16	42596.9	22420.9	0.67
2025-07-24	19:55:03	27.784	0.264	8	98.8	11.95	210.4	26.13	42539.3	22441.2	0.67
2025-07-24	19:55:02	26.989	0.335	8	98.9	11.93	210.3	26.1	42474.9	22472.7	0.67
2025-07-24	19:55:01	26.862	0.414	8	99	11.92	210.2	26.08	42419.9	22500.1	0.64
2025-07-24	19:55:00	26.646	0.482	8	99.1	11.91	210.1	26.05	42356.6	22529.8	0.63
2025-07-24	19:54:59	26.592	0.556	8.01	99.2	11.9	210	26.03	42312.4	22557.5	0.63
2025-07-24	19:54:58	26.52	0.616	8.01	99.2	11.89	209.9	26	42250.5	22580.6	0.63
2025-07-24	19:54:57	26.442	0.69	8.01	99.3	11.88	209.8	25.98	42197.5	22604.2	0.63
2025-07-24	19:54:56	26.253	0.757	8.01	99.4	11.87	209.7	25.95	42140.2	22635.3	0.64
2025-07-24	19:54:55	25.861	0.836	8.01	99.5	11.86	209.6	25.94	42096.1	22667.1	0.65
2025-07-24	19:54:54	24.95	0.912	8.01	99.7	11.86	209.5	25.91	42037.3	22705.2	0.66
2025-07-24	19:54:53	24.794	0.995	8.02	99.8	11.85	209.4	25.89	41992.4	22739.1	0.66
2025-07-24	19:54:52	24.665	1.078	8.02	100	11.85	209.3	25.87	41939.1	22776.4	0.67
2025-07-24	19:54:51	24.516	1.147	8.02	100.1	11.84	209.2	25.85	41888.1	22811.2	0.68
2025-07-24	19:54:50	24.302	1.214	8.02	100.2	11.84	209.1	25.83	41851.5	22837.8	0.68
2025-07-24	19:54:49	24.082	1.273	8.02	100.3	11.83	209.1	25.81	41800.1	22862.9	0.69
2025-07-24	19:54:48	23.904	1.326	8.02	100.4	11.83	209	25.8	41773	22884.1	0.7
2025-07-24	19:54:47	22.949	1.355	8.02	100.4	11.82	208.9	25.79	41747.4	22895.7	0.7
2025-07-24	19:54:46	22.751	1.375	8.02	100.3	11.81	208.8	25.77	41724.2	22896.8	0.68
2025-07-24	19:54:45	22.64	1.388	8.02	100.3	11.8	208.8	25.76	41699.3	22895.1	0.68
2025-07-24	19:54:44	22.513	1.396	8.02	100.2	11.79	208.7	25.75	41689	22894	0.69
2025-07-24	19:54:43	22.385	1.399	8.02	100	11.77	208.7	25.74	41671.2	22887	0.68
2025-07-24	19:54:42	22.302	1.408	8.02	99.9	11.76	208.6	25.73	41655.7	22885.4	0.67
2025-07-24	19:54:41	21.865	1.426	8.02	99.8	11.74	208.6	25.72	41632.6	22889.3	0.66
2025-07-24	19:54:40	21.74	1.455	8.02	99.8	11.73	208.5	25.71	41606.3	22895.6	0.65
2025-07-24	19:54:39	21.58	1.491	8.02	99.8	11.72	208.5	25.69	41575	22910.8	0.62
2025-07-24	19:54:38	20.653	1.535	8.02	99.8	11.7	208.4	25.68	41544.1	22924.9	0.6
2025-07-24	19:54:37	20.475	1.577	8.02	99.8	11.69	208.4	25.66	41513.6	22941.2	0.58
2025-07-24	19:54:36	20.316	1.61	8.02	99.7	11.68	208.3	25.65	41478.8	22952	0.58
2025-07-24	19:54:35	20.212	1.645	8.02	99.7	11.67	208.2	25.64	41454.8	22962.3	0.57
2025-07-24	19:54:34	20.176	1.675	8.02	99.6	11.65	208.2	25.62	41424	22972.2	0.54
2025-07-24	19:54:33	19.663	1.702	8.02	99.5	11.63	208.1	25.61	41400.9	22977.8	0.54
2025-07-24	19:54:32	19.46	1.721	8.02	99.4	11.61	208.1	25.59	41373.6	22980.1	0.53
2025-07-24	19:54:31	18.654	1.75	8.02	99.3	11.59	208	25.58	41344.4	22984	0.53
2025-07-24	19:54:30	18.512	1.766	8.02	99.1	11.57	207.9	25.55	41302.5	22975.3	0.54
2025-07-24	19:54:29	18.342	1.794	8.02	99	11.55	207.9	25.51	41241.8	22962.1	0.54
2025-07-24	19:54:28	18.182	1.844	8.02	98.9	11.52	207.8	25.45	41140	22951	0.55
2025-07-24	19:54:27	18.096	1.92	8.02	98.9	11.5	207.7	25.38	41016.8	22935.7	0.55
2025-07-24	19:54:26	17.831	2.008	8.02	98.9	11.49	207.5	25.27	40828.3	22909	0.55
2025-07-24	19:54:25	17.474	2.116	8.02	99	11.47	207.3	25.15	40640.7	22877.3	0.55
2025-07-24	19:54:24	17.254	2.219	8.02	99	11.46	207.2	25.01	40402.3	22833.9	0.56
2025-07-24	19:54:23	16.499	2.339	8.02	99.2	11.45	207	24.88	40184.2	22791.4	0.56
2025-07-24	19:54:22	16.328	2.443	8.02	99.3	11.45	206.7	24.72	39928.6	22737.2	0.55
2025-07-24	19:54:21	16.102	2.568	8.03	99.4	11.44	206.5	24.54	39637.2	22666.6	0.54
2025-07-24	19:54:20	15.9	2.694	8.03	99.6	11.44	206.3	24.38	39388.9	22607.7	0.53
2025-07-24	19:54:19	15.722	2.786	8.03	99.7	11.44	206	24.23	39145.9	22537	0.54
2025-07-24	19:54:18	15.38	2.886	8.04	99.9	11.44	205.8	24.06	38870.3	22452.2	0.53
2025-07-24	19:54:17	14.858	2.964	8.04	100	11.44	205.6	23.91	38636.5	22382.6	0.52
2025-07-24	19:54:16	13.975	3.045	8.04	100.1	11.44	205.4	23.8	38456.1	22330	0.51
2025-07-24	19:54:15	13.776	3.107	8.04	100.1	11.44	205.2	23.69	38279.4	22278.8	0.5
2025-07-24	19:54:14	13.581	3.177	8.05	100.2	11.43	205.1	23.59	38134.6	22239	0.49
2025-07-24	19:54:13	13.478	3.231	8.05	100.2	11.43	204.9	23.5	37986	22197.3	0.48
2025-07-24	19:54:12	13.033	3.282	8.05	100.2	11.42	204.8	23.44	37881.6	22168.1	0.48
2025-07-24	19:54:11	12.816	3.324	8.05	100.2	11.41	204.6	23.37	37782.6	22143.6	0.47
2025-07-24	19:54:10	12.564	3.362	8.05	100.1	11.39	204.5	23.34	37725.1	22134.1	0.48
2025-07-24	19:54:09	11.657	3.393	8.05	100.1	11.38	204.4	23.31	37681.3	22133.6	0.46
2025-07-24	19:54:08	11.487	3.433	8.05	100	11.35	204.3	23.29	37646.2	22138.9	0.47
2025-07-24	19:54:07	11.315	3.476	8.05	99.9	11.33	204.3	23.28	37619.3	22158.1	0.48
2025-07-24	19:54:06	11.136	3.535	8.06	99.8	11.3	204.2	23.27	37591.9	22186.4	0.48
2025-07-24	19:54:05	11.023	3.596	8.06	99.7	11.28	204.1	23.26	37563.1	22213.4	0.48
2025-07-24	19:54:04	10.73	3.675	8.06	99.7	11.26	204	23.24	37525.6	22247.9	0.47

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-12 CTD Profiles for WQ2 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-24	19:54:03	10.488	3.756	8.06	99.7	11.23	203.9	23.23	37493.3	22279.8	0.48
2025-07-24	19:54:02	10.182	3.825	8.06	99.6	11.21	203.8	23.21	37459.4	22316.8	0.46
2025-07-24	19:54:01	9.209	3.906	8.05	99.6	11.18	203.7	23.2	37430.1	22349.6	0.48
2025-07-24	19:54:00	8.984	3.974	8.05	99.5	11.16	203.6	23.19	37398.6	22386	0.47
2025-07-24	19:53:59	8.774	4.046	8.05	99.5	11.13	203.5	23.17	37372.2	22415.4	0.46
2025-07-24	19:53:58	8.679	4.105	8.05	99.3	11.1	203.4	23.15	37333.2	22439.8	0.47
2025-07-24	19:53:57	8.465	4.198	8.05	99.3	11.07	203.3	23.11	37253.1	22451.5	0.47
2025-07-24	19:53:56	8.115	4.288	8.05	99.3	11.06	203.2	23.04	37143	22458.4	0.49
2025-07-24	19:53:55	7.848	4.391	8.05	99.3	11.03	203.1	22.98	37041.3	22460.6	0.52
2025-07-24	19:53:54	7.005	4.482	8.05	99.4	11.02	203	22.91	36916.7	22458.4	0.56
2025-07-24	19:53:53	6.869	4.589	8.05	99.4	11	202.8	22.84	36804	22455.9	0.6
2025-07-24	19:53:52	6.705	4.684	8.05	99.5	10.99	202.7	22.76	36668.6	22449.9	0.65
2025-07-24	19:53:51	6.565	4.8	8.04	99.6	10.97	202.5	22.68	36538.1	22441.3	0.69
2025-07-24	19:53:50	6.43	4.917	8.04	99.7	10.96	202.3	22.59	36385.2	22428.2	0.73
2025-07-24	19:53:49	6.317	5.018	8.04	99.8	10.96	202.1	22.49	36232.6	22413.4	0.79
2025-07-24	19:53:48	5.979	5.104	8.04	100	10.96	202	22.43	36131.5	22401.3	0.82
2025-07-24	19:53:47	5.593	5.147	8.04	100	10.95	201.8	22.39	36060.6	22390.3	0.85
2025-07-24	19:53:46	4.679	5.184	8.04	99.9	10.94	201.7	22.36	36014.2	22383	0.85
2025-07-24	19:53:45	4.545	5.208	8.04	99.8	10.92	201.5	22.33	35974.5	22377.4	0.87
2025-07-24	19:53:44	4.363	5.232	8.04	99.7	10.91	201.4	22.31	35943.3	22372.5	0.86
2025-07-24	19:53:43	4.169	5.251	8.04	99.6	10.89	201.3	22.3	35914.7	22369.1	0.87
2025-07-24	19:53:42	4	5.265	8.04	99.4	10.87	201.2	22.29	35899.4	22367.7	0.87
2025-07-24	19:53:41	3.929	5.272	8.04	99.2	10.85	201.1	22.28	35892.7	22368.4	0.86
2025-07-24	19:53:40	3.687	5.277	8.04	99	10.82	201	22.28	35890.1	22369.9	0.87
2025-07-24	19:53:39	3.287	5.282	8.04	98.8	10.8	201	22.28	35889.1	22372.7	0.87
2025-07-24	19:53:38	2.389	5.286	8.04	98.6	10.77	200.9	22.28	35889.1	22375.4	0.86
2025-07-24	19:53:37	2.204	5.292	8.04	98.4	10.75	200.9	22.28	35883.8	22376.8	0.87
2025-07-24	19:53:36	2.022	5.296	8.03	98.2	10.73	200.8	22.28	35881.3	22377.8	0.89
2025-07-24	19:53:35	1.861	5.299	8.03	98.1	10.72	200.8	22.28	35877.9	22377.9	0.88
2025-07-24	19:53:34	1.722	5.302	8.03	98	10.7	200.8	22.28	35875.9	22378.9	0.88
2025-07-24	19:53:33	1.473	5.306	8.03	97.9	10.69	200.7	22.27	35873.3	22379.3	0.89
2025-07-24	19:53:32	1.293	5.308	8.03	97.8	10.68	201.1	22.27	35872.3	22380.2	0.89
2025-07-24	19:53:31	0.454	5.31	8.03	97.7	10.67	201.7	22.27	35871	22380.7	0.9
2025-07-24	19:53:30	0.371	5.313	8.02	97.5	10.65	202.4	22.27	35870.5	22382.1	0.89
2025-07-24	19:53:29	0.294	5.315	8.02	97.4	10.64	203.2	22.27	35864.1	22379.7	0.88
2025-07-24	19:53:28	0.231	5.319	8.01	97.3	10.63	203.7	22.25	35839.4	22366.5	0.9
2025-07-24	19:53:27	0.17	5.291	8.01	97.1	10.61	204.4	22.29	35903.7	22388.1	0.91
2025-07-24	19:53:26	0.119	5.308	7.99	96.8	10.56	205.5	22.25	35843	22369.9	1.22
2025-07-24	19:53:25	0.103	5.411	7.96	97	10.55	205.9	22.31	35916.5	22478	1.04

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-13 CTD Profiles for WQ3 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	21:00:41	38.489	-0.819	7.93	95.9	11.9	237.7	26.53	43457	22027	7.58
2025-07-25	21:00:42	38.444	-0.808	7.93	95.8	11.9	237.6	26.52	43448	22030	7.35
2025-07-25	21:00:43	38.366	-0.799	7.93	95.9	11.9	237.6	26.52	43438	22034	8.23
2025-07-25	21:00:44	37.521	-0.788	7.93	95.9	11.89	237.6	26.51	43430	22037	7.8
2025-07-25	21:00:45	37.509	-0.778	7.93	95.9	11.89	237.5	26.51	43418	22041	7.96
2025-07-25	21:00:46	37.259	-0.763	7.94	95.9	11.89	237.5	26.5	43405	22045	7.72
2025-07-25	21:00:47	36.927	-0.749	7.94	95.9	11.89	237.5	26.5	43390	22050	7.48
2025-07-25	21:00:48	36.716	-0.733	7.94	96	11.89	237.4	26.49	43377	22055	7.2
2025-07-25	21:00:49	36.508	-0.716	7.94	96	11.89	237.4	26.48	43361	22063	5.39
2025-07-25	21:00:50	36.305	-0.69	7.94	96.1	11.89	237.3	26.48	43340	22072	5.74
2025-07-25	21:00:51	35.181	-0.665	7.94	96.1	11.89	237.3	26.46	43314	22081	6.29
2025-07-25	21:00:52	34.658	-0.637	7.95	96.2	11.9	237.2	26.45	43291	22090	5.93
2025-07-25	21:00:53	34.332	-0.613	7.95	96.3	11.9	237.2	26.44	43265	22099	5.45
2025-07-25	21:00:54	34.03	-0.586	7.95	96.4	11.9	237.2	26.43	43240	22109	5.41
2025-07-25	21:00:55	33.827	-0.558	7.95	96.5	11.91	237.1	26.43	43222	22120	5.33
2025-07-25	21:00:56	33.493	-0.53	7.95	96.6	11.91	237.1	26.41	43195	22132	6.66
2025-07-25	21:00:57	33.318	-0.493	7.95	96.7	11.92	237	26.4	43168	22144	7.88
2025-07-25	21:00:58	33.2	-0.457	7.96	96.9	11.93	237	26.39	43132	22160	8.15
2025-07-25	21:00:59	33.075	-0.414	7.96	97	11.93	236.9	26.37	43101	22175	8.62
2025-07-25	21:01:00	32.166	-0.376	7.96	97.2	11.94	236.9	26.36	43064	22192	8.54
2025-07-25	21:01:01	32.041	-0.328	7.96	97.3	11.95	236.8	26.34	43028	22207	8.27
2025-07-25	21:01:02	31.705	-0.276	7.97	97.5	11.96	236.7	26.32	42979	22230	8.39
2025-07-25	21:01:03	31.476	-0.214	7.97	97.7	11.96	236.7	26.3	42933	22251	8.6
2025-07-25	21:01:04	31.517	-0.159	7.97	97.9	11.97	236.6	26.27	42875	22272	8.65
2025-07-25	21:01:05	31.515	-0.102	7.97	98.1	11.98	236.5	26.26	42832	22291	7.81
2025-07-25	21:01:06	31.395	-0.056	7.98	98.3	11.98	236.5	26.24	42789	22312	5.79
2025-07-25	21:01:07	31.267	-0.006	7.98	98.4	11.99	236.4	26.22	42751	22328	5.1
2025-07-25	21:01:08	31.185	0.036	7.98	98.6	11.99	236.4	26.2	42707	22343	4.54
2025-07-25	21:01:09	31.094	0.078	7.98	98.7	12	236.3	26.18	42673	22356	3.91
2025-07-25	21:01:10	30.319	0.119	7.98	98.8	12	236.3	26.17	42639	22372	3.77
2025-07-25	21:01:11	30.378	0.154	7.99	99	12.01	236.2	26.15	42606	22387	3.54
2025-07-25	21:01:12	30.037	0.206	7.99	99.1	12.01	236.2	26.14	42565	22403	4
2025-07-25	21:01:13	29.883	0.248	7.99	99.3	12.02	236.1	26.12	42523	22420	3.95
2025-07-25	21:01:14	29.766	0.296	7.99	99.4	12.02	236.1	26.1	42490	22436	3.8
2025-07-25	21:01:15	29.683	0.341	7.99	99.6	12.03	236	26.08	42445	22454	3.91
2025-07-25	21:01:16	29.607	0.39	7.99	99.7	12.04	236	26.06	42409	22470	4.11
2025-07-25	21:01:17	29.538	0.429	8	99.9	12.04	235.9	26.05	42373	22487	3.99
2025-07-25	21:01:18	28.642	0.472	8	100	12.05	235.9	26.04	42345	22502	4.07
2025-07-25	21:01:19	28.32	0.516	8	100.2	12.05	235.8	26.02	42309	22523	4.37
2025-07-25	21:01:20	28.115	0.571	8	100.4	12.06	235.8	26.01	42272	22542	4.58
2025-07-25	21:01:21	27.783	0.608	8	100.5	12.06	235.7	25.99	42238	22560	4.85
2025-07-25	21:01:22	27.721	0.651	8	100.7	12.07	235.7	25.98	42217	22579	4.03
2025-07-25	21:01:23	27.581	0.694	8	100.9	12.08	235.7	25.97	42186	22601	3.81
2025-07-25	21:01:24	27.433	0.748	8	101.1	12.09	235.6	25.96	42158	22624	3.6
2025-07-25	21:01:25	27.314	0.817	8	101.3	12.1	235.6	25.95	42120	22658	3.35
2025-07-25	21:01:26	26.332	0.891	8	101.6	12.12	235.5	25.93	42072	22699	2.79
2025-07-25	21:01:27	26.189	0.989	8	101.9	12.13	235.5	25.9	42016	22737	2.54
2025-07-25	21:01:28	25.617	1.074	8	102.2	12.13	235.4	25.88	41948	22778	2.36
2025-07-25	21:01:29	25.614	1.164	8.01	102.4	12.13	235.3	25.85	41894	22812	1.95
2025-07-25	21:01:30	25.467	1.238	8.01	102.6	12.14	235.3	25.83	41837	22849	1.44
2025-07-25	21:01:31	25.253	1.322	8.01	102.8	12.14	235.2	25.81	41786	22880	1.21
2025-07-25	21:01:32	25.081	1.391	8.01	103	12.13	235.2	25.78	41727	22911	1.08
2025-07-25	21:01:33	24.14	1.465	8.01	103.1	12.13	235.1	25.75	41677	22936	0.92
2025-07-25	21:01:34	23.863	1.516	8.01	103.2	12.12	235	25.73	41623	22954	0.83
2025-07-25	21:01:35	23.704	1.556	8.01	103.2	12.11	235	25.7	41580	22959	0.8
2025-07-25	21:01:36	23.244	1.576	8.01	103.2	12.1	235	25.69	41549	22960	0.8
2025-07-25	21:01:37	23.133	1.586	8.01	103.1	12.09	234.9	25.68	41533	22958	0.79
2025-07-25	21:01:38	22.957	1.592	8.01	103.1	12.08	234.9	25.67	41513	22953	0.81
2025-07-25	21:01:39	22.77	1.593	8.01	103	12.08	234.9	25.66	41498	22945	0.81
2025-07-25	21:01:40	22.615	1.588	8.01	103	12.07	234.9	25.64	41479	22932	0.83
2025-07-25	21:01:41	22.5	1.586	8.01	103	12.07	234.8	25.63	41461	22920	0.8
2025-07-25	21:01:42	21.644	1.586	8.01	103	12.07	234.8	25.61	41438	22907	0.81

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-13 CTD Profiles for WQ3 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	21:01:43	21.423	1.585	8.01	103	12.07	234.8	25.59	41408	22889	0.82
2025-07-25	21:01:44	21.338	1.59	8.02	103	12.08	234.8	25.58	41379	22876	0.82
2025-07-25	21:01:45	21.3	1.62	8.02	103.1	12.09	234.7	25.53	41307	22861	0.83
2025-07-25	21:01:46	21.144	1.678	8.02	103.3	12.11	234.6	25.47	41209	22846	0.82
2025-07-25	21:01:47	20.839	1.739	8.02	103.6	12.12	234.6	25.4	41079	22828	0.83
2025-07-25	21:01:48	20.63	1.824	8.02	103.8	12.13	234.5	25.32	40946	22812	0.82
2025-07-25	21:01:49	20.5	1.907	8.02	104.1	12.15	234.4	25.22	40781	22793	0.83
2025-07-25	21:01:50	20.386	2.015	8.02	104.4	12.16	234.2	25.12	40618	22775	0.82
2025-07-25	21:01:51	19.414	2.127	8.02	104.8	12.19	234.1	24.99	40391	22745	0.81
2025-07-25	21:01:52	19.125	3.481	8.02	106.8	12.12	233.9	23.95	38625	22716	0.8
2025-07-25	21:01:53	18.944	3.606	8.02	106.4	11.99	233.6	23.79	38359	22684	0.81
2025-07-25	21:01:54	18.935	3.688	8.02	106.6	12.01	233.4	23.7	38215	22655	0.8
2025-07-25	21:01:55	18.837	3.715	8.02	106.6	12	233.2	23.64	38122	22624	0.79
2025-07-25	21:01:56	18.589	3.747	8.03	106.6	12	233	23.6	38047	22599	0.8
2025-07-25	21:01:57	18.41	3.784	8.03	106.6	11.99	232.8	23.54	37956	22576	0.81
2025-07-25	21:01:58	18.282	3.814	8.03	106.6	11.99	232.7	23.49	37885	22555	0.82
2025-07-25	21:01:59	17.291	3.843	8.03	106.7	11.99	232.5	23.46	37827	22539	0.8
2025-07-25	21:02:00	17.024	3.894	8.04	106.8	12	232.4	23.4	37739	22526	0.8
2025-07-25	21:02:01	16.71	3.984	8.04	107.1	12.01	232.2	23.34	37636	22521	0.8
2025-07-25	21:02:02	16.63	4.054	8.04	107.2	12.01	232.1	23.28	37536	22519	0.8
2025-07-25	21:02:03	16.47	4.124	8.04	107.3	12	232	23.24	37462	22519	0.8
2025-07-25	21:02:04	16.265	4.18	8.04	107.4	12	232	23.2	37388	22520	0.82
2025-07-25	21:02:05	16.117	4.287	8.04	107.5	11.99	231.9	23.13	37279	22521	0.82
2025-07-25	21:02:06	15.292	4.374	8.04	107.6	11.98	231.8	23.06	37161	22522	0.82
2025-07-25	21:02:07	15.049	4.469	8.04	107.7	11.97	231.7	23	37063	22521	0.81
2025-07-25	21:02:08	14.773	4.537	8.04	107.8	11.95	231.6	22.95	36982	22520	0.81
2025-07-25	21:02:09	14.539	4.628	8.04	107.8	11.93	231.5	22.89	36876	22521	0.83
2025-07-25	21:02:10	14.521	4.658	8.04	107.7	11.91	231.4	22.87	36837	22522	0.83
2025-07-25	21:02:11	14.44	4.681	8.05	107.5	11.88	231.4	22.85	36809	22523	0.83
2025-07-25	21:02:12	13.436	4.697	8.05	107.4	11.86	231.3	22.84	36792	22524	0.84
2025-07-25	21:02:13	13.382	4.706	8.05	107.1	11.84	231.3	22.83	36781	22524	0.83
2025-07-25	21:02:14	13.046	4.71	8.05	107	11.81	231.2	22.83	36777	22524	0.81
2025-07-25	21:02:15	12.876	4.712	8.05	106.8	11.79	231.2	22.83	36773	22524	0.8
2025-07-25	21:02:16	12.764	4.714	8.05	106.6	11.77	231.2	22.83	36771	22523	0.8
2025-07-25	21:02:17	12.676	4.714	8.05	106.5	11.76	231.2	22.83	36770	22523	0.79
2025-07-25	21:02:18	12.548	4.715	8.05	106.4	11.74	231.2	22.83	36769	22523	0.78
2025-07-25	21:02:19	12.39	4.716	8.05	106.2	11.73	231.1	22.83	36768	22523	0.76
2025-07-25	21:02:20	11.345	4.716	8.05	106.2	11.72	231.1	22.83	36767	22522	0.75
2025-07-25	21:02:21	11.206	4.717	8.05	106.1	11.71	231.1	22.82	36763	22521	0.73
2025-07-25	21:02:22	10.779	4.718	8.05	106	11.7	231.1	22.82	36760	22520	0.73
2025-07-25	21:02:23	10.769	4.719	8.05	105.9	11.7	231	22.82	36757	22519	0.72
2025-07-25	21:02:24	10.657	4.72	8.05	105.9	11.69	231	22.82	36754	22517	0.74
2025-07-25	21:02:25	10.541	4.721	8.05	105.8	11.68	231	22.82	36751	22516	0.73
2025-07-25	21:02:26	10.413	4.722	8.05	105.8	11.68	231	22.81	36748	22515	0.73
2025-07-25	21:02:27	10.299	4.725	8.05	105.7	11.67	231	22.81	36745	22515	0.74
2025-07-25	21:02:28	10.217	4.728	8.05	105.7	11.67	230.9	22.81	36739	22514	0.73
2025-07-25	21:02:29	10.129	4.732	8.05	105.6	11.66	230.9	22.81	36735	22513	0.72
2025-07-25	21:02:30	10.046	4.734	8.05	105.6	11.66	230.9	22.8	36731	22513	0.72
2025-07-25	21:02:31	9.026	4.738	8.05	105.6	11.65	230.9	22.8	36728	22514	0.73
2025-07-25	21:02:32	8.642	4.742	8.05	105.5	11.65	230.9	22.8	36725	22515	0.73
2025-07-25	21:02:33	8.225	4.747	8.05	105.5	11.64	230.9	22.8	36721	22516	0.72
2025-07-25	21:02:34	8.182	4.752	8.05	105.5	11.64	230.9	22.8	36717	22517	0.71
2025-07-25	21:02:35	8.05	4.759	8.05	105.5	11.64	230.9	22.79	36712	22518	0.71
2025-07-25	21:02:36	7.949	4.765	8.05	105.5	11.63	230.9	22.79	36706	22520	0.71
2025-07-25	21:02:37	7.057	4.775	8.05	105.5	11.63	230.8	22.79	36698	22521	0.71
2025-07-25	21:02:38	6.636	4.79	8.05	105.5	11.63	230.8	22.78	36683	22523	0.72
2025-07-25	21:02:39	6.367	4.813	8.05	105.5	11.63	230.8	22.76	36660	22525	0.75
2025-07-25	21:02:40	6.115	4.845	8.05	105.6	11.63	230.8	22.75	36632	22527	0.76
2025-07-25	21:02:41	5.827	4.881	8.05	105.7	11.63	230.7	22.72	36589	22529	0.79
2025-07-25	21:02:42	5.688	4.932	8.05	105.8	11.64	230.7	22.69	36541	22530	0.82

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-13 CTD Profiles for WQ3 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	21:02:43	5.542	4.978	8.05	105.9	11.63	230.6	22.66	36484	22531	0.84
2025-07-25	21:02:44	5.383	5.027	8.05	106	11.63	230.6	22.63	36438	22533	0.86
2025-07-25	21:02:45	4.362	5.068	8.05	106	11.63	230.5	22.6	36388	22535	0.88
2025-07-25	21:02:46	4.191	5.111	8.05	106	11.62	230.5	22.58	36347	22536	0.91
2025-07-25	21:02:47	3.845	5.139	8.05	106	11.61	230.4	22.56	36312	22538	0.91
2025-07-25	21:02:48	3.724	5.164	8.05	106	11.6	230.4	22.54	36289	22539	0.91
2025-07-25	21:02:49	3.495	5.176	8.05	105.9	11.59	230.4	22.53	36275	22540	0.9
2025-07-25	21:02:50	3.355	5.18	8.05	105.8	11.57	230.4	22.53	36273	22541	0.9
2025-07-25	21:02:51	3.279	5.175	8.05	105.7	11.56	230.4	22.54	36281	22542	0.9
2025-07-25	21:02:52	2.079	5.159	8.05	105.5	11.55	230.4	22.55	36298	22544	0.89
2025-07-25	21:02:53	1.619	5.145	8.05	105.4	11.54	230.4	22.56	36315	22544	0.87
2025-07-25	21:02:54	1.434	5.133	8.05	105.3	11.53	230.4	22.57	36331	22545	0.86
2025-07-25	21:02:55	1.007	5.121	8.05	105.2	11.52	230.4	22.58	36344	22545	0.86
2025-07-25	21:02:56	0.903	5.114	8.05	105.2	11.52	230.4	22.58	36354	22546	0.86
2025-07-25	21:02:57	0.074	5.111	8.05	105.1	11.52	230.4	22.59	36357	22546	0.87

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-14 CTD Profiles for WQ4 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	15:38:24	14.985	4.908	8.05	104.4	11.48	247.2	22.75	36630	22573	5.95
2025-07-25	15:38:25	14.003	4.906	8.05	104.4	11.48	247.1	22.75	36637	22576	5.45
2025-07-25	15:38:26	14.108	4.902	8.05	104.4	11.48	247.1	22.76	36643	22577	4.04
2025-07-25	15:38:27	13.881	4.899	8.05	104.4	11.48	247.1	22.76	36650	22579	3.36
2025-07-25	15:38:28	13.812	4.897	8.05	104.4	11.48	247.1	22.77	36656	22582	2.21
2025-07-25	15:38:29	13.758	4.895	8.05	104.4	11.48	247.1	22.77	36663	22584	1.55
2025-07-25	15:38:30	13.614	4.893	8.05	104.4	11.48	247.1	22.77	36669	22586	1.2
2025-07-25	15:38:31	13.52	4.89	8.05	104.4	11.48	247.1	22.78	36675	22588	0.91
2025-07-25	15:38:32	13.423	4.888	8.05	104.4	11.48	247.1	22.78	36680	22590	0.77
2025-07-25	15:38:33	13.32	4.887	8.05	104.4	11.48	247.1	22.78	36682	22590	0.73
2025-07-25	15:38:34	13.235	4.888	8.05	104.4	11.49	247.1	22.78	36682	22591	0.68
2025-07-25	15:38:35	12.544	4.89	8.05	104.4	11.49	247.1	22.78	36679	22590	0.66
2025-07-25	15:38:36	12.423	4.895	8.05	104.5	11.49	247.1	22.78	36670	22588	0.65
2025-07-25	15:38:37	12.082	4.902	8.05	104.5	11.49	247.1	22.77	36660	22586	0.64
2025-07-25	15:38:38	12.087	4.908	8.05	104.5	11.49	247	22.76	36647	22583	0.66
2025-07-25	15:38:39	11.957	4.915	8.05	104.5	11.49	247	22.75	36635	22580	0.66
2025-07-25	15:38:40	11.82	4.921	8.05	104.5	11.49	247	22.74	36620	22576	0.68
2025-07-25	15:38:41	11.73	4.929	8.05	104.5	11.49	247	22.74	36606	22572	0.69
2025-07-25	15:38:42	11.635	4.936	8.05	104.6	11.49	247	22.73	36591	22568	0.7
2025-07-25	15:38:43	10.842	4.942	8.05	104.6	11.49	246.9	22.72	36579	22565	0.69
2025-07-25	15:38:44	10.649	4.947	8.05	104.6	11.49	246.9	22.71	36568	22562	0.71
2025-07-25	15:38:45	10.483	4.95	8.05	104.6	11.49	246.9	22.71	36561	22560	0.71
2025-07-25	15:38:46	10.292	4.95	8.05	104.6	11.49	246.9	22.71	36559	22559	0.72
2025-07-25	15:38:47	10.138	4.95	8.06	104.6	11.49	246.9	22.71	36557	22557	0.73
2025-07-25	15:38:48	10.046	4.949	8.06	104.6	11.49	246.9	22.71	36557	22557	0.72
2025-07-25	15:38:49	9.885	4.948	8.06	104.5	11.49	246.9	22.71	36559	22557	0.72
2025-07-25	15:38:50	9.725	4.946	8.06	104.5	11.49	246.9	22.71	36561	22557	0.72
2025-07-25	15:38:51	9.611	4.945	8.06	104.5	11.49	246.9	22.71	36564	22558	0.72
2025-07-25	15:38:52	9.5	4.943	8.06	104.5	11.49	246.9	22.71	36566	22559	0.73
2025-07-25	15:38:53	9.421	4.942	8.06	104.5	11.49	246.9	22.71	36568	22559	0.73
2025-07-25	15:38:54	8.446	4.941	8.06	104.5	11.49	246.9	22.71	36569	22558	0.72
2025-07-25	15:38:55	8.255	4.94	8.06	104.5	11.49	246.9	22.71	36569	22558	0.71
2025-07-25	15:38:56	7.768	4.94	8.06	104.5	11.49	246.9	22.71	36568	22557	0.71
2025-07-25	15:38:57	7.764	4.939	8.06	104.5	11.49	246.9	22.71	36566	22556	0.71
2025-07-25	15:38:58	7.678	4.939	8.05	104.6	11.49	246.9	22.71	36563	22553	0.72
2025-07-25	15:38:59	7.466	4.939	8.06	104.6	11.49	246.9	22.71	36558	22551	0.73
2025-07-25	15:39:00	7.281	4.94	8.06	104.6	11.49	246.9	22.7	36551	22547	0.73
2025-07-25	15:39:01	6.416	4.94	8.05	104.6	11.49	246.9	22.7	36544	22543	0.73
2025-07-25	15:39:02	6.208	4.941	8.05	104.6	11.5	246.9	22.69	36535	22537	0.71
2025-07-25	15:39:03	5.977	4.941	8.05	104.6	11.49	246.9	22.69	36528	22533	0.71
2025-07-25	15:39:04	5.805	4.941	8.05	104.6	11.5	246.9	22.68	36520	22528	0.73
2025-07-25	15:39:05	5.725	4.941	8.05	104.6	11.5	246.8	22.68	36514	22525	0.76
2025-07-25	15:39:06	5.551	4.942	8.05	104.6	11.5	246.8	22.67	36507	22521	0.76
2025-07-25	15:39:07	5.381	4.944	8.05	104.6	11.5	246.8	22.67	36500	22518	0.77
2025-07-25	15:39:08	5.187	4.951	8.05	104.6	11.5	246.8	22.66	36489	22516	0.79
2025-07-25	15:39:09	5.071	4.969	8.05	104.7	11.51	246.7	22.65	36470	22515	0.79
2025-07-25	15:39:10	4.197	4.99	8.05	104.8	11.51	246.7	22.63	36445	22516	0.81
2025-07-25	15:39:11	4.029	5.019	8.05	104.9	11.52	246.7	22.62	36418	22517	0.82
2025-07-25	15:39:12	3.98	5.05	8.05	105	11.52	246.6	22.6	36382	22519	0.84
2025-07-25	15:39:13	3.796	5.087	8.05	105.1	11.52	246.6	22.58	36349	22521	0.86
2025-07-25	15:39:14	3.663	5.123	8.05	105.2	11.52	246.6	22.56	36313	22524	0.87
2025-07-25	15:39:15	3.518	5.153	8.05	105.2	11.52	246.5	22.54	36283	22526	0.87
2025-07-25	15:39:16	3.315	5.188	8.05	105.2	11.52	246.5	22.52	36249	22529	0.89
2025-07-25	15:39:17	3.173	5.215	8.05	105.3	11.51	246.4	22.5	36219	22532	0.9
2025-07-25	15:39:18	2.191	5.237	8.05	105.3	11.5	246.4	22.49	36200	22534	0.92
2025-07-25	15:39:19	1.914	5.252	8.05	105.2	11.5	246.5	22.48	36183	22536	0.93
2025-07-25	15:39:20	1.475	5.264	8.05	105.2	11.49	246.5	22.47	36173	22537	0.93
2025-07-25	15:39:21	1.374	5.279	8.05	105.2	11.49	246.4	22.46	36157	22538	0.95
2025-07-25	15:39:22	1.308	5.298	8.05	105.2	11.48	246.4	22.45	36140	22538	0.97
2025-07-25	15:39:23	1.141	5.318	8.05	105.2	11.48	246.4	22.44	36116	22539	0.99
2025-07-25	15:39:24	0.982	5.344	8.05	105.2	11.48	246.3	22.43	36092	22540	1
2025-07-25	15:39:25	0.851	5.369	8.05	105.2	11.47	246.3	22.41	36063	22541	1.01

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-14 CTD Profiles for WQ4 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	15:39:26	0.738	5.397	8.05	105.3	11.47	246.3	22.39	36037	22542	1.03
2025-07-25	15:39:27	0.641	5.422	8.05	105.3	11.46	246.2	22.37	36007	22543	1.04
2025-07-25	15:39:28	0.576	5.449	8.05	105.3	11.46	246.2	22.36	35979	22544	1.05
2025-07-25	15:39:29	0.492	5.472	8.05	105.3	11.45	246.1	22.34	35955	22544	1.04
2025-07-25	15:39:30	0.428	5.493	8.05	105.3	11.44	246.1	22.33	35934	22545	1.87

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-15 CTD Profiles for WQ5 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	16:07:40	9.872	4.895	8.06	104.4	11.49	241.2	22.69	36538.9	22508.3	1.08
2025-07-25	16:07:39	9.806	4.9	8.06	104.4	11.49	241.2	22.68	36533.3	22507.9	0.86
2025-07-25	16:07:38	9.724	4.906	8.06	104.5	11.49	241.2	22.68	36527.3	22508	0.8
2025-07-25	16:07:37	9.651	4.91	8.06	104.5	11.49	241.2	22.68	36520.8	22507.8	0.81
2025-07-25	16:07:36	9.581	4.915	8.06	104.5	11.49	241.2	22.67	36514.9	22507.5	0.82
2025-07-25	16:07:35	9.507	4.921	8.06	104.5	11.49	241.2	22.67	36508	22507.2	0.81
2025-07-25	16:07:34	9.421	4.926	8.06	104.5	11.49	241.2	22.67	36503.3	22507.2	0.8
2025-07-25	16:07:33	9.348	4.929	8.06	104.5	11.49	241.2	22.66	36499.2	22507	0.78
2025-07-25	16:07:32	9.273	4.931	8.06	104.4	11.48	241.2	22.66	36495.8	22506.6	0.78
2025-07-25	16:07:31	9.188	4.934	8.06	104.4	11.48	241.2	22.66	36493	22506.7	0.77
2025-07-25	16:07:30	9.084	4.936	8.06	104.4	11.48	241.2	22.66	36491	22506.8	0.77
2025-07-25	16:07:29	8.993	4.938	8.06	104.4	11.48	241.2	22.66	36488.8	22506.8	0.77
2025-07-25	16:07:28	8.906	4.939	8.06	104.4	11.48	241.2	22.66	36487.1	22506.9	0.78
2025-07-25	16:07:27	8.815	4.941	8.06	104.4	11.48	241.2	22.66	36485.5	22507	0.77
2025-07-25	16:07:26	8.699	4.943	8.06	104.4	11.48	241.2	22.66	36484.2	22507.3	0.77
2025-07-25	16:07:25	8.601	4.944	8.06	104.4	11.48	241.2	22.65	36481.5	22507	0.77
2025-07-25	16:07:24	8.498	4.947	8.06	104.4	11.48	241.2	22.65	36479	22506.9	0.78
2025-07-25	16:07:23	8.396	4.949	8.06	104.4	11.48	241.2	22.65	36476	22506.9	0.81
2025-07-25	16:07:22	8.302	4.951	8.06	104.4	11.47	241.2	22.65	36474	22507	0.81
2025-07-25	16:07:21	8.198	4.954	8.06	104.4	11.47	241.1	22.65	36470.2	22506.5	0.82
2025-07-25	16:07:20	8.113	4.956	8.06	104.4	11.47	241.1	22.64	36466.8	22506.3	0.82
2025-07-25	16:07:19	8.03	4.96	8.05	104.4	11.47	241.1	22.64	36462.5	22505.9	0.82
2025-07-25	16:07:18	7.932	4.963	8.05	104.4	11.47	241.1	22.64	36457.4	22505.3	0.82
2025-07-25	16:07:17	7.853	4.967	8.05	104.4	11.47	241.1	22.64	36453	22504.8	0.83
2025-07-25	16:07:16	7.788	4.97	8.05	104.4	11.47	241.1	22.63	36447.6	22503.9	0.84
2025-07-25	16:07:15	7.714	4.973	8.05	104.4	11.47	241.1	22.63	36443.5	22503.6	0.84
2025-07-25	16:07:14	7.64	4.976	8.05	104.4	11.47	241.1	22.63	36439.1	22503	0.84
2025-07-25	16:07:13	7.542	4.979	8.05	104.4	11.47	241.1	22.63	36436	22502.6	0.83
2025-07-25	16:07:12	7.456	4.981	8.06	104.4	11.47	241.1	22.62	36432.3	22502.2	0.85
2025-07-25	16:07:11	7.359	4.983	8.06	104.4	11.47	241.1	22.62	36430.3	22502	0.84
2025-07-25	16:07:10	7.264	4.985	8.06	104.4	11.47	241.1	22.62	36427.2	22501.5	0.83
2025-07-25	16:07:09	7.142	4.987	8.06	104.4	11.47	241.1	22.62	36424.4	22501.2	0.81
2025-07-25	16:07:08	7.044	4.989	8.06	104.4	11.47	241.1	22.62	36421.4	22500.9	0.8
2025-07-25	16:07:07	6.94	4.992	8.06	104.4	11.47	241	22.62	36418.1	22500.7	0.81
2025-07-25	16:07:06	6.837	4.994	8.06	104.4	11.47	241	22.61	36415.1	22500.6	0.8
2025-07-25	16:07:05	6.712	4.996	8.06	104.4	11.47	241	22.61	36412.3	22500.4	0.8
2025-07-25	16:07:04	6.62	4.999	8.06	104.4	11.46	241	22.61	36410.1	22500.4	0.8
2025-07-25	16:07:03	6.53	5	8.06	104.4	11.47	241	22.61	36407.6	22500.2	0.79
2025-07-25	16:07:02	6.461	5.002	8.06	104.4	11.46	241	22.61	36405.8	22500	0.79
2025-07-25	16:07:01	6.369	5.003	8.06	104.4	11.46	241	22.61	36403.9	22500.1	0.78
2025-07-25	16:07:00	6.294	5.004	8.06	104.4	11.46	241	22.61	36403	22500.2	0.79
2025-07-25	16:06:59	6.231	5.005	8.06	104.4	11.46	241	22.61	36402.6	22500.2	0.79
2025-07-25	16:06:58	6.161	5.006	8.06	104.4	11.46	241	22.61	36402.1	22500.3	0.79
2025-07-25	16:06:57	6.082	5.006	8.06	104.4	11.46	241	22.61	36401.7	22500.4	0.79
2025-07-25	16:06:56	6.02	5.007	8.06	104.4	11.46	241	22.61	36401.1	22500.5	0.78
2025-07-25	16:06:55	5.962	5.008	8.06	104.4	11.46	241	22.6	36399.4	22500.4	0.77
2025-07-25	16:06:54	5.898	5.009	8.06	104.4	11.46	241	22.6	36398.6	22500.5	0.78
2025-07-25	16:06:53	5.836	5.01	8.06	104.4	11.46	241	22.6	36397.2	22500.5	0.79
2025-07-25	16:06:52	5.762	5.011	8.06	104.4	11.46	241.1	22.6	36395.7	22500.4	0.78
2025-07-25	16:06:51	5.704	5.012	8.06	104.4	11.46	241.1	22.6	36394.9	22500.3	0.78
2025-07-25	16:06:50	5.641	5.012	8.06	104.4	11.46	241.1	22.6	36394.3	22500.3	0.78
2025-07-25	16:06:49	5.564	5.013	8.06	104.3	11.46	241.1	22.6	36393.5	22500.1	0.79
2025-07-25	16:06:48	5.508	5.013	8.06	104.3	11.45	241.1	22.6	36393.5	22500.2	0.78
2025-07-25	16:06:47	5.45	5.013	8.06	104.3	11.45	241.1	22.6	36393.3	22500.3	0.78
2025-07-25	16:06:46	5.394	5.013	8.06	104.3	11.45	241.1	22.6	36393.8	22500.5	0.77
2025-07-25	16:06:45	5.335	5.013	8.06	104.3	11.45	241.1	22.6	36394.2	22500.6	0.77
2025-07-25	16:06:44	5.264	5.013	8.06	104.3	11.45	241.1	22.6	36393.8	22500.5	0.77
2025-07-25	16:06:43	5.206	5.013	8.06	104.3	11.45	241.1	22.6	36393.4	22500.4	0.75
2025-07-25	16:06:42	5.152	5.014	8.06	104.3	11.45	241.1	22.6	36392.2	22500.4	0.76
2025-07-25	16:06:41	5.094	5.016	8.06	104.3	11.45	241.1	22.6	36390.6	22500.2	0.76
2025-07-25	16:06:40	5.033	5.017	8.06	104.3	11.44	241.1	22.6	36388.4	22499.9	0.74
2025-07-25	16:06:39	4.973	5.019	8.06	104.3	11.44	241.1	22.6	36386.4	22499.8	0.75

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-15 CTD Profiles for WQ5 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	16:06:38	4.912	5.02	8.06	104.3	11.44	241.1	22.6	36384.1	22499.4	0.75
2025-07-25	16:06:37	4.855	5.021	8.06	104.3	11.44	241.1	22.59	36381.9	22498.9	0.75
2025-07-25	16:06:36	4.781	5.022	8.06	104.2	11.44	241.1	22.59	36380.5	22498.6	0.77
2025-07-25	16:06:35	4.719	5.023	8.06	104.2	11.44	241.1	22.59	36379.5	22498.4	0.77
2025-07-25	16:06:34	4.654	5.023	8.06	104.2	11.44	241.1	22.59	36378.6	22498.1	0.78
2025-07-25	16:06:33	4.589	5.023	8.06	104.2	11.44	241	22.59	36378.6	22498.2	0.79
2025-07-25	16:06:32	4.511	5.024	8.06	104.2	11.44	241	22.59	36378.1	22498.1	0.79
2025-07-25	16:06:31	4.452	5.024	8.06	104.2	11.44	241	22.59	36378	22498	0.8
2025-07-25	16:06:30	4.388	5.024	8.06	104.2	11.43	241	22.59	36377.6	22497.9	0.81
2025-07-25	16:06:29	4.339	5.023	8.06	104.1	11.43	241	22.59	36377.8	22497.8	0.8
2025-07-25	16:06:28	4.269	5.023	8.06	104.1	11.43	241	22.59	36377.8	22497.7	0.81
2025-07-25	16:06:27	4.217	5.023	8.06	104.1	11.43	241	22.59	36377.5	22497.6	0.79
2025-07-25	16:06:26	4.166	5.024	8.06	104.1	11.43	241	22.59	36377.1	22497.7	0.79
2025-07-25	16:06:25	4.117	5.025	8.06	104.1	11.42	241	22.59	36376	22497.5	0.79
2025-07-25	16:06:24	4.06	5.026	8.06	104.1	11.42	241	22.59	36374.4	22497.6	0.79
2025-07-25	16:06:23	4.012	5.028	8.06	104	11.42	241	22.59	36371.1	22497.1	0.78
2025-07-25	16:06:22	3.969	5.031	8.06	104	11.42	241	22.59	36366.8	22496.9	0.8
2025-07-25	16:06:21	3.918	5.036	8.06	104	11.41	241	22.58	36362.2	22496.5	0.8
2025-07-25	16:06:20	3.867	5.039	8.06	104	11.41	241	22.58	36357.2	22496	0.82
2025-07-25	16:06:19	3.819	5.043	8.06	104	11.41	241	22.58	36352.3	22495.8	0.81
2025-07-25	16:06:18	3.773	5.047	8.06	104	11.41	241	22.57	36346.7	22495.6	0.81
2025-07-25	16:06:17	3.739	5.052	8.06	104	11.41	241	22.57	36341.3	22495.3	0.82
2025-07-25	16:06:16	3.7	5.057	8.06	104	11.4	240.9	22.57	36335	22494.8	0.8
2025-07-25	16:06:15	3.661	5.061	8.06	104	11.4	240.9	22.56	36330.2	22494.7	0.81
2025-07-25	16:06:14	3.61	5.065	8.06	104	11.4	240.9	22.56	36324.8	22494.1	0.82
2025-07-25	16:06:13	3.579	5.068	8.06	103.9	11.4	240.9	22.56	36322.1	22494.1	0.82
2025-07-25	16:06:12	3.531	5.07	8.06	103.9	11.4	240.9	22.56	36319	22493.9	0.8
2025-07-25	16:06:11	3.484	5.072	8.06	103.9	11.39	240.9	22.55	36317	22494	0.81
2025-07-25	16:06:10	3.44	5.075	8.06	103.9	11.39	240.9	22.55	36314.1	22494.1	0.79
2025-07-25	16:06:09	3.408	5.077	8.06	103.9	11.39	240.9	22.55	36312.1	22494.1	0.78
2025-07-25	16:06:08	3.362	5.079	8.06	103.8	11.38	240.9	22.55	36310.3	22494.3	0.78
2025-07-25	16:06:07	3.318	5.08	8.06	103.8	11.38	240.9	22.55	36308.8	22494.7	0.8
2025-07-25	16:06:06	3.262	5.082	8.06	103.8	11.38	240.8	22.55	36307.4	22494.9	0.8
2025-07-25	16:06:05	3.214	5.084	8.06	103.8	11.37	240.8	22.55	36305.4	22495.2	0.8
2025-07-25	16:06:04	3.174	5.086	8.06	103.7	11.37	240.8	22.55	36303.9	22495.2	0.79
2025-07-25	16:06:03	3.127	5.088	8.06	103.7	11.37	240.8	22.55	36301.7	22495.6	0.8
2025-07-25	16:06:02	3.07	5.09	8.06	103.6	11.36	240.8	22.55	36300.5	22495.9	0.8
2025-07-25	16:06:01	3.024	5.093	8.06	103.6	11.35	240.8	22.54	36297	22496.3	0.81
2025-07-25	16:06:00	2.981	5.098	8.06	103.5	11.35	240.8	22.54	36292.3	22496.3	0.83
2025-07-25	16:05:59	2.931	5.101	8.06	103.5	11.34	240.8	22.54	36288.2	22496.4	0.82
2025-07-25	16:05:58	2.882	5.109	8.06	103.4	11.33	240.8	22.53	36278.5	22495.9	0.83
2025-07-25	16:05:57	2.815	5.118	8.06	103.4	11.33	240.8	22.53	36267.5	22495.5	0.81
2025-07-25	16:05:56	2.76	5.129	8.06	103.3	11.32	240.8	22.52	36254.2	22494.6	0.82
2025-07-25	16:05:55	2.694	5.143	8.06	103.3	11.31	240.8	22.51	36234.5	22493.6	0.82
2025-07-25	16:05:54	2.624	5.162	8.06	103.3	11.3	240.7	22.49	36215.1	22492.6	0.83
2025-07-25	16:05:53	2.542	5.182	8.06	103.3	11.3	240.7	22.48	36187.2	22491.2	0.83
2025-07-25	16:05:52	2.474	5.205	8.06	103.3	11.29	240.7	22.46	36157.8	22489.5	0.85
2025-07-25	16:05:51	2.4	5.231	8.06	103.3	11.29	240.7	22.44	36130.6	22488	0.86
2025-07-25	16:05:50	2.332	5.251	8.06	103.3	11.28	240.7	22.42	36102.2	22486.6	0.86
2025-07-25	16:05:49	2.256	5.275	8.06	103.3	11.28	240.6	22.41	36076.7	22485.2	0.87
2025-07-25	16:05:48	2.196	5.291	8.06	103.3	11.28	240.6	22.4	36055.7	22484.1	0.86
2025-07-25	16:05:47	2.135	5.311	8.06	103.3	11.27	240.6	22.38	36034.5	22483.2	0.86
2025-07-25	16:05:46	2.083	5.325	8.06	103.3	11.27	240.6	22.37	36015.3	22482.2	0.88
2025-07-25	16:05:45	2.024	5.339	8.06	103.3	11.27	240.5	22.36	36000.6	22481.4	0.88
2025-07-25	16:05:44	1.98	5.348	8.06	103.3	11.27	240.5	22.36	35988.6	22480.8	0.88
2025-07-25	16:05:43	1.936	5.357	8.06	103.3	11.26	240.5	22.35	35978.1	22480	0.88
2025-07-25	16:05:42	1.894	5.363	8.06	103.3	11.26	240.5	22.34	35969.9	22479.5	0.89
2025-07-25	16:05:41	1.841	5.369	8.06	103.3	11.26	240.5	22.34	35963.6	22479.2	0.88
2025-07-25	16:05:40	1.798	5.375	8.06	103.2	11.25	240.5	22.33	35955.2	22478.4	0.88
2025-07-25	16:05:39	1.754	5.381	8.06	103.2	11.25	240.5	22.33	35948.6	22478.1	0.89

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-15 CTD Profiles for WQ5 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	16:05:38	1.71	5.387	8.06	103.2	11.24	240.5	22.33	35940.8	22477.5	0.89
2025-07-25	16:05:37	1.659	5.391	8.06	103.1	11.24	240.4	22.32	35935.6	22477.2	0.9
2025-07-25	16:05:36	1.608	5.396	8.06	103.1	11.23	240.4	22.32	35931.4	22477.1	0.9
2025-07-25	16:05:35	1.564	5.399	8.06	103.1	11.23	240.4	22.32	35927.5	22477.1	0.9
2025-07-25	16:05:34	1.512	5.4	8.07	103	11.22	240.4	22.32	35926.1	22477	0.9
2025-07-25	16:05:33	1.451	5.401	8.07	103	11.22	240.4	22.32	35925.5	22477	0.9
2025-07-25	16:05:32	1.4	5.401	8.07	102.9	11.21	240.4	22.32	35925.3	22477	0.89
2025-07-25	16:05:31	1.348	5.401	8.07	102.8	11.2	240.4	22.32	35925.8	22477.2	0.89
2025-07-25	16:05:30	1.296	5.401	8.06	102.8	11.2	240.5	22.32	35926.1	22477.6	0.89
2025-07-25	16:05:29	1.239	5.401	8.07	102.7	11.19	240.5	22.32	35925.9	22477.7	0.89
2025-07-25	16:05:28	1.157	5.402	8.07	102.6	11.18	240.5	22.32	35925.6	22477.8	0.89
2025-07-25	16:05:27	1.088	5.403	8.07	102.5	11.17	240.5	22.32	35924.5	22477.6	0.89
2025-07-25	16:05:26	1.012	5.403	8.07	102.4	11.16	240.5	22.32	35924	22477.7	0.87
2025-07-25	16:05:25	0.931	5.404	8.07	102.4	11.15	240.5	22.32	35923.1	22477.5	0.88
2025-07-25	16:05:24	0.835	5.404	8.07	102.3	11.14	240.5	22.32	35922.8	22477.7	0.88
2025-07-25	16:05:23	0.754	5.405	8.07	102.2	11.13	240.5	22.32	35922.1	22477.9	0.88
2025-07-25	16:05:22	0.671	5.406	8.07	102.1	11.12	240.5	22.31	35920.9	22478	0.88
2025-07-25	16:05:21	0.592	5.407	8.07	102	11.11	240.4	22.31	35919.4	22477.6	0.88
2025-07-25	16:05:20	0.507	5.408	8.07	101.8	11.09	240.4	22.31	35918.7	22477.4	0.88
2025-07-25	16:05:19	0.436	5.408	8.07	101.7	11.08	240.4	22.31	35919.1	22477.6	0.88
2025-07-25	16:05:18	0.372	5.407	8.07	101.6	11.07	240.4	22.31	35919.7	22477.9	0.87
2025-07-25	16:05:17	0.305	5.407	8.07	101.4	11.05	240.4	22.31	35920.4	22478.1	0.89
2025-07-25	16:05:16	0.244	5.406	8.07	101.3	11.04	240.4	22.32	35921.7	22478.4	0.88
2025-07-25	16:05:15	0.198	5.406	8.07	101.2	11.02	240.5	22.32	35922.2	22478.8	0.87
2025-07-25	16:05:14	0.172	5.407	8.07	101	11	240.5	22.32	35922.1	22478.9	0.87
2025-07-25	16:05:13	0.161	5.407	8.07	100.8	10.99	240.5	22.32	35922.3	22479.1	0.87
2025-07-25	16:05:12	0.15	5.406	8.07	100.7	10.97	240.5	22.32	35923.3	22479.2	0.88
2025-07-25	16:05:11	0.117	5.405	8.07	100.5	10.95	240.5	22.32	35925.1	22479.5	0.88
2025-07-25	16:05:10	0.081	5.396	8.07	100.3	10.93	240.5	22.32	35937.6	22480.1	2.43
2025-07-25	16:05:09	0.048	5.384	8.07	100.2	10.92	240.5	22.33	35948.6	22480.2	4.78
2025-07-25	16:05:08	0.023	5.375	8.07	100.1	10.91	240.6	22.34	35960.8	22480.5	6.94
2025-07-25	16:05:07	0.005	5.365	8.07	100	10.9	240.7	22.35	35972.5	22480.6	9.12

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-16 CTD Profiles for WQ6 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-24	18:49:01	31.482	-0.342	7.96	98.2	12.04	244.1	26.35	43040.8	22211	0.94
2025-07-24	18:49:00	31.437	-0.31	7.96	98.2	12.03	244.1	26.34	43018.4	22222.4	0.92
2025-07-24	18:48:59	31.379	-0.273	7.96	98.2	12.03	244	26.33	42988.5	22237.4	0.95
2025-07-24	18:48:58	31.334	-0.236	7.96	98.3	12.02	244	26.32	42959.8	22252.9	0.97
2025-07-24	18:48:57	31.209	-0.189	7.97	98.4	12.02	243.9	26.3	42922.9	22272.5	1
2025-07-24	18:48:56	31.159	-0.144	7.97	98.4	12.01	243.9	26.28	42879.9	22292.3	0.99
2025-07-24	18:48:55	31.043	-0.093	7.97	98.5	12.01	243.8	26.27	42841.7	22308.8	0.98
2025-07-24	18:48:54	30.157	-0.051	7.97	98.6	12	243.8	26.25	42801.6	22327	0.99
2025-07-24	18:48:53	30.097	-0.006	7.97	98.6	12	243.7	26.24	42771.1	22343.4	0.95
2025-07-24	18:48:52	29.98	0.03	7.97	98.6	11.99	243.7	26.22	42739.2	22359.9	0.9
2025-07-24	18:48:51	29.866	0.074	7.97	98.7	11.98	243.6	26.21	42711.7	22377.5	0.86
2025-07-24	18:48:50	29.74	0.119	7.97	98.7	11.97	243.6	26.2	42675.3	22400.9	0.84
2025-07-24	18:48:49	29.668	0.176	7.98	98.8	11.96	243.5	26.18	42639.5	22422.6	0.79
2025-07-24	18:48:48	29.478	0.229	7.98	98.8	11.95	243.5	26.16	42592	22446.5	0.73
2025-07-24	18:48:47	29.302	0.29	7.98	98.9	11.94	243.4	26.15	42555.5	22471	0.7
2025-07-24	18:48:46	29.129	0.347	7.98	99	11.93	243.4	26.13	42509.2	22500.3	0.7
2025-07-24	18:48:45	28.031	0.42	7.98	99.1	11.92	243.3	26.11	42466.1	22529.1	0.69
2025-07-24	18:48:44	27.918	0.486	7.98	99.2	11.92	243.3	26.09	42416.2	22563.8	0.68
2025-07-24	18:48:43	27.775	0.564	7.98	99.3	11.91	243.2	26.07	42359.8	22597.5	0.67
2025-07-24	18:48:42	27.648	0.639	7.99	99.4	11.91	243.1	26.05	42314.6	22625.5	0.67
2025-07-24	18:48:41	27.511	0.696	7.99	99.5	11.9	243.1	26.03	42267.2	22652.9	0.68
2025-07-24	18:48:40	27.394	0.756	7.99	99.6	11.9	243	26.01	42230.8	22675.5	0.66
2025-07-24	18:48:39	27.146	0.808	7.99	99.7	11.89	243	26	42192.7	22702.9	0.65
2025-07-24	18:48:38	26.918	0.867	7.99	99.8	11.89	242.9	25.98	42155.8	22724.3	0.65
2025-07-24	18:48:37	26.001	0.914	7.99	99.9	11.88	242.9	25.96	42117.9	22746.7	0.64
2025-07-24	18:48:36	25.828	0.96	7.99	99.9	11.88	242.9	25.95	42091.4	22764.3	0.64
2025-07-24	18:48:35	25.702	0.998	7.99	100	11.87	242.8	25.94	42060.2	22783.1	0.63
2025-07-24	18:48:34	25.576	1.045	7.99	100	11.86	242.8	25.93	42031.1	22799.8	0.62
2025-07-24	18:48:33	25.485	1.087	7.99	100.1	11.86	242.7	25.91	41998.1	22821.1	0.62
2025-07-24	18:48:32	25.268	1.139	7.99	100.1	11.85	242.7	25.9	41966.6	22840.5	0.6
2025-07-24	18:48:31	24.876	1.181	7.99	100.2	11.85	242.6	25.88	41932.3	22860.3	0.6
2025-07-24	18:48:30	24.717	1.229	7.99	100.3	11.84	242.6	25.87	41900.4	22876.8	0.61
2025-07-24	18:48:29	23.865	1.276	7.99	100.3	11.83	242.6	25.85	41865.3	22895	0.62
2025-07-24	18:48:28	23.751	1.318	7.99	100.4	11.83	242.5	25.84	41829	22913.7	0.62
2025-07-24	18:48:27	23.611	1.37	7.99	100.4	11.82	242.5	25.82	41796.5	22932	0.62
2025-07-24	18:48:26	23.482	1.415	8	100.5	11.81	242.5	25.8	41757.8	22951.4	0.63
2025-07-24	18:48:25	23.317	1.459	8	100.5	11.81	242.4	25.79	41728.9	22966	0.63
2025-07-24	18:48:24	23.126	1.497	8	100.6	11.8	242.4	25.77	41694.5	22981.3	0.62
2025-07-24	18:48:23	22.867	1.535	8	100.6	11.8	242.4	25.76	41666.5	22992.3	0.64
2025-07-24	18:48:22	22.805	1.567	8	100.7	11.79	242.3	25.74	41633.1	23003.5	0.63
2025-07-24	18:48:21	22.659	1.605	8	100.7	11.79	242.3	25.73	41601.4	23012.2	0.63
2025-07-24	18:48:20	21.692	1.635	8	100.8	11.79	242.3	25.71	41567.8	23020.1	0.61
2025-07-24	18:48:19	21.574	1.664	8	100.8	11.79	242.2	25.7	41540.2	23024.6	0.61
2025-07-24	18:48:18	21.476	1.685	8	100.8	11.78	242.2	25.68	41508.5	23026.2	0.6
2025-07-24	18:48:17	21.381	1.705	8	100.8	11.78	242.2	25.66	41479.7	23024.1	0.6
2025-07-24	18:48:16	21.289	1.721	8	100.9	11.78	242.1	25.64	41443.6	23017.6	0.61
2025-07-24	18:48:15	21.152	1.728	8	100.8	11.78	242.1	25.62	41415	23006.5	0.61
2025-07-24	18:48:14	21.091	1.724	7.99	100.8	11.78	242.1	25.6	41383.6	22984.6	0.61
2025-07-24	18:48:13	20.887	1.71	7.99	100.7	11.78	242.1	25.58	41353.7	22956.7	0.6
2025-07-24	18:48:12	20.792	1.701	7.99	100.6	11.77	242	25.54	41303.2	22922.6	0.61
2025-07-24	18:48:11	19.77	1.697	7.99	100.5	11.76	242	25.5	41238.7	22883.2	0.62
2025-07-24	18:48:10	19.663	1.692	7.99	100.4	11.75	242	25.46	41182.1	22848.6	0.63
2025-07-24	18:48:09	19.556	1.689	7.99	100.3	11.74	242	25.42	41118.6	22811.2	0.64
2025-07-24	18:48:08	19.438	1.69	7.99	100.2	11.73	241.9	25.38	41059.7	22779.3	0.65
2025-07-24	18:48:07	19.267	1.696	7.99	100	11.72	241.9	25.33	40990.9	22746.6	0.64
2025-07-24	18:48:06	19.114	1.71	7.99	99.9	11.7	241.8	25.29	40928.3	22722	0.62
2025-07-24	18:48:05	18.988	1.732	7.99	99.8	11.69	241.8	25.24	40852.6	22700.7	0.62
2025-07-24	18:48:04	18.919	1.773	7.99	99.8	11.67	241.8	25.2	40780.1	22688.4	0.62
2025-07-24	18:48:03	18.508	1.825	8	99.8	11.66	241.7	25.15	40688.5	22683.8	0.61
2025-07-24	18:48:02	18.246	1.883	8	99.8	11.65	241.7	25.1	40615.1	22681.8	0.61
2025-07-24	18:48:01	17.497	1.931	8	99.8	11.64	241.6	25.05	40524.6	22675	0.63
2025-07-24	18:48:00	17.41	2.001	8	99.9	11.63	241.6	24.99	40427	22668.3	0.63

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-16 CTD Profiles for WQ6 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-24	18:47:59	17.318	2.078	8	99.9	11.61	241.5	24.92	40296.7	22663	0.61
2025-07-24	18:47:58	17.211	2.171	8	100	11.6	241.4	24.85	40179.4	22659.8	0.61
2025-07-24	18:47:57	17.104	2.264	8	100.1	11.6	241.3	24.77	40044.5	22654.8	0.61
2025-07-24	18:47:56	16.981	2.342	8	100.3	11.59	241.2	24.69	39913.1	22648.5	0.62
2025-07-24	18:47:55	16.845	2.433	8	100.4	11.59	241	24.63	39794.4	22642	0.62
2025-07-24	18:47:54	16.764	2.513	8	100.5	11.59	240.9	24.55	39659.4	22633.2	0.61
2025-07-24	18:47:53	16.582	2.592	8	100.7	11.59	240.9	24.48	39553.3	22625	0.61
2025-07-24	18:47:52	16.414	2.662	8	100.8	11.58	240.8	24.41	39436.3	22618.1	0.6
2025-07-24	18:47:51	15.418	2.731	8	100.9	11.58	240.7	24.36	39351.6	22614.3	0.59
2025-07-24	18:47:50	15.261	2.77	8.01	100.9	11.58	240.6	24.32	39280.1	22604.4	0.57
2025-07-24	18:47:49	15.115	2.792	8.01	100.9	11.58	240.6	24.29	39224.1	22586.6	0.58
2025-07-24	18:47:48	14.952	2.819	8.01	100.9	11.57	240.5	24.24	39150.4	22568.1	0.58
2025-07-24	18:47:47	14.8	2.86	8.01	101	11.56	240.5	24.2	39086.9	22558.4	0.59
2025-07-24	18:47:46	14.717	2.896	8.01	101	11.56	240.4	24.16	39016.4	22547.6	0.59
2025-07-24	18:47:45	14.441	2.929	8.01	101	11.56	240.4	24.13	38962.7	22538.1	0.58
2025-07-24	18:47:44	14.237	2.957	8.01	101	11.55	240.3	24.09	38901.6	22526.3	0.58
2025-07-24	18:47:43	13.965	2.994	8.01	101	11.55	240.3	24.05	38837.6	22513.9	0.58
2025-07-24	18:47:42	13.048	3.033	8.01	101.1	11.54	240.2	24	38757.4	22496.1	0.59
2025-07-24	18:47:41	12.887	3.064	8.01	101.1	11.54	240.1	23.95	38676.4	22475.2	0.59
2025-07-24	18:47:40	12.709	3.111	8.01	101.1	11.54	240.1	23.9	38596.3	22460.2	0.58
2025-07-24	18:47:39	12.529	3.156	8.01	101.2	11.54	240	23.85	38508.2	22445.2	0.59
2025-07-24	18:47:38	12.422	3.181	8.02	101.3	11.54	239.9	23.8	38441.3	22421.3	0.61
2025-07-24	18:47:37	12.074	3.199	8.02	101.3	11.54	239.8	23.75	38358.6	22387.7	0.61
2025-07-24	18:47:36	11.785	3.218	8.02	101.3	11.54	239.8	23.7	38288.5	22359	0.61
2025-07-24	18:47:35	10.995	3.234	8.02	101.3	11.54	239.7	23.65	38211.6	22327.3	0.61
2025-07-24	18:47:34	10.846	3.247	8.02	101.3	11.54	239.6	23.62	38154.7	22302	0.62
2025-07-24	18:47:33	10.728	3.251	8.02	101.2	11.54	239.6	23.59	38106.6	22276.8	0.59
2025-07-24	18:47:32	10.616	3.253	8.02	101.2	11.53	239.6	23.56	38074.7	22259.5	0.61
2025-07-24	18:47:31	10.499	3.256	8.03	101.1	11.52	239.5	23.54	38040.6	22242.5	0.62
2025-07-24	18:47:30	10.424	3.257	8.03	101	11.51	239.5	23.53	38017.4	22229	0.62
2025-07-24	18:47:29	10.135	3.257	8.03	100.9	11.5	239.5	23.51	38000.2	22219.3	0.62
2025-07-24	18:47:28	10.033	3.262	8.03	100.9	11.5	239.4	23.51	37987.2	22215	0.6
2025-07-24	18:47:27	9.894	3.267	8.03	100.8	11.48	239.4	23.5	37970.3	22209.6	0.59
2025-07-24	18:47:26	8.991	3.275	8.03	100.7	11.47	239.4	23.48	37950.9	22204.4	0.59
2025-07-24	18:47:25	8.878	3.287	8.03	100.6	11.46	239.4	23.47	37931	22200.3	0.6
2025-07-24	18:47:24	8.777	3.297	8.03	100.5	11.45	239.3	23.46	37909.2	22196.3	0.59
2025-07-24	18:47:23	8.667	3.316	8.03	100.5	11.44	239.3	23.44	37884.1	22193.7	0.6
2025-07-24	18:47:22	8.551	3.336	8.03	100.4	11.43	239.3	23.42	37852.6	22192.1	0.57
2025-07-24	18:47:21	8.413	3.361	8.03	100.4	11.41	239.3	23.41	37825.4	22191.6	0.57
2025-07-24	18:47:20	8.27	3.385	8.03	100.3	11.4	239.2	23.39	37792.5	22192.3	0.57
2025-07-24	18:47:19	8.195	3.419	8.03	100.2	11.38	239.2	23.37	37757.3	22193.8	0.55
2025-07-24	18:47:18	7.9	3.454	8.03	100.2	11.37	239.2	23.35	37716.2	22198.7	0.55
2025-07-24	18:47:17	7.66	3.496	8.03	100.1	11.35	239.1	23.33	37682.1	22205	0.56
2025-07-24	18:47:16	6.903	3.529	8.03	100	11.34	239.1	23.31	37648.7	22212.4	0.57
2025-07-24	18:47:15	6.794	3.568	8.03	100	11.32	239.1	23.29	37620.2	22220.3	0.56
2025-07-24	18:47:14	6.674	3.607	8.03	99.9	11.3	239	23.27	37584.6	22231.2	0.57
2025-07-24	18:47:13	6.527	3.647	8.03	99.8	11.27	239	23.26	37559.8	22241.6	0.56
2025-07-24	18:47:12	6.386	3.692	8.03	99.7	11.25	239	23.24	37523.3	22257.2	0.58
2025-07-24	18:47:11	6.277	3.761	8.03	99.6	11.22	238.9	23.21	37469.6	22277.4	0.57
2025-07-24	18:47:10	6.257	3.849	8.03	99.6	11.2	238.9	23.18	37404.7	22294	0.57
2025-07-24	18:47:09	5.985	3.923	8.03	99.5	11.18	238.8	23.13	37329.9	22309.2	0.59
2025-07-24	18:47:08	5.779	4.005	8.03	99.5	11.16	238.8	23.1	37261.9	22319.8	0.6
2025-07-24	18:47:07	4.98	4.084	8.03	99.5	11.13	238.7	23.05	37173.3	22330.9	0.6
2025-07-24	18:47:06	4.885	4.185	8.03	99.5	11.11	238.7	22.99	37081	22339.2	0.61
2025-07-24	18:47:05	4.766	4.288	8.03	99.5	11.09	238.6	22.92	36952	22344.5	0.65
2025-07-24	18:47:04	4.662	4.415	8.03	99.6	11.07	238.6	22.84	36828.2	22348	0.68
2025-07-24	18:47:03	4.55	4.519	8.03	99.6	11.04	238.5	22.76	36692.8	22349.4	0.72
2025-07-24	18:47:02	4.439	4.646	8.03	99.6	11.02	238.4	22.68	36558.8	22346	0.74
2025-07-24	18:47:01	4.297	4.745	8.03	99.7	11.01	238.4	22.59	36415.3	22336.8	0.79
2025-07-24	18:47:00	4.208	4.856	8.02	99.8	10.99	238.3	22.52	36297	22331.6	0.86

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-16 CTD Profiles for WQ6 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-24	18:46:59	4.071	4.955	8.02	99.9	10.98	238.3	22.44	36163.8	22327.7	0.91
2025-07-24	18:46:58	3.564	5.062	8.02	99.9	10.97	238.2	22.38	36054.7	22324.5	0.98
2025-07-24	18:46:57	3.204	5.149	8.02	100	10.95	238.2	22.31	35939.3	22320.8	1.05
2025-07-24	18:46:56	2.296	5.218	8.02	100.1	10.94	238.2	22.26	35856.2	22318.1	1.19
2025-07-24	18:46:55	2.219	5.322	8.02	100.3	10.95	238.2	22.19	35753	22315.4	1.73
2025-07-24	18:46:54	2.102	5.403	8.02	100.6	10.96	238.3	22.13	35642.7	22309.7	2.23
2025-07-24	18:46:53	1.983	5.493	8.02	100.9	10.97	238.3	22.07	35549.4	22304.1	2.75
2025-07-24	18:46:52	1.68	5.547	8.02	101.1	10.99	238.4	22.02	35478.2	22300.9	3.22
2025-07-24	18:46:51	1.298	5.6	8.02	101.3	11	238.5	22	35432.6	22303.4	3.79
2025-07-24	18:46:50	1.043	5.636	8.02	101.5	11.01	238.5	21.97	35391.7	22305.1	4.64
2025-07-24	18:46:49	0.149	5.668	8.01	101.7	11.03	238.5	21.97	35384.4	22319.3	5.15
2025-07-24	18:46:48	0.105	5.694	8	101.9	12.76	238.5	21.97	35378.8	22335.9	5.28

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-17 CTD Profiles for WQ9 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	16:46:32	1.85	5.208	8.06	104	11.37	240	22.52	36245	22543	8.36
2025-07-25	16:46:33	1.218	5.217	8.06	104.1	11.38	240	22.51	36226	22537	7.21
2025-07-25	16:46:34	0.939	5.23	8.06	104.1	11.38	240	22.49	36204	22532	5.64
2025-07-25	16:46:35	0.827	5.242	8.06	104.2	11.38	240	22.48	36180	22526	4.22
2025-07-25	16:46:36	0.783	5.256	8.06	104.2	11.38	240	22.46	36158	22521	3.4
2025-07-25	16:46:37	0.738	5.269	8.06	104.3	11.39	240	22.45	36133	22515	2.7
2025-07-25	16:46:38	0.685	5.281	8.06	104.3	11.39	240	22.43	36108	22509	2.32
2025-07-25	16:46:39	0.576	5.295	8.06	104.3	11.39	240	22.42	36088	22504	2.1
2025-07-25	16:46:40	0.495	5.305	8.05	104.3	11.39	240	22.41	36069	22501	2
2025-07-25	16:46:41	0.441	5.311	8.05	104.3	11.38	240	22.4	36061	22499	1.96
2025-07-25	16:46:42	0.392	5.315	8.05	104.3	11.38	240	22.4	36056	22499	1.93
2025-07-25	16:46:43	0.32	5.316	8.05	104.2	11.38	240.1	22.4	36053	22499	2.09

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-18 CTD Profiles for WQ10 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	20:06:42	35.803	-0.682	7.95	97.9	12.12	240.1	26.47	43320.3	22070.8	1.24
2025-07-25	20:06:41	35.671	-0.682	7.95	98	12.12	240.1	26.47	43319.7	22070.5	0.88
2025-07-25	20:06:40	34.886	-0.681	7.95	98	12.13	240.1	26.47	43320.1	22071.2	0.84
2025-07-25	20:06:39	34.812	-0.68	7.95	98.1	12.13	240.1	26.47	43319.7	22072.1	0.84
2025-07-25	20:06:38	34.745	-0.678	7.95	98.1	12.14	240.1	26.46	43317.6	22072.4	0.83
2025-07-25	20:06:37	34.687	-0.675	7.95	98.1	12.14	240.1	26.46	43315.4	22074.4	0.82
2025-07-25	20:06:36	34.586	-0.672	7.95	98.2	12.14	240	26.47	43316.9	22077	0.82
2025-07-25	20:06:35	34.494	-0.669	7.95	98.2	12.15	240	26.47	43318.8	22080.6	0.81
2025-07-25	20:06:34	34.449	-0.662	7.95	98.2	12.15	240	26.47	43315.3	22084.2	0.82
2025-07-25	20:06:33	34.385	-0.642	7.96	98.3	12.15	240	26.46	43293	22092.4	0.8
2025-07-25	20:06:32	34.265	-0.614	7.96	98.4	12.15	239.9	26.45	43270.1	22104.3	0.8
2025-07-25	20:06:31	34.165	-0.583	7.96	98.5	12.15	239.9	26.44	43249	22115.7	0.79
2025-07-25	20:06:30	34.001	-0.554	7.96	98.6	12.15	239.9	26.43	43218.2	22127.6	0.79
2025-07-25	20:06:29	33.944	-0.517	7.96	98.6	12.15	239.8	26.41	43187.2	22138.9	0.79
2025-07-25	20:06:28	33.106	-0.485	7.96	98.7	12.15	239.8	26.4	43155.4	22152.8	0.79
2025-07-25	20:06:27	33.047	-0.448	7.97	98.8	12.16	239.7	26.38	43124.7	22163.3	0.79
2025-07-25	20:06:26	32.986	-0.414	7.97	98.9	12.15	239.7	26.37	43086	22176.3	0.79
2025-07-25	20:06:25	32.925	-0.369	7.97	99	12.16	239.6	26.35	43049.5	22189.9	0.78
2025-07-25	20:06:24	32.862	-0.333	7.97	99.1	12.16	239.6	26.33	43014.1	22204.8	0.78
2025-07-25	20:06:23	32.825	-0.299	7.97	99.2	12.16	239.5	26.32	42984.8	22213.9	0.78
2025-07-25	20:06:22	32.783	-0.269	7.97	99.3	12.16	239.5	26.31	42952	22225.5	0.78
2025-07-25	20:06:21	32.708	-0.235	7.97	99.3	12.16	239.5	26.29	42925.6	22235.7	0.77
2025-07-25	20:06:20	32.604	-0.209	7.98	99.4	12.16	239.4	26.28	42901.1	22247.9	0.77
2025-07-25	20:06:19	32.558	-0.185	7.98	99.5	12.16	239.4	26.27	42880.9	22256.8	0.77
2025-07-25	20:06:18	32.588	-0.149	7.98	99.6	12.16	239.4	26.26	42849.2	22270.4	0.76
2025-07-25	20:06:17	32.549	-0.117	7.98	99.6	12.16	239.4	26.25	42826.6	22280.8	0.76
2025-07-25	20:06:16	32.294	-0.088	7.98	99.7	12.16	239.3	26.24	42801.1	22291.5	0.75
2025-07-25	20:06:15	31.584	-0.073	7.98	99.8	12.16	239.3	26.23	42786.7	22298.1	0.74
2025-07-25	20:06:14	31.475	-0.055	7.98	99.8	12.16	239.3	26.23	42774.6	22304.8	0.73
2025-07-25	20:06:13	31.374	-0.039	7.98	99.9	12.16	239.3	26.22	42761.8	22312.9	0.72
2025-07-25	20:06:12	31.25	-0.026	7.98	99.9	12.17	239.2	26.22	42753.5	22317.3	0.73
2025-07-25	20:06:11	31.151	-0.019	7.98	99.9	12.17	239.2	26.22	42745.6	22320.2	0.73
2025-07-25	20:06:10	31.047	-0.01	7.98	99.9	12.17	239.2	26.21	42738	22322.8	0.73
2025-07-25	20:06:09	30.999	-0.004	7.98	100	12.17	239.2	26.21	42732.5	22325.4	0.72
2025-07-25	20:06:08	30.953	0.005	7.98	100	12.17	239.1	26.21	42725	22327.6	0.72
2025-07-25	20:06:07	30.888	0.01	7.98	100	12.17	239.1	26.2	42718.2	22329.1	0.72
2025-07-25	20:06:06	30.841	0.013	7.98	100	12.17	239.2	26.2	42715.2	22329.2	0.72
2025-07-25	20:06:05	30.797	0.015	7.98	100	12.17	239.2	26.2	42710.8	22328.7	0.73
2025-07-25	20:06:04	30.745	0.017	7.98	100	12.17	239.2	26.2	42708	22328.7	0.72
2025-07-25	20:06:03	30.665	0.017	7.98	100	12.17	239.2	26.2	42706.1	22328	0.74
2025-07-25	20:06:02	30.557	0.018	7.98	100	12.17	239.2	26.19	42702.2	22326.2	0.72
2025-07-25	20:06:01	30.467	0.021	7.98	100	12.17	239.2	26.19	42697.6	22326.4	0.71
2025-07-25	20:06:00	30.453	0.028	7.98	100	12.17	239.2	26.19	42688.7	22328.9	0.71
2025-07-25	20:05:59	30.235	0.039	7.98	100	12.16	239.1	26.18	42682.4	22333.3	0.71
2025-07-25	20:05:58	30.021	0.048	7.98	100	12.16	239.1	26.18	42674.2	22337.1	0.71
2025-07-25	20:05:57	29.328	0.059	7.98	100	12.16	239.1	26.18	42663.5	22339.6	0.71
2025-07-25	20:05:56	29.268	0.075	7.98	100	12.15	239.1	26.17	42645.6	22346	0.7
2025-07-25	20:05:55	29.195	0.095	7.98	100.1	12.15	239.1	26.16	42633.5	22353.6	0.7
2025-07-25	20:05:54	29.124	0.11	7.98	100.1	12.15	239	26.16	42620.2	22360.4	0.71
2025-07-25	20:05:53	29.045	0.139	7.98	100.1	12.14	239	26.14	42592.2	22367.2	0.71
2025-07-25	20:05:52	28.975	0.178	7.99	100.2	12.14	238.9	26.13	42553.8	22382.8	0.71
2025-07-25	20:05:51	28.924	0.215	7.99	100.3	12.13	238.9	26.11	42529.1	22396.3	0.71
2025-07-25	20:05:50	28.885	0.258	7.99	100.3	12.13	238.9	26.1	42489.9	22410.5	0.73
2025-07-25	20:05:49	28.807	0.299	7.99	100.4	12.13	238.8	26.08	42445.2	22425.5	0.74
2025-07-25	20:05:48	28.697	0.347	7.99	100.5	12.12	238.8	26.06	42410.5	22440.8	0.74
2025-07-25	20:05:47	28.407	0.388	7.99	100.5	12.12	238.7	26.04	42371.7	22458.3	0.74
2025-07-25	20:05:46	28.244	0.437	7.99	100.6	12.12	238.6	26.02	42334.8	22473	0.74
2025-07-25	20:05:45	28.422	0.483	7.99	100.7	12.11	238.6	26	42282.5	22488.9	0.74
2025-07-25	20:05:44	27.713	0.549	8	100.8	12.11	238.5	25.97	42229.3	22507.8	0.72
2025-07-25	20:05:43	27.624	0.594	8	100.9	12.1	238.5	25.96	42193.1	22529.5	0.72
2025-07-25	20:05:42	27.541	0.643	8	101	12.1	238.4	25.94	42156.8	22544.6	0.71
2025-07-25	20:05:41	27.409	0.689	8	101	12.09	238.4	25.92	42111.9	22562.1	0.71

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-18 CTD Profiles for WQ10 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	20:05:40	27.31	0.738	8	101.1	12.09	238.5	25.91	42078.4	22579.3	0.69
2025-07-25	20:05:39	27.296	0.784	8	101.2	12.08	238.4	25.89	42040.1	22600.1	0.68
2025-07-25	20:05:38	27.125	0.836	8	101.3	12.08	238.4	25.87	42005.6	22618.7	0.67
2025-07-25	20:05:37	26.994	0.877	8	101.4	12.08	238.3	25.86	41977.9	22641.4	0.66
2025-07-25	20:05:36	26.151	0.927	8	101.5	12.08	238.3	25.85	41948.7	22660.6	0.67
2025-07-25	20:05:35	26.087	0.963	8	101.6	12.08	238.3	25.84	41928.3	22682.1	0.66
2025-07-25	20:05:34	26.041	0.993	8	101.6	12.07	238.3	25.84	41913.1	22697.3	0.66
2025-07-25	20:05:33	25.95	1.024	8	101.6	12.07	238.2	25.83	41893.8	22708.8	0.66
2025-07-25	20:05:32	25.834	1.049	8	101.7	12.07	238.2	25.82	41873.9	22721.3	0.67
2025-07-25	20:05:31	25.777	1.074	8	101.7	12.07	238.1	25.82	41861.4	22731.3	0.67
2025-07-25	20:05:30	25.688	1.09	8.01	101.7	12.06	238	25.81	41846.4	22737.9	0.68
2025-07-25	20:05:29	25.607	1.108	8.01	101.7	12.06	238	25.8	41832.8	22742.7	0.67
2025-07-25	20:05:28	25.399	1.122	8.01	101.7	12.06	238	25.8	41816.4	22746.7	0.68
2025-07-25	20:05:27	25.295	1.138	8.01	101.7	12.05	238	25.79	41803.1	22750.6	0.69
2025-07-25	20:05:26	25.095	1.154	8.01	101.7	12.04	238	25.78	41787.6	22757.2	0.69
2025-07-25	20:05:25	25.228	1.175	8.01	101.7	12.04	238	25.78	41776.3	22765.6	0.7
2025-07-25	20:05:24	25.025	1.197	8.01	101.7	12.03	237.9	25.77	41757.1	22775.8	0.7
2025-07-25	20:05:23	24.189	1.23	8.01	101.8	12.03	237.9	25.76	41732	22785.2	0.7
2025-07-25	20:05:22	24.111	1.257	8.01	101.8	12.02	237.9	25.74	41698.5	22792.1	0.69
2025-07-25	20:05:21	24.074	1.288	8.01	101.8	12.02	237.8	25.72	41665.8	22795.5	0.69
2025-07-25	20:05:20	23.993	1.309	8.01	101.8	12.02	237.8	25.7	41635.1	22797.4	0.69
2025-07-25	20:05:19	23.921	1.336	8.01	101.9	12.01	237.8	25.69	41606.7	22801	0.69
2025-07-25	20:05:18	23.849	1.364	8.01	101.9	12.01	237.8	25.67	41571.3	22803.7	0.68
2025-07-25	20:05:17	23.775	1.383	8.01	101.9	12	237.7	25.65	41540.7	22804.4	0.69
2025-07-25	20:05:16	23.719	1.407	8.01	101.9	12	237.7	25.63	41508.5	22803.3	0.68
2025-07-25	20:05:15	23.596	1.426	8.01	101.9	11.99	237.7	25.61	41472.1	22800.7	0.67
2025-07-25	20:05:14	23.473	1.439	8.01	101.9	11.99	237.7	25.6	41451.1	22797.9	0.66
2025-07-25	20:05:13	23.23	1.447	8.01	101.8	11.98	237.7	25.59	41436.3	22796.9	0.66
2025-07-25	20:05:12	23.229	1.458	8.01	101.8	11.98	237.6	25.59	41425.9	22798.5	0.67
2025-07-25	20:05:11	23.302	1.467	8.01	101.8	11.97	237.6	25.58	41418.5	22803.1	0.67
2025-07-25	20:05:10	22.576	1.483	8.01	101.7	11.96	237.6	25.58	41408	22808.9	0.68
2025-07-25	20:05:09	22.511	1.498	8.01	101.7	11.96	237.6	25.57	41392.9	22814	0.69
2025-07-25	20:05:08	22.429	1.523	8.01	101.7	11.95	237.6	25.56	41373.8	22821.3	0.7
2025-07-25	20:05:07	22.367	1.544	8.01	101.7	11.94	237.5	25.55	41354.3	22829	0.69
2025-07-25	20:05:06	22.328	1.564	8.01	101.7	11.93	237.5	25.54	41337.4	22833.8	0.69
2025-07-25	20:05:05	22.27	1.582	8.01	101.7	11.92	237.5	25.53	41315.7	22838.2	0.69
2025-07-25	20:05:04	22.201	1.602	8.01	101.6	11.92	237.4	25.52	41293.9	22839.7	0.7
2025-07-25	20:05:03	22.135	1.621	8.02	101.6	11.91	237.4	25.5	41267.4	22839.9	0.71
2025-07-25	20:05:02	22.098	1.638	8.02	101.5	11.9	237.4	25.49	41240.5	22839.7	0.73
2025-07-25	20:05:01	21.947	1.657	8.02	101.5	11.89	237.3	25.47	41213.9	22838.8	0.72
2025-07-25	20:05:00	21.962	1.678	8.02	101.5	11.88	237.3	25.45	41175.9	22836.3	0.72
2025-07-25	20:04:59	21.641	1.7	8.02	101.4	11.87	237.3	25.43	41141.5	22832.1	0.7
2025-07-25	20:04:58	21.676	1.72	8.02	101.4	11.86	237.2	25.4	41089.8	22822.1	0.7
2025-07-25	20:04:57	20.828	1.745	8.02	101.4	11.86	237.2	25.37	41044.9	22813.7	0.7
2025-07-25	20:04:56	20.715	1.761	8.02	101.4	11.85	237.2	25.35	41000.2	22802.5	0.71
2025-07-25	20:04:55	20.655	1.772	8.02	101.4	11.85	237.1	25.32	40961.4	22789	0.71
2025-07-25	20:04:54	20.603	1.785	8.02	101.4	11.85	237.1	25.29	40915	22775	0.71
2025-07-25	20:04:53	20.553	1.804	8.02	101.4	11.84	237	25.26	40867.9	22761.7	0.7
2025-07-25	20:04:52	20.473	1.825	8.02	101.3	11.84	237	25.22	40798.3	22741.9	0.69
2025-07-25	20:04:51	20.373	1.854	8.02	101.3	11.83	236.9	25.17	40725.5	22721.4	0.69
2025-07-25	20:04:50	20.31	1.879	8.02	101.3	11.83	236.7	25.12	40645.3	22697.5	0.69
2025-07-25	20:04:49	20.285	1.889	8.02	101.3	11.83	236.6	25.09	40598.8	22677.8	0.7
2025-07-25	20:04:48	20.22	1.901	8.03	101.4	11.83	236.5	25.05	40532	22649.4	0.7
~~2025-07-25~~	~~20:04:47~~	~~20.145~~	~~1.93~~	~~8.03~~	~~101.5~~	~~11.84~~	~~236.4~~	~~24.97~~	~~40397~~	~~22618.3~~	~~0.71~~
2025-07-25	20:04:46	19.872	1.98	8.03	101.6	11.83	236.2	24.91	40314.2	22589	0.72
2025-07-25	20:04:45	19.784	2.066	8.03	101.7	11.84	236.1	24.82	40159.4	22561.5	0.75
2025-07-25	20:04:44	19.887	2.089	8.04	101.7	11.93	235.9	24.77	40077.4	22539.4	0.75
2025-07-25	20:04:43	19.202	3.054	8.03	101.9	11.62	235.7	24	38749.9	22519	0.76
2025-07-25	20:04:42	19.145	3.173	8.03	102.1	11.62	235.6	23.91	38597.2	22506.4	0.77
2025-07-25	20:04:41	19.102	3.29	8.04	102.2	11.6	235.5	23.79	38408.5	22495.2	0.77
2025-07-25	20:04:40	19.051	3.428	8.04	102.5	11.6	235.4	23.7	38246.2	22488	0.79

Appendix G
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Table A.3-18 CTD Profiles for WQ10 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	20:04:39	18.962	3.552	8.04	102.6	11.59	235.2	23.59	38062.2	22483.5	0.78
2025-07-25	20:04:38	18.892	3.695	8.04	102.9	11.58	235.1	23.5	37911.5	22484.1	0.78
2025-07-25	20:04:37	18.826	3.798	8.04	103	11.58	235	23.42	37777.3	22488.7	0.76
2025-07-25	20:04:36	18.81	3.901	8.04	103.2	11.58	234.9	23.36	37676.8	22493.6	0.74
2025-07-25	20:04:35	18.629	3.988	8.04	103.4	11.58	234.8	23.3	37566.9	22498.6	0.72
2025-07-25	20:04:34	18.677	4.073	8.04	103.6	11.58	234.7	23.25	37483.9	22501.2	0.71
2025-07-25	20:04:33	17.866	4.14	8.04	103.7	11.58	234.7	23.2	37396.1	22503	0.7
2025-07-25	20:04:32	17.805	4.203	8.04	103.8	11.58	234.6	23.16	37327.8	22504.3	0.68
2025-07-25	20:04:31	17.749	4.24	8.04	103.9	11.58	234.6	23.13	37283.9	22503.9	0.67
2025-07-25	20:04:30	17.664	4.282	8.04	103.9	11.58	234.5	23.1	37232.7	22502.5	0.67
2025-07-25	20:04:29	17.585	4.299	8.04	104	11.58	234.5	23.09	37217.6	22501.9	0.67
2025-07-25	20:04:28	17.548	4.302	8.04	104	11.58	234.5	23.09	37213.8	22501.9	0.67
2025-07-25	20:04:27	17.526	4.303	8.04	103.9	11.57	234.5	23.09	37212.3	22502.1	0.66
2025-07-25	20:04:26	17.453	4.306	8.04	103.9	11.57	234.5	23.09	37208.8	22502.1	0.66
2025-07-25	20:04:25	17.318	4.311	8.04	103.9	11.57	234.5	23.08	37203.7	22502	0.66
2025-07-25	20:04:24	17.233	4.318	8.04	103.9	11.57	234.5	23.08	37195.6	22502.8	0.66
2025-07-25	20:04:23	17.008	4.324	8.04	103.9	11.57	234.5	23.08	37191	22503.9	0.65
2025-07-25	20:04:22	16.977	4.329	8.04	103.9	11.56	234.5	23.07	37186.8	22505.6	0.66
2025-07-25	20:04:21	17.173	4.336	8.04	103.9	11.56	234.5	23.07	37182.5	22507.4	0.66
2025-07-25	20:04:20	16.311	4.343	8.04	103.9	11.56	234.5	23.07	37178.3	22510.1	0.65
2025-07-25	20:04:19	16.213	4.35	8.04	103.9	11.55	234.5	23.07	37175.6	22512.9	0.64
2025-07-25	20:04:18	16.129	4.356	8.04	103.9	11.55	234.4	23.07	37172.2	22516	0.65
2025-07-25	20:04:17	16.071	4.364	8.04	103.9	11.55	234.4	23.06	37167.4	22518.2	0.66
2025-07-25	20:04:16	16.002	4.371	8.04	103.8	11.55	234.4	23.06	37163.1	22520.4	0.65
2025-07-25	20:04:15	15.955	4.376	8.04	103.8	11.54	234.4	23.06	37160.8	22522.6	0.66
2025-07-25	20:04:14	15.917	4.38	8.04	103.8	11.54	234.4	23.06	37158.5	22523.9	0.65
2025-07-25	20:04:13	15.859	4.385	8.04	103.8	11.54	234.4	23.06	37153.1	22525	0.65
2025-07-25	20:04:12	15.778	4.392	8.04	103.8	11.53	234.4	23.05	37148	22525.8	0.65
2025-07-25	20:04:11	15.72	4.396	8.04	103.8	11.53	234.4	23.05	37142.4	22526.3	0.65
2025-07-25	20:04:10	15.688	4.402	8.04	103.7	11.52	234.4	23.05	37137	22526.3	0.66
2025-07-25	20:04:09	15.652	4.406	8.04	103.7	11.52	234.4	23.04	37130.6	22526.2	0.68
2025-07-25	20:04:08	15.624	4.412	8.04	103.6	11.51	234.4	23.04	37125.1	22526.1	0.68
2025-07-25	20:04:07	15.362	4.415	8.04	103.6	11.51	234.4	23.04	37121.1	22526.7	0.68
2025-07-25	20:04:06	15.211	4.421	8.04	103.5	11.5	234.4	23.03	37115.3	22526.5	0.68
2025-07-25	20:04:05	14.51	4.427	8.04	103.4	11.49	234.4	23.03	37106.4	22526.3	0.68
2025-07-25	20:04:04	14.448	4.443	8.04	103.4	11.48	234.4	23.02	37091.2	22527.8	0.68
2025-07-25	20:04:03	14.397	4.458	8.04	103.4	11.47	234.4	23.01	37075.5	22530.5	0.69
2025-07-25	20:04:02	14.323	4.48	8.04	103.4	11.47	234.4	23	37052.5	22534.5	0.7
2025-07-25	20:04:01	14.255	4.531	8.04	103.4	11.46	234.4	22.97	37008.9	22539.8	0.7
2025-07-25	20:04:00	14.203	4.576	8.04	103.5	11.45	234.3	22.94	36959	22546.1	0.7
2025-07-25	20:03:59	14.16	4.63	8.04	103.6	11.45	234.3	22.92	36913.9	22551.7	0.69
2025-07-25	20:03:58	14.09	4.676	8.04	103.7	11.45	234.2	22.89	36862.3	22557.7	0.7
2025-07-25	20:03:57	13.993	4.731	8.05	103.8	11.45	234.2	22.86	36815.5	22563.1	0.72
2025-07-25	20:03:56	13.902	4.78	8.05	103.9	11.45	234.2	22.83	36762.9	22570.1	0.72
2025-07-25	20:03:55	13.808	4.83	8.05	104	11.45	234.1	22.81	36724.1	22576.5	0.72
2025-07-25	20:03:54	13.655	4.867	8.05	104.1	11.45	234.1	22.78	36683.7	22580.9	0.73
2025-07-25	20:03:53	13.547	4.909	8.05	104.1	11.45	234	22.76	36646.8	22583.9	0.72
2025-07-25	20:03:52	12.712	4.925	8.05	104.2	11.45	234	22.75	36630.6	22585.6	0.73
2025-07-25	20:03:51	12.65	4.931	8.05	104.2	11.45	234	22.75	36625.6	22586.5	0.74
2025-07-25	20:03:50	12.583	4.936	8.05	104.2	11.45	234	22.75	36620.7	22587	0.74
2025-07-25	20:03:49	12.491	4.94	8.05	104.2	11.45	234	22.74	36615.9	22587	0.75
2025-07-25	20:03:48	12.411	4.947	8.05	104.2	11.45	234	22.74	36609	22587.6	0.74
2025-07-25	20:03:47	12.352	4.95	8.05	104.2	11.44	234	22.74	36606.1	22587.9	0.73
2025-07-25	20:03:46	12.308	4.953	8.05	104.2	11.44	234	22.74	36603.7	22588	0.73
2025-07-25	20:03:45	12.209	4.955	8.05	104.2	11.44	234	22.73	36600.3	22588.2	0.74
2025-07-25	20:03:44	12.082	4.958	8.05	104.2	11.44	234	22.73	36598.4	22588.5	0.75
2025-07-25	20:03:43	12	4.962	8.05	104.1	11.44	234	22.73	36595	22589.2	0.76
2025-07-25	20:03:42	11.948	4.964	8.05	104.1	11.44	234	22.73	36593.7	22589.4	0.75
2025-07-25	20:03:41	12.1	4.969	8.05	104.1	11.44	234	22.73	36586.5	22589.5	0.76
2025-07-25	20:03:40	11.294	4.975	8.05	104.1	11.43	234	22.72	36581.6	22590.1	0.76
2025-07-25	20:03:39	11.229	4.981	8.05	104.2	11.43	233.9	22.72	36576.5	22591.2	0.75
2025-07-25	20:03:38	11.187	4.988	8.05	104.2	11.43	233.9	22.72	36569.9	22592	0.75

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Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	20:03:37	11.113	4.992	8.05	104.2	11.43	233.9	22.71	36565.6	22592.5	0.74
2025-07-25	20:03:36	11.05	4.999	8.05	104.2	11.43	233.9	22.71	36560.1	22593.2	0.74
2025-07-25	20:03:35	11.011	5.001	8.04	104.2	11.43	233.9	22.71	36558.3	22593.8	0.74
2025-07-25	20:03:34	10.968	5.004	8.04	104.2	11.43	233.9	22.71	36554.8	22594.2	0.72
2025-07-25	20:03:33	10.898	5.007	8.05	104.2	11.43	233.9	22.71	36553.4	22595.1	0.71
2025-07-25	20:03:32	10.816	5.011	8.05	104.2	11.43	233.9	22.7	36549.1	22595.8	0.71
2025-07-25	20:03:31	10.783	5.016	8.05	104.1	11.42	233.8	22.7	36546.9	22596.9	0.71
2025-07-25	20:03:30	10.711	5.015	8.05	104.1	11.42	233.8	22.7	36546.9	22596.8	0.7
2025-07-25	20:03:29	10.652	5.015	8.05	104.1	11.42	233.8	22.7	36548.4	22597.2	0.7
2025-07-25	20:03:28	10.473	5.015	8.05	104.1	11.42	233.8	22.7	36548	22597.3	0.71
2025-07-25	20:03:27	10.566	5.019	8.05	104.1	11.42	233.8	22.7	36544.6	22597.5	0.72
2025-07-25	20:03:26	9.774	5.024	8.04	104.1	11.42	233.8	22.7	36537.9	22597.9	0.73
2025-07-25	20:03:25	9.712	5.031	8.04	104.1	11.42	233.8	22.69	36531.2	22598.2	0.74
2025-07-25	20:03:24	9.661	5.038	8.04	104.1	11.42	233.8	22.69	36523.9	22599	0.75
2025-07-25	20:03:23	9.591	5.047	8.04	104.1	11.41	233.8	22.69	36515.8	22599.3	0.75
2025-07-25	20:03:22	9.522	5.053	8.04	104.1	11.41	233.8	22.68	36508.7	22599.7	0.74
2025-07-25	20:03:21	9.459	5.059	8.04	104.1	11.41	233.8	22.68	36502.7	22599.6	0.74
2025-07-25	20:03:20	9.385	5.068	8.04	104.1	11.41	233.8	22.67	36493.7	22600.4	0.75
2025-07-25	20:03:19	9.287	5.077	8.04	104.1	11.41	233.8	22.67	36482.9	22601	0.77
2025-07-25	20:03:18	9.098	5.085	8.04	104.2	11.41	233.8	22.66	36476.7	22601.6	0.77
2025-07-25	20:03:17	8.955	5.089	8.04	104.2	11.41	233.8	22.66	36472.2	22602.2	0.78
2025-07-25	20:03:16	8.951	5.093	8.04	104.2	11.41	233.8	22.66	36469.2	22602.6	0.78
2025-07-25	20:03:15	8.933	5.096	8.04	104.2	11.41	233.7	22.66	36466.3	22603.3	0.79
2025-07-25	20:03:14	8.762	5.098	8.04	104.2	11.41	233.7	22.66	36464.3	22603.3	0.79
2025-07-25	20:03:13	7.911	5.099	8.04	104.2	11.41	233.7	22.66	36463.6	22603.7	0.79
2025-07-25	20:03:12	7.832	5.099	8.04	104.2	11.41	233.7	22.66	36463.9	22603.8	0.81
2025-07-25	20:03:11	7.75	5.098	8.04	104.1	11.41	233.7	22.66	36466	22603.9	0.82
2025-07-25	20:03:10	7.671	5.097	8.04	104.1	11.4	233.8	22.66	36467.2	22604	0.82
2025-07-25	20:03:09	7.616	5.095	8.04	104.1	11.4	233.9	22.66	36468.6	22603.8	0.8
2025-07-25	20:03:08	7.546	5.094	8.04	104.1	11.4	233.9	22.66	36469.8	22603.7	0.8
2025-07-25	20:03:07	7.467	5.093	8.04	104.1	11.4	233.9	22.66	36471.5	22603.8	0.79
2025-07-25	20:03:06	7.308	5.092	8.04	104.1	11.4	233.9	22.66	36471.9	22603.7	0.78
2025-07-25	20:03:05	7.152	5.092	8.04	104.1	11.4	233.9	22.66	36472.2	22603.5	0.76
2025-07-25	20:03:04	7.029	5.091	8.04	104	11.4	233.9	22.66	36472.5	22603.5	0.77
2025-07-25	20:03:03	7.054	5.091	8.04	104	11.39	233.9	22.66	36472.2	22603.4	0.74
2025-07-25	20:03:02	7.135	5.091	8.04	104	11.39	234	22.66	36472.2	22603.7	0.74
2025-07-25	20:03:01	6.883	5.093	8.04	104	11.39	233.9	22.66	36471.1	22603.9	0.72
2025-07-25	20:03:00	6.037	5.094	8.04	104	11.39	233.9	22.66	36470.3	22604	0.73
2025-07-25	20:02:59	5.98	5.095	8.04	104	11.39	233.9	22.66	36469.7	22604.1	0.73
2025-07-25	20:02:58	5.927	5.095	8.04	104	11.39	233.9	22.66	36469.9	22604.4	0.73
2025-07-25	20:02:57	5.854	5.095	8.04	103.9	11.38	233.9	22.66	36469.6	22604.1	0.74
2025-07-25	20:02:56	5.798	5.093	8.04	103.9	11.38	233.9	22.66	36470.9	22603.8	0.74
2025-07-25	20:02:55	5.766	5.092	8.04	103.9	11.38	233.9	22.66	36472	22603.9	0.76
2025-07-25	20:02:54	5.74	5.092	8.04	103.9	11.38	233.9	22.66	36472.8	22604	0.76
2025-07-25	20:02:53	5.657	5.091	8.04	103.9	11.38	233.9	22.66	36473.6	22604.1	0.76
2025-07-25	20:02:52	5.452	5.09	8.04	103.9	11.38	234	22.66	36474.2	22604	0.76
2025-07-25	20:02:51	5.359	5.09	8.04	103.8	11.37	234	22.66	36474.9	22604.1	0.77
2025-07-25	20:02:50	5.241	5.089	8.04	103.8	11.37	234	22.66	36476.2	22604.1	0.75
2025-07-25	20:02:49	5.254	5.088	8.04	103.8	11.37	234	22.66	36477.2	22603.9	0.75
2025-07-25	20:02:48	4.465	5.087	8.04	103.8	11.37	234	22.66	36477.6	22603.5	0.73
2025-07-25	20:02:47	4.396	5.086	8.04	103.8	11.37	234.1	22.67	36478.4	22603.6	0.74
2025-07-25	20:02:46	4.335	5.086	8.04	103.7	11.36	234.1	22.67	36478.4	22603.8	0.73
2025-07-25	20:02:45	4.29	5.086	8.04	103.7	11.36	234.1	22.67	36478.4	22603.4	0.73
2025-07-25	20:02:44	4.231	5.085	8.04	103.7	11.36	234.1	22.67	36478.7	22603.1	0.72
2025-07-25	20:02:43	4.144	5.085	8.04	103.7	11.36	234.1	22.67	36478.5	22602.9	0.73
2025-07-25	20:02:42	4.096	5.085	8.04	103.6	11.35	234.1	22.67	36478.6	22602.9	0.74
2025-07-25	20:02:41	4.097	5.084	8.04	103.6	11.35	234.1	22.67	36478.8	22602.5	0.74
2025-07-25	20:02:40	4.047	5.084	8.04	103.6	11.35	234.1	22.67	36478.4	22602.3	0.76
2025-07-25	20:02:39	3.916	5.084	8.04	103.5	11.34	234.1	22.67	36478.9	22602.5	0.76
2025-07-25	20:02:38	3.774	5.084	8.04	103.5	11.34	234.1	22.67	36479.3	22602.7	0.77
2025-07-25	20:02:37	3.634	5.084	8.04	103.5	11.34	234.1	22.67	36479.1	22602.8	0.77
2025-07-25	20:02:36	3.644	5.085	8.04	103.4	11.33	234.1	22.67	36479.5	22603.3	0.78

Appendix G
Summary of Sea Water Monitoring Data
Modified Phase III ESA at Sointula Small Craft Harbour, Sointula, Malcom Island, BC
Fisheries Oceans Canada

Table A.3-18 CTD Profiles for WQ10 (July 2025)

Date (MM/DD/YYYY)	Time (HH:MM:SS)	Approx. Depth (m)	Temp (°C)	pH	DO (%)	DO (mg/L)	ORP (mV)	Sal (psu)	SpCond (µS/cm)	C (µS/cm)	NTU
2025-07-25	20:02:35	2.838	5.085	8.04	103.4	11.33	234.1	22.67	36479.9	22603.8	0.77
2025-07-25	20:02:34	2.736	5.085	8.04	103.4	11.32	234.1	22.67	36479.7	22603.7	0.76
2025-07-25	20:02:33	2.6	5.085	8.04	103.3	11.32	234.2	22.67	36479.8	22604	0.76
2025-07-25	20:02:32	2.481	5.086	8.04	103.3	11.31	234.2	22.67	36479.6	22604.5	0.75
2025-07-25	20:02:31	2.381	5.087	8.04	103.2	11.31	234.2	22.67	36479.6	22605	0.73
2025-07-25	20:02:30	2.268	5.088	8.04	103.2	11.3	234.2	22.67	36479.7	22605.5	0.73
2025-07-25	20:02:29	2.183	5.088	8.04	103.1	11.3	234.2	22.67	36479.2	22605.4	0.73
2025-07-25	20:02:28	2.124	5.088	8.04	103.1	11.29	234.2	22.67	36478.7	22605.3	0.73
2025-07-25	20:02:27	2.084	5.089	8.04	103.1	11.29	234.2	22.67	36478.5	22605.6	0.73
2025-07-25	20:02:26	2.038	5.088	8.04	103	11.28	234.3	22.67	36478.4	22605.2	0.73
2025-07-25	20:02:25	1.965	5.089	8.04	102.9	11.28	234.3	22.67	36477.7	22605	0.73
2025-07-25	20:02:24	1.92	5.09	8.04	102.9	11.27	234.3	22.67	36477.8	22605.8	0.75
2025-07-25	20:02:23	1.901	5.09	8.04	102.8	11.26	234.4	22.67	36477.9	22606.2	0.73
2025-07-25	20:02:22	1.873	5.09	8.04	102.8	11.25	234.4	22.67	36477.5	22605.6	0.74
2025-07-25	20:02:21	1.83	5.09	8.04	102.7	11.25	234.4	22.67	36477.2	22605.3	0.75
2025-07-25	20:02:20	1.766	5.09	8.04	102.6	11.24	234.5	22.67	36476.8	22605.2	0.75
2025-07-25	20:02:19	1.741	5.09	8.04	102.5	11.23	234.5	22.67	36477.1	22605.6	0.73
2025-07-25	20:02:18	1.46	5.09	8.04	102.5	11.22	234.5	22.67	36477.4	22605.7	0.73
2025-07-25	20:02:17	1.651	5.09	8.04	102.4	11.21	234.6	22.67	36477.9	22606	0.73
2025-07-25	20:02:16	0.892	5.091	8.04	102.3	11.2	234.6	22.67	36476.9	22606.3	0.72
2025-07-25	20:02:15	0.807	5.091	8.04	102.2	11.19	234.6	22.67	36477.3	22606.6	0.74
2025-07-25	20:02:14	0.725	5.091	8.04	102.1	11.18	234.7	22.67	36476.4	22606.1	0.75
2025-07-25	20:02:13	0.596	5.092	8.04	102	11.17	234.7	22.67	36475.3	22606	0.76
2025-07-25	20:02:12	0.497	5.093	8.04	101.8	11.15	234.7	22.67	36475.7	22606.9	0.75
2025-07-25	20:02:11	0.415	5.094	8.03	101.7	11.14	234.7	22.67	36475.6	22607.3	0.75
2025-07-25	20:02:10	0.344	5.094	8.03	101.6	11.13	234.8	22.67	36476.5	22607.7	0.74
2025-07-25	20:02:09	0.263	5.094	8.03	101.5	11.11	234.8	22.67	36476.5	22607.7	0.74
2025-07-25	20:02:08	0.211	5.095	8.03	101.3	11.1	234.8	22.67	36476.1	22608.2	0.75
2025-07-25	20:02:07	0.184	5.094	8.03	101.2	11.08	234.8	22.67	36477	22608.5	0.75
2025-07-25	20:02:06	0.141	5.095	8.03	101	11.06	234.8	22.67	36477.9	22609.2	0.74
2025-07-25	20:02:05	0.094	5.097	8.03	100.9	11.05	234.9	22.67	36476.8	22610.7	0.72
2025-07-25	20:02:04	0.092	5.1	8.03	100.7	11.03	234.9	22.67	36477	22612.8	0.7
2025-07-25	20:02:03	0.088	5.102	8.03	100.5	11.01	234.9	22.67	36477.8	22614.2	0.7
2025-07-25	20:02:02	0.081	5.102	8.03	100.3	10.99	234.9	22.67	36478.3	22615.1	0.71
2025-07-25	20:02:01	0.066	5.105	8.03	100.2	10.96	235	22.67	36477.8	22616.2	0.7

Notes

Depth (m)	Depth in metres	**Sal (psu)**	Salinity in practical salinity units (parts per thousand)
Temp (°C)	Temperature in degrees Celsius	**SpCon (uS/cm)**	Specific Conductance in microsiemens per centimetre
DO (%sat)	Dissolved oxygen in % saturation	**(MM/DD/YYYY)**	month/day/year
DO (mg/L)	Dissolved oxygen in milligrams per litre	**(HH:MM:SS)**	hour:minute:second
ORP (mV)	Oxidation reduction potential in millivolts	**NTU**	Turbidity

A.4 Water Quality Results

Table A.4-1 Water Quality Data in Grays Bay, August 2024

Parameter	Units	CCME WQG-MAL		WQ1		WQ3		WQ4		WQ5		WQ6		WQ7		WQ8		WQ9	WQ10		Summary Statistics			
		Short Term	Long Term	WQ1-S	WQ1-D	WQ3-S	WQ3-D	WQ4-S	WQ4-D	WQ5-S	WQ5-D	WQ-6-S	WQ6-D	WQ7-S	WQ7-D	WQ8-S	WQ8-D	WQ9-S	WQ10-S	WQ10-D	Min	Max	Mean	Std Dev
General																								
Hardness (as CaCO3), dissolved	mg/L	-	-	4,530	4,610	4,520	4,690	4,680	4,800	4,500	4,610	4,640	4,700	4,540	4,610	4,420	4,990	4,750	4,520	4,960	4,420	4,990	4,651	156
Hardness (as CaCO3), total	mg/L	-	-	4,990	5,080	4,750	5,140	4,950	4,930	4,940	4,920	4,940	5,480	4,870	4,860	4,870	5,160	524	4,860	5,330	524	5,480	4,741	1,102
Anions and Nutrients																								
Chloride	mg/L	-	-	14,700	15,400	16,400	16,200	15,000	15,700	15,600	15,100	15,500	16,900	15,900	15,900	14,900	16,500	2,090	15,400	16,200	2,090	16,900	14,905	3,358
Sulfate	mg/L	-	-	2,110	2,210	2,350	2,320	2,140	2,240	2,210	2,160	2,220	2,400	2,270	2,260	2,120	2,330	274	2,200	2,310	274	2,400	2,125	484
Bromide	mg/L	-	-	49	50.9	54.8	53.8	49.8	52.4	51.2	50.1	51.6	55.9	52.3	52.1	49.1	55	6.4	51.6	53.9	6.4	55.9	49.4	11.3
Fluoride	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Nitrate (as N)	mg/L	550	13	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Nitrite (as N)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Ammonia (as N) - Total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0141	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0141	0.0058	0.0026
Total Kjeldahl Nitrogen	mg/L	-	-	0.100	0.074	0.088	0.095	0.097	0.106	0.130	0.104	0.092	0.091	0.098	0.096	0.101	0.090	0.109	0.096	0.094	0.074	0.130	0.098	0.011
Phosphorus - Dissolved	mg/L	-	-	0.0234	0.036	0.0205	0.0412	0.0248	0.0725	0.0205	0.039	0.0203	0.0293	0.0202	0.0386	0.0231	0.0441	0.0200	0.0205	0.0309	0.0200	0.0725	0.0309	0.00137
Phosphorus, Total	mg/L	-	-	0.0195	0.03	0.0204	0.0369	0.021	0.0865	0.021	0.033	0.0221	0.0267	0.0208	0.0323	0.02	0.0381	0.018	0.0204	0.0301	0.018	0.087	0.029	0.016
Organic / Inorganic Carbon																								
Dissolved Organic Carbon	mg/L	-	-	1.11	2.06	2.06	2.08	1.34	1.18	1.01	1.22	1.98	1.16	1.11	1.1	1.54	2.12	2.21	2.07	2.10	1.01	2.21	1.61	0.47
Total Organic Carbon	mg/L	-	-	0.98	0.86	0.98	1.01	0.96	0.95	0.91	0.91	0.99	1.06	0.98	0.96	1.25	0.93	1.37	1.00	1.00	0.86	1.37	1.01	0.13
Total Metals																								
Aluminum	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.486	<0.050	<0.050	<0.050	<0.050	<0.050	-
Antimony	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Arsenic	mg/L	-	0.0125	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Barium	mg/L	-	-	0.0081	0.0086	0.0075	0.0094	0.0081	0.0086	0.0082	0.0082	0.0076	0.0103	0.0082	0.0082	0.0083	0.0098	0.0073	0.0079	0.0103	0.0073	0.0103	0.0085	0.0009
Beryllium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Boron	mg/L	-	-	3.3	3.24	2.82	3.42	3.26	3.29	3.24	3.34	3.2	3.63	3.31	3.32	3.29	3.43	0.32	3.25	3.47	0.32	3.63	3.13	0.74
Cadmium	mg/L	-	0.00012	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	-
Calcium	mg/L	-	-	300	302	258	312	302	308	298	307	295	332	305	308	303	318	36.5	296	319	36.5	332	288	67
Cesium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Chromium	mg/L	-	0.0015 (Cr(IV)); 0.056 (Cr(III))	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	-
Cobalt	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Copper	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Iron	mg/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.58	<0.20	<0.20	<0.20	0.58	-	-
Lead	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Lithium	mg/L	-	-	0.135	0.134	0.114	0.136	0.136	0.136	0.132	0.138	0.131	0.149	0.135	0.134	0.133	0.141	<0.025	0.133	0.144	0.114	0.149	0.135	0.007
Magnesium	mg/L	-	-	1,030	1,050	998	1,060	1,020	1,010	1,020	1,010	1,020	1,130	998	994	1,000	1,060	105	1,000	1,100	105	1130	977	228
Manganese	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0029	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0222	<0.0025	<0.0025	0.0222	<0.0025	-	-
Mercury	mg/L	-	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum	mg/L	-	-	0.0083	0.0078	0.0073	0.0088	0.0082	0.0086	0.0086	0.0092	0.0079	0.009	0.0083	0.0082	0.0088	0.0085	<0.0025	0.0079	0.0088	0.0073	0.0092	0.0084	0.0005
Nickel	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Phosphorus	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Potassium	mg/L	-	-	324	319	309	332	310	318	325	310	306	342	321	316	306	338	33.5	310	333	33.5	342	303	70
Rubidium	mg/L	-	-	0.084	0.087	0.083	0.088	0.084	0.086	0.082	0.084	0.084	0.091	0.086	0.084	0.083	0.09	0.012	0.081	0.087	0.012	0.091	0.081	0.018
Selenium	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Silicon	mg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.19	<0.50	<0.50	<0.50	1.19	-	-
Silver	mg/L	0.0075	-	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	-
Sodium	mg/L	-	-	8,490	8,580	8,250	8,630	8,160	8,490	8,260	8,240	8,260	9,010	8,190	8,190	8,200	8,790	875	8,220	9,020	875	9020	7991	1856
Strontium	mg/L	-	-	5.73	5.88	5.08	6.06	5.74	6.08	5.94	5.81	5.54	6.16	5.86	5.87	5.86	6.22	0.623	5.64	6.21	0.623	6.22	5.55	1.30
Sulfur	mg/L	-	-	753	730	697	747	705	732	722	693	706	794	710	719	703	786	61.3	718	769	61.3	794	691	165
Tellurium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Thallium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thorium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tin	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Titanium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0228	<0.0050	<0.0050	0.0228	0.0228	0.0228	-
Tungsten	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Uranium	mg/L	-	-	0.00231	0.00229	0.00208	0.0024	0.00238	0.00231	0.00228	0.00237	0.00228	0.00248	0.00241	0.00244	0.00238	0.00234	<0.00050	0.00237	0.00259	<0.00050	0.00259	0.00225	0.00046
Vanadium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Zinc	mg/L	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-
Zirconium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dissolved Metals																								
Aluminum	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Antimony	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Arsenic	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Barium	mg/L	-	-	0.0076	0.0072	0.007	0.0089	0.0077	0.0085	0.0073	0.0078	0.0074	0.0088	0.0074	0.008	0.0072	0.0102	0.0073	0.0073	0.0105	0.007	0.011	0.008	0.001
Beryllium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Boron	mg/L	-	-	3.46	3.49	3.3	3.62	3.47	3.55	3.39	3.53	3.46	3.5	3.54	3.44	3.4	3.81	3.23	3.35	3.66	3.23	3.81	3.48	0.14
Cadmium	mg/L	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-
Calcium	mg/L	-	-	299	306	295	320	307	320	300	316	303	305	310	303	301	334	290	294	321	290	334	307	12
Cesium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Chromium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Cobalt	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Copper	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Iron	mg/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-
Lead	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Lithium	mg/L	-	-	0.132	0.133	0.126	0.137	0.132	0.136	0.13	0.135	0.13	0.133	0.133	0.13	0.13	0.146	0.127	0.127	0.14	0.126	0.146	0.133	0.005
Magnesium	mg/L	-	-	918	934	919	945	950	973	912	927	942	957	914	936	890	1,010	977	919	1,010	890	1010	943	34
Manganese	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Mercury	mg/L	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum	mg/L	-	-	0.0079	0.0081	0.0084	0.0082	0.0082	0.0091	0.008	0.0087	0.008	0.009	0.0092	0.0088	0.0085	0.0092	0.0077	0.0082	0.0087	0.0077	0.0092	0.0085	0.0005
Nickel	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Phosphorus	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Potassium	mg/L	-	-	309	302	311	323	318	321	307	304	307	319	312	321	315	329	288	305	336	288	336	313	11
Rubidium	mg/L	-	-	0.079	0.082	0.082	0.08	0.082	0.083	0.079	0.08	0.08	0.086	0.084	0.085	0.08	0.081	0.078	0.079	0.086	0.078	0.086	0.082	0.003
Selenium	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-

Table A.4-1 Water Quality Data in Grays Bay, August 2024

Parameter	Units	CCME WQG-MAL		WQ1		WQ3		WQ4		WQ5		WQ6		WQ7		WQ8		WQ9	WQ10		Summary Statistics			
		Short Term	Long Term	WQ1-S	WQ1-D	WQ3-S	WQ3-D	WQ4-S	WQ4-D	WQ5-S	WQ5-D	WQ-6-S	WQ6-D	WQ7-S	WQ7-D	WQ8-S	WQ8-D	WQ9-S	WQ10-S	WQ10-D	Min	Max	Mean	Std Dev
Silicon	mg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Silver	mg/L	-	-	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	-
Sodium	mg/L	-	-	7,760	7,930	7,560	7,690	7,550	7,720	7,480	7,520	7,690	7,890	7,470	7,700	7,420	8,190	7,990	7,460	8,270	7420	8270	7723	256
Strontium	mg/L	-	-	5.6	5.9	5.6	5.84	5.6	6.21	5.72	5.84	5.73	5.85	5.81	5.76	5.64	6.18	5.35	5.74	6.24	5.35	6.24	5.80	0.24
Sulfur	mg/L	-	-	699	675	652	702	716	736	707	700	692	720	726	742	722	775	680	688	767	652	775	711	32
Tellurium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Thallium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thorium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tin	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Titanium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tungsten	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Uranium	mg/L	-	-	0.00225	0.0024	0.00221	0.0024	0.00228	0.00229	0.00229	0.00228	0.00216	0.00244	0.00213	0.00221	0.00229	0.00235	0.0023	0.00223	0.00253	0.00213	0.00253	0.00230	0.00010
Vanadium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Zinc	mg/L	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-
Zirconium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Volatile Organic Compounds																								
Benzene	µg/L	-	110	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Ethylbenzene	µg/L	-	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Methyl tert-butyl ether (MTBE)	µg/L	-	5000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Styrene	µg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Toluene	µg/L	-	215	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Xylene, m & p-	µg/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-
Xylene, o-	µg/L	-	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-
Xylenes, Total	µg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Hydrocarbons																								
Volatile Petroleum Hydrocarbons (VI	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
PHC F1 (C6-C10 range)	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
VH (C6-C10)	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
PHC F1 (C6-C10 range) minus BTE	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
PHC F2 (>C10-C16 range)	µg/L	-	-	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	-
PHC F3 (>C16-C34 range)	µg/L	-	-	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	-
PHC F4 (>C34-C50 range)	µg/L	-	-	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	-
Polycyclic Aromatic Hydrocarbons																								
Acenaphthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Acenaphthylene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Acridine	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Anthracene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(a)anthracene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(a)pyrene	µg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Benzo(b)pyridine (Quinoline)	µg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Benzo(b/j)fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(b+j+k)fluoranthene	µg/L	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-
Benzo(g,h,i)perylene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(k)fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Chrysene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dibenzo(a,h)anthracene	µg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Fluorene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Indeno(1,2,3-cd)pyrene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Methylnaphthalene (Total)	µg/L	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-
Methylnaphthalene, 1-	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Methylnaphthalene, 2-	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Naphthalene	µg/L	-	1.40	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
PAH Toxicity Equivalency (PAH TEQ	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
PAHs, High Molecular Weight (BC A	µg/L	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	-
PAHs, Low Molecular Weight (BC A	µg/L	-	-	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	-
PAHs, Total (CCME sewer 18)	µg/L	-	-	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	-
Phenanthrene	µg/L	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	-
Pyrene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Total PAH	µg/L	-	-	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	-

Notes:

WQG-MAL = water quality guidelines for the protection of marine aquatic life

Bold text indicates an exceedance of the long term CCME WQG-MAL, italics text indicates an exceedance of the short term CCME WQL-MAL.

Table A.4-2 Water Quality Data in Grays Bay, April-May, 2025

Parameter	Units	CCME WQG-MAL		SCH-BH-05	SCH-B4-09	WRF-BF-01	WRF-B4-04	Summary Statistics			
		Short Term	Long Term					Min	Max	Mean	Std Dev
Physical Tests											
Conductivity	µS/cm	-	-	24,100	38,600	41,900	41,700	24,100	41,900	36,575	8,453
Hardness (as CaCO3), total	mg/L	-	-	3,690	5,460	5,760	5,530	3,690	5,760	5,110	955
Total Suspended Solids	mg/L	-	-	<2.0	<2.0	3.3	6.6	3.3	6.6	5.0	2.3
pH	pH units	-	-	7.77	7.74	7.70	7.72	7.70	7.77	7.73	0.03
Total Metals											
Aluminum	mg/L	-	-	0.0103	0.0059	0.0059	0.0061	0.0059	0.0103	0.0071	0.0022
Antimony	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Arsenic	mg/L	-	0.0125	0.00099	0.00118	0.00127	0.00125	0.00099	0.00127	0.001173	0.000128
Barium	mg/L	-	-	0.0156	0.0116	0.0107	0.0114	0.0107	0.0156	0.0123	0.0022
Beryllium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Boron	mg/L	-	-	2.30	3.33	3.36	3.71	2.30	3.71	3.18	0.608
Cadmium	mg/L	-	0.00012	0.000051	0.000042	0.000046	0.000042	0.000042	0.000051	0.000045	0.000004
Calcium	mg/L	-	-	244	355	359	353	244	359	328	56
Cesium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Chromium	mg/L	-	0.0015 (Cr(IV)); 0.056 (Cr(III))	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Cobalt	mg/L	-	-	0.000204	0.000109	0.000082	0.000107	0.000082	0.000204	0.000126	0.000054
Copper	mg/L	-	-	0.00297	0.00081	0.00053	0.00077	0.00053	0.00297	0.00127	0.00114
Gallium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Iron	mg/L	-	-	0.018	0.016	<0.010	0.010	<0.010	0.018	0.014	0.004
Lead	mg/L	-	-	<0.00010	0.00031	<0.00010	<0.00010	<0.00010	0.00031	0.000153	0.000105
Lithium	mg/L	-	-	0.108	0.159	0.165	0.179	0.108	0.179	0.153	0.031
Magnesium	mg/L	-	-	748	1110	1180	1130	748	1180	1042	198
Manganese	mg/L	-	-	0.021	0.00479	0.00129	0.00411	0.00129	0.0210	0.00780	0.00893
Mercury	mg/L	-	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum	mg/L	-	-	0.00565	0.00834	0.00862	0.00848	0.00565	0.00862	0.007773	0.00142
Nickel	mg/L	-	-	0.00347	0.00109	0.00075	0.00099	0.00075	0.00347	0.001575	0.001271
Phosphorus	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Potassium	mg/L	-	-	228	299	308	301	228	308	284	38
Rhenium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Rubidium	mg/L	-	-	0.0718	0.0906	0.0925	0.0927	0.0718	0.0927	0.0869	0.0101
Selenium	mg/L	-	-	<0.00050	<0.0010	<0.00055	<0.00090	<0.00050	<0.0010	0.00074	0.00025
Silicon	mg/L	-	-	1.7	<1.0	<1.0	<1.0	<1.0	1.7	1.2	0.3
Silver	mg/L	0.0075	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	-
Sodium	mg/L	-	-	5970	8600	8860	8580	5970	8860	8003	1361
Strontium	mg/L	-	-	4.12	6.05	6.32	6.06	4.12	6.32	5.64	1.02
Sulfur	mg/L	-	-	448	670	720	696	448	720	634	125
Tellurium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thallium	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	-
Thorium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Tin	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Titanium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tungsten	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Uranium	mg/L	-	-	0.0016	0.00224	0.00237	0.00227	0.0016	0.00237	0.00212	0.00035
Vanadium	mg/L	-	-	0.00062	0.00072	0.00075	0.00069	0.00062	0.00075	0.00070	0.00006
Yttrium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Zinc	mg/L	-	-	0.0216	0.0049	<0.0030	<0.0030	<0.0030	0.0216	0.0081	0.0090
Zirconium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-

Notes:
WQG-MAL = water quality guidelines for the protection of marine aquatic life
Bold text indicates an exceedance of the long term CCME WQG-MAL, italics text indicates an exceedance of the short term CCME WQL-MAL.

Table A.4-3 Water Quality Data in Grays Bay, July 2025

Parameter	Units	CCME WQG-MAL		WQ1		WQ2		WQ3		WQ4	WQ5	WQ6		WQ9	WQ10		Summary Statistics			
		Short Term	Long Term	WQ1-S	WQ1-D	WQ3-S	WQ3-D	WQ3-S	WQ3-D	WQ4-D	WQ5-D	WQ-6-S	WQ6-D	WQ9-S	WQ10-S	WQ10-D	Min	Max	Mean	Std Dev
General																				
Hardness (as CaCO3), dissolved	mg/L	-	-	4,240	4,550	4,290	4,730	4,490	5,030	4,430	4,370	4,400	5,060	4,380	4,590	4,940	4,240	5,060	4,577	279
Hardness (as CaCO3), total	mg/L	-	-	4,400	4,400	4,390	4,780	4,440	5,090	4,420	4,500	4,310	4,760	4,350	4,430	5,110	4,310	5,110	4,568	276
Anions and Nutrients																				
Chloride	mg/L	-	-	10,700	11,500	11,200	12,200	9,920	13,700	12,000	12,000	13,000	11,500	10,700	11,700	11,800	9,920	13,700	11,686	984
Sulfate	mg/L	-	-	1,290	1,510	1,480	1,590	1,320	1,820	1,580	1,580	1,740	1,590	1,400	1,600	1,600	1,290	1,820	1,546	150
Bromide	mg/L	-	-	38	41.5	40.6	43.2	34.7	48.5	43.5	43.1	45	41.6	38.3	41	41.1	34.7	48.5	41.5	3.4
Fluoride	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Nitrate (as N)	mg/L	1500	200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Nitrite (as N)	mg/L	-	-	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Ammonia (as N) - Total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0156	<0.0050	0.0156	0.0058	0.0029
Total Kjeldahl Nitrogen	mg/L	-	-	0.106	0.083	0.105	0.078	0.091	0.088	0.092	0.084	0.094	0.075	0.099	0.086	0.112	0.075	0.112	0.092	0.011
Phosphorus - Dissolved	mg/L	-	-	0.0185	0.0202	0.0191	0.0239	0.0202	0.0248	0.0194	0.0192	0.0196	0.0243	0.0192	0.0198	0.0249	0.0185	0.0249	0.0210	0.0025
Phosphorus, Total	mg/L	-	-	0.0215	0.021	0.0201	0.0241	0.0238	0.0264	0.0206	0.0205	0.0201	0.0254	0.0216	0.0208	0.0263	0.0201	0.0264	0.0225	0.0024
Organic / Inorganic Carbon																				
Dissolved Organic Carbon	mg/L	-	-	1.16	1.09	1.14	1.32	1.15	1.09	1.26	1.17	1.19	1.32	1.24	1.06	1.07	1.06	1.32	1.17	0.09
Total Organic Carbon	mg/L	-	-	1.15	1.19	1.18	1.11	1.01	0.79	1.09	1.07	1.22	1.12	1.01	0.95	0.83	0.79	1.22	1.06	0.13
Total Metals																				
Aluminum	mg/L	-	-	0.073	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0730	0.0518	0.0064
Antimony	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Arsenic	mg/L	-	0.0125	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Barium	mg/L	-	-	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.011	0.011	0.010	0.011	0.010	0.010	0.010	0.011	0.010	0.00048
Beryllium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Boron	mg/L	-	-	3.15	3.18	3.08	3.45	3.05	3.61	3.12	3.19	3.07	3.46	3.10	3.05	3.69	3.05	3.69	3.25	0.22
Cadmium	mg/L	-	0.00012	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	-
Calcium	mg/L	-	-	272	278	268	304	270	322	272	279	276	300	275	272	330	268	330	286	21
Cesium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Chromium	mg/L	-	0.0015 (Cr(IV)); 0.056 (Cr(III))	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	-
Cobalt	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Copper	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Iron	mg/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-
Lead	mg/L	-	-	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	0.0021	0.0003
Lithium	mg/L	-	-	0.118	0.120	0.118	0.132	0.112	0.135	0.115	0.119	0.119	0.129	0.116	0.111	0.136	0.111	0.136	0.122	0.009
Magnesium	mg/L	-	-	903	901	904	976	914	1040	909	925	879	974	890	911	1040	879	1040	936	54
Manganese	mg/L	-	-	0.0035	0.0030	0.0039	0.0037	<0.0025	<0.0025	0.0033	0.0027	0.0049	<0.0025	0.0030	0.0028	0.0026	<0.0025	0.0049	0.0031	0.0007
Mercury	mg/L	-	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum	mg/L	-	-	0.0078	0.008	0.0079	0.0085	0.0078	0.0091	0.0074	0.0082	0.008	0.0089	0.0074	0.0081	0.0094	0.0074	0.0094	0.00819231	0.00062
Nickel	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Phosphorus	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Potassium	mg/L	-	-	276	284	281	309	284	334	277	278	269	314	278	276	325	269	334	291	21
Rubidium	mg/L	-	-	0.075	0.073	0.076	0.083	0.078	0.082	0.076	0.074	0.072	0.085	0.071	0.074	0.085	0.071	0.085	0.077	0.005
Selenium	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Silicon	mg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Silver	mg/L	0.0075	-	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	-
Sodium	mg/L	-	-	7,060	7,270	7,210	7,990	7,120	8,400	7,110	7,380	7,020	7,850	7,230	7,240	8,460	7,020	8,460	7,488	509
Strontium	mg/L	-	-	5.32	5.37	5.19	5.92	5.46	6.29	5.32	5.44	5.2	5.96	5.45	5.26	6.43	5.19	6.43	5.59	0.42
Sulfur	mg/L	-	-	672	667	669	732	693	786	678	674	645	733	674	690	792	645	792	700	46
Tellurium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Thallium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thorium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tin	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Titanium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tungsten	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Uranium	mg/L	-	-	0.00212	0.00236	0.00212	0.00256	0.00229	0.00250	0.00222	0.00225	0.00242	0.00241	0.00228	0.00227	0.00256	0.00212	0.00256	0.00234	0.00015
Vanadium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Zinc	mg/L	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-
Zirconium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dissolved Metals																				
Aluminum	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Antimony	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Arsenic	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Barium	mg/L	-	-	0.0102	0.0095	0.0095	0.0097	0.0092	0.0096	0.0094	0.0111	0.0105	0.0101	0.0101	0.0102	0.0107	0.0092	0.0111	0.0100	0.0006
Beryllium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Boron	mg/L	-	-	3.02	2.81	3.02	2.85	3.37	2.81	2.98	2.85	3.23	2.85	3.01	3.34	2.87	2.81	3.37	3.00	0.20
Cadmium	mg/L	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-
Calcium	mg/L	-	-	286	267	293	266	316	269	280	269	312	273	282	313	270	266	316	284	19
Cesium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Chromium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Cobalt	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Copper	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Iron	mg/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-
Lead	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Lithium	mg/L	-	-	0.121	0.111	0.123	0.110	0.132	0.113	0.118	0.113	0.128	0.113	0.118	0.130	0.113	0.110	0.132	0.119	0.008

Table A.4-3 Water Quality Data in Grays Bay, July 2025

Parameter	Units	CCME WQG-MAL		WQ1		WQ2		WQ3		WQ4	WQ5	WQ6		WQ9	WQ10		Summary Statistics			
		Short Term	Long Term	WQ1-S	WQ1-D	WQ3-S	WQ3-D	WQ3-S	WQ3-D	WQ4-D	WQ5-D	WQ-6-S	WQ6-D	WQ9-S	WQ10-S	WQ10-D	Min	Max	Mean	Std Dev
General																				
Magnesium	mg/L	-	-	931	879	972	930	1,030	913	892	905	1,040	897	943	1,010	892	879	1,040	941	55
Manganese	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0033	<0.0025	<0.0025	<0.0025	<0.0025	0.0033	0.0026	0.0002
Mercury	mg/L	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum	mg/L	-	-	0.0076	0.0077	0.0089	0.0081	0.0086	0.0081	0.0072	0.007	0.0092	0.0074	0.0079	0.0092	0.0074	0.0070	0.0092	0.0080	0.0007
Nickel	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Phosphorus	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Potassium	mg/L	-	-	279	270	306	289	314	267	266	282	305	275	291	310	280	266	314	287.2	16.8
Rubidium	mg/L	-	-	0.077	0.077	0.08	0.076	0.089	0.078	0.079	0.076	0.088	0.079	0.080	0.091	0.079	0.076	0.091	0.081	0.005
Selenium	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Silicon	mg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Silver	mg/L	-	-	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	-
Sodium	mg/L	-	-	7470	7090	7930	7390	8190	7190	7110	7270	8260	7130	7460	8120	7190	7,090	8,260	7,523	441
Strontium	mg/L	-	-	5.63	5.25	5.84	5.22	6.06	5.32	5.2	5.24	6.02	5.3	5.34	5.89	5.15	5.15	6.06	5.50	0.34
Sulfur	mg/L	-	-	681	658	754	701	782	662	674	677	775	655	716	768	696	655	782	708	47
Tellurium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Thallium	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thorium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tin	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Titanium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tungsten	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Uranium	mg/L	-	-	0.00229	0.00224	0.00252	0.00213	0.00246	0.00222	0.00221	0.00223	0.00261	0.00215	0.00218	0.00234	0.00222	0.00213	0.00261	0.00229	0.00015
Vanadium	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Zinc	mg/L	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-
Zirconium	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Volatile Organic Compounds																				
Benzene	µg/L	-	110	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Ethylbenzene	µg/L	-	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Methyl tert-butyl ether (MTBE)	µg/L	-	5000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Styrene	µg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Toluene	µg/L	-	215	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Xylene, m & p-	µg/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-
Xylene, o-	µg/L	-	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-
Xylenes, Total	µg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Hydrocarbons																				
F2 (C10-C16)	µg/L	-	-	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	-
F3 (C16-C34)	µg/L	-	-	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	-
F4 (C34-C50)	µg/L	-	-	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	-
F1-BTEX	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
Polycyclic Aromatic Hydrocarbons																				
Acenaphthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Acenaphthylene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Acridine	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Anthracene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(a)anthracene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(a)pyrene	µg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Benzo(b/j)fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(b+j+k)fluoranthene	µg/L	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-
Benzo(g,h,i)perylene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(k)fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Chrysene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dibenzo(a,h)anthracene	µg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Fluorene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Indeno(1,2,3-cd)pyrene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Methylnaphthalene (Total)	µg/L	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-
Methylnaphthalene, 1-	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Methylnaphthalene, 2-	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Naphthalene	µg/L	-	1.40	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Phenanthrene	µg/L	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	-
Pyrene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Quinoline	µg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
PAH Toxicity Equivalency (PAH TEQ	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
PAHs, High Molecular Weight (BC A	µg/L	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	-
PAHs, Low Molecular Weight (BC A	µg/L	-	-	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	-
PAHs, Total (CCME sewer 18)	µg/L	-	-	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	-
Total PAH	µg/L	-	-	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	-

Notes:
WQG-MAL = water quality guidelines for the protection of marine aquatic life
Bold text indicates an exceedance of the long term CCME WQG-MAL, italics text indicates an exceedance of the short term CCME WQL-MAL.

Table A.4-4 Water Quality Data in Grays Bay, August 2025

Parameter	Units	CCME WQG-MAL		WQ1	WQ2	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	Summary Statistics			
		Short Term	Long Term											Min	Max	Mean	Std Dev
General																	
Hardness (as CaCO3), dissolved	mg/L	-	-	4310	4420	4240	4240	4290	4260	4290	4330	4310	4230	4,230	4,420	4,292	57
Hardness (as CaCO3), total	mg/L	-	-	4500	4530	4580	4620	4610	4590	4630	4670	4490	4530	4,490	4,670	4,575	60
Anions and Nutrients																	
Bromide	mg/L	-	-	49.2	51.9	48.6	49.4	49.1	44.9	45.3	44.5	45	44.8	45	52	47	3
Chloride	mg/L	-	-	13400	14200	13300	13500	13300	12800	12900	12700	12800	12800	12,700	14,200	13,170	467
Sulfate (as SO4)	mg/L	-	-	1870	1980	1850	1870	1850	1820	1850	1810	1800	1810	1,800	1,980	1,851	52
Fluoride	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Nitrate (as N)	mg/L	1500	200	<0.50	<0.50	<0.50	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.67	0.52	0.05
Nitrite (as N)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-
Ammonia, total (as N)	mg/L	-	-	0.0104	<0.0050	<0.0050	<0.0050	0.0088	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0104	0.0059	0.0020
Total Kjeldahl Nitrogen	mg/L	-	-	0.083	0.077	0.063	0.092	0.088	0.103	0.079	0.084	0.092	0.085	0.063	0.103	0.085	0.011
Phosphorus, total	mg/L	-	-	0.0177	0.022	0.0173	0.0176	0.0193	0.0168	0.0166	0.0174	0.0182	0.0173	0.0166	0.0220	0.0180	0.0016
Phosphorus, total dissolved	mg/L	-	-	0.0173	0.0168	0.0179	0.0177	0.0179	0.0186	0.0196	0.0198	0.0184	0.0177	0.0168	0.0198	0.0182	0.0010
Organic / Inorganic Carbon																	
Dissolved Organic Carbon	mg/L	-	-	1.41	1.38	1.18	1.07	1.22	1.60	1.32	1.20	1.23	1.35	1.07	1.60	1.30	0.15
Total Organic Carbon	mg/L	-	-	1.21	1.19	1.95	1.22	1.31	1.26	1.17	1.11	1.18	1.18	1.11	1.95	1.28	0.24
Metals																	
Aluminum, dissolved	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
Aluminum, total	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.056	<0.050	<0.050	0.056	0.0506	0.0019
Antimony, dissolved	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Antimony, total	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Arsenic, dissolved	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Arsenic, total	mg/L	-	0.0125	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Barium, dissolved	mg/L	-	-	0.0097	0.0098	0.0092	0.0088	0.0088	0.0089	0.0099	0.0092	0.0098	0.0095	0.0088	0.0099	0.00936	0.00044
Barium, total	mg/L	-	-	0.0098	0.0089	0.0104	0.0096	0.0092	0.0102	0.0102	0.0094	0.0095	0.0099	0.0089	0.0104	0.00971	0.00048
Beryllium, dissolved	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Beryllium, total	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth, dissolved	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Bismuth, total	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Boron, dissolved	mg/L	-	-	2.86	2.84	2.77	2.78	2.79	2.88	2.94	2.94	2.88	2.81	2.77	2.94	2.85	0.06
Boron, total	mg/L	-	-	3.1	3.1	3.27	3.15	3.21	3.22	3.22	3.22	3.12	3.13	3.10	3.27	3.17	0.06
Cadmium, dissolved	mg/L	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-
Cadmium, total	mg/L	-	0.00012	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	**<0.00020**	-
Calcium, dissolved	mg/L	-	-	286	276	279	278	277	282	286	287	279	281	276	287	281	4
Calcium, total	mg/L	-	-	299	295	306	294	305	300	304	306	296	301	294	306	301	5
Cesium, dissolved	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Cesium, total	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Chromium, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Chromium, total	mg/L	-	0.0015 (Cr(IV)); 0.056 (Cr(III))	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	**<0.0050**	-
Cobalt, dissolved	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Cobalt, total	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Copper, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Copper, total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Iron, dissolved	mg/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-

Table A.4-4 Water Quality Data in Grays Bay, August 2025

Parameter	Units	CCME WQG-MAL		WQ1	WQ2	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	Summary Statistics			
		Short Term	Long Term											Min	Max	Mean	Std Dev
Iron, total	mg/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-
Lead, dissolved	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Lead, total	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Lithium, dissolved	mg/L	-	-	0.116	0.114	0.114	0.115	0.116	0.117	0.119	0.119	0.118	0.115	0.114	0.119	0.116	0.002
Lithium, total	mg/L	-	-	0.115	0.119	0.123	0.119	0.121	0.12	0.122	0.121	0.118	0.117	0.115	0.123	0.120	0.002
Magnesium, dissolved	mg/L	-	-	874	905	860	861	873	864	868	877	878	857	857	905	872	14
Magnesium, total	mg/L	-	-	912	922	928	944	935	932	940	949	911	918	911	949	929	13
Manganese, dissolved	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Manganese, total	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Mercury, dissolved	mg/L	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Mercury, total	mg/L	-	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-
Molybdenum, dissolved	mg/L	-	-	0.0076	0.0072	0.0074	0.0078	0.0070	0.0077	0.0075	0.0074	0.0072	0.0076	0.0070	0.0078	0.0074	0.0003
Molybdenum, total	mg/L	-	-	0.0082	0.0072	0.0078	0.0083	0.0079	0.0084	0.0084	0.0085	0.0083	0.0074	0.0072	0.0085	0.0080	0.0005
Nickel, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Nickel, total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Phosphorus, dissolved	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Phosphorus, total	mg/L	-	-	<1.0	<1.1	<1.2	<1.3	<1.4	<1.5	<1.6	<1.7	<1.8	<1.9	-	-	-	-
Potassium, dissolved	mg/L	-	-	268	274	264	260	266	263	264	266	270	263	260	274	266	4
Potassium, total	mg/L	-	-	300	294	291	291	300	304	306	298	294	296	291	306	297	5
Rubidium, dissolved	mg/L	-	-	0.074	0.074	0.072	0.075	0.07	0.073	0.071	0.072	0.078	0.070	0.070	0.078	0.073	0.002
Rubidium, total	mg/L	-	-	0.078	0.079	0.08	0.08	0.082	0.083	0.077	0.076	0.081	0.078	0.076	0.083	0.079	0.002
Selenium, dissolved	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Selenium, total	mg/L	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-
Silicon, dissolved	mg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Silicon, total	mg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Silver, dissolved	mg/L	-	-	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	-
Silver, total	mg/L	0.0075	-	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	-
Sodium, dissolved	mg/L	-	-	7,460	7,680	7,430	7,260	7,460	7,350	7,350	7,360	7,460	7,340	7,260	7,680	7,415	114
Sodium, total	mg/L	-	-	7,210	7,260	7,520	7,330	7,300	7,290	7,280	7,260	7,220	7,190	7,190	7,520	7,286	93
Strontium, dissolved	mg/L	-	-	5.30	5.51	5.48	5.49	5.31	5.61	5.50	5.38	5.48	5.38	5.30	5.61	5.44	0.10
Strontium, total	mg/L	-	-	5.53	5.38	5.35	5.43	5.54	5.51	5.57	5.39	5.44	5.29	5.29	5.57	5.44	0.09
Sulfur, dissolved	mg/L	-	-	622	620	621	627	607	627	624	619	629	610	607	629	621	7
Sulfur, total	mg/L	-	-	722	718	713	727	725	726	714	740	732	719	713	740	724	8
Tellurium, dissolved	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Tellurium, total	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Thallium, dissolved	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thallium, total	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Thorium, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Thorium, total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tin, dissolved	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Tin, total	mg/L	-	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	-
Titanium, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Titanium, total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tungsten, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Tungsten, total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-

Table A.4-4 Water Quality Data in Grays Bay, August 2025

Parameter	Units	CCME WQG-MAL		WQ1	WQ2	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	Summary Statistics			
		Short Term	Long Term											Min	Max	Mean	Std Dev
Uranium, dissolved	mg/L	-	-	0.00211	0.00208	0.00213	0.00202	0.00207	0.00202	0.00212	0.00204	0.00206	0.00206	0.00202	0.00213	0.00207	0.00004
Uranium, total	mg/L	-	-	0.00237	0.00226	0.0024	0.00224	0.0023	0.00231	0.00233	0.00247	0.00236	0.00222	0.00222	0.00247	0.00233	0.00008
Vanadium, dissolved	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Vanadium, total	mg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Zinc, dissolved	mg/L	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-
Zinc, total	mg/L	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-
Zirconium, dissolved	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Zirconium, total	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Volatile Organic Compounds																	
Benzene	µg/L	-	110	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Ethylbenzene	µg/L	-	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Methyl-tert-butyl ether [MTBE]	µg/L	-	5000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Styrene	µg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Toluene	µg/L	-	215	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Xylene, m+p-	µg/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-
Xylene, o-	µg/L	-	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-
Xylenes, total	µg/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
BTEX+Styrene, total	µg/L	-	-	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	-
BTEX, total	µg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Hydrocarbons																	
F1 (C6-C10)	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
F1-BTEX	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
F2 (C10-C16)	µg/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-
F3 (C16-C34)	µg/L	-	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	-
F4 (C34-C50)	µg/L	-	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	-
TEH (C10-C50)	µg/L	-	-	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	-
TEH (C16-C50)	µg/L	-	-	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	-
Polycyclic Aromatic Hydrocarbons																	
Acenaphthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Acenaphthylene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Acridine	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Anthracene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
B(a)P total potency equivalents	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benz(a)anthracene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(a)pyrene	µg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Benzo(b+j)fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(b+j+k)fluoranthene	µg/L	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-
Benzo(g,h,i)perylene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Benzo(k)fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Chrysene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dibenz(a,h)anthracene	µg/L	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Fluoranthene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Fluorene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Methylnaphthalene, 1+2-	µg/L	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	-

Table A.4-4 Water Quality Data in Grays Bay, August 2025

Parameter	Units	CCME WQG-MAL		WQ1	WQ2	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	Summary Statistics			
		Short Term	Long Term											Min	Max	Mean	Std Dev
Methylnaphthalene, 1-	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Methylnaphthalene, 2-	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Naphthalene	µg/L	-	1.40	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-
PAHs, high molecular weight (BC	µg/L	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	-
PAHs, low molecular weight (BC	µg/L	-	-	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	-
PAHs, total (CCME sewer 18)	µg/L	-	-	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	<0.070	-
PAHs, total (EPA 16)	µg/L	-	-	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	-
Phenanthrene	µg/L	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	-
Pyrene	µg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Quinoline	µg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-

Notes:
WQG-MAL = water quality guidelines for the protection of marine aquatic life
Bold text indicates an exceedance of the long term CCME WQG-MAL, italics text indicates an exceedance of the short term CCME WQL-MAL.

Parameter	Units	CCME WQG-MAL		August 2024				May 2025				July 2025				August 2025			
		Short Term	Long Term	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev
General																			
Total Hardness	mg/L	-	-	524	5,480	4,741	1,102	3,690	5,760	5,110	955	4,310	5,110	4,568	276	4,490	4,670	4,575	60
Anions and Nutrients																			
Nitrate	mg/L	550	13	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	0.67	0.517	0.05
Total Metals																			
Arsenic	mg/L	-	0.0125	<0.0030	<0.0030	<0.0030	-	0.00099	0.00127	0.00117	0.00013	<0.0030	<0.0030	<0.0030	-	<0.0030	<0.0030	<0.0030	-
Cadmium	mg/L	-	0.00012	**<0.00020**	**<0.00020**	**<0.00020**	-	0.000042	0.000051	0.000045	0.000004	**<0.00020**	**<0.00020**	**<0.00020**	-	**<0.00020**	**<0.00020**	**<0.00020**	-
Chromium	mg/L	-	0.0015 (Cr(IV)); 0.056 (Cr(III))	**<0.0050**	**<0.0050**	**<0.0050**	-	<0.00050	<0.00050	<0.00050	-	**<0.0050**	**<0.0050**	**<0.0050**	-	**<0.0050**	**<0.0050**	**<0.0050**	-
Mercury	mg/L	-	0.000016	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050	-
Silver	mg/L	0.0075	-	<0.00025	<0.00025	<0.00025	-	<0.00010	<0.00010	<0.00010	-	<0.00025	<0.00025	<0.00025	-	<0.00025	<0.00025	<0.00025	-
Petroleum Hydrocarbons																			
Benzene	µg/L	-	110	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Ethylbenzene	µg/L	-	25	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Methyl tert-butyl ether	µg/L	-	5000	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Styrene	µg/L	-	-	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Toluene	µg/L	-	215	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Xylenes	µg/L	-	-	<0.50	<0.50	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Polycyclic Aromatic Hydrocarbons																			
Naphthalene	µg/L	-	1.40	<0.050	<0.050	<0.050	-	-	-	-	-	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	-

Appendix B Zooplankton Analysis

Table B.1 Summary Statistics of Zooplankton Abundance Results from August 2024

Phylum	Class	Order	n	Minimum	Maximum	Average	Total
Chaetognatha	Sagittoidea	Aphragmophora	15	1	29	8	131
Cnidaria	Hydrozoa	Narcomedusae	6	1	13	5	29
		Trachymedusae	5	3	111	40	202
		Hydrozoa indet.	9	2	208	57	510
Arthropoda	Malacostraca	Amphipoda	2	1	2	1	3
	Thecostraca	Balanomorpha	2	1	11	6	12
	Branchiopoda	Diplostraca	10	1	300	115	1,148
	Copepoda	Calanoida	101	1	789	64	6,470
		Cyclopoida	9	1	11	4	34
		Copepoda indet.	6	1	20	7	41
	Malacostraca	Euphausiacea	19	1	21	8	154
	Ostracoda	Ostracoda indet.	1	2	2	2	2
Echinodermata	Echinoidea	Echinoidea indet.	4	1	4	2	9
	Ophiuroidea	Ophiuroidea indet.	5	1	16	6	32
	-	Egg/egg mass	9	2	43	15	138
Mollusca	Bivalvia	Bivalvia indet.	2	1	3	2	4
	Gastropoda	Gastropoda indet.	7	1	11	5	36
Annelida	Polychaeta	Polychaeta indet.	1	1	1	1	1
Chordata	Appendicularia	Copelata	12	1	64	30	358

Table B.2 Summary Statistics of Zooplankton Density Results from August 2024

Phylum	Class	Order	n	Minimum	Maximum	Average	Total
Chaetognatha	Sagittoidea	Aphragmophora	15	0.0002	0.0109	0.0022	0.0326
Cnidaria	Hydrozoa	Narcomedusae	6	0.0003	0.0022	0.0009	0.0053
		Trachymedusae	5	0.0011	0.0189	0.0069	0.0344
		Hydrozoa indet.	9	0.0006	0.0353	0.0120	0.1079
Arthropoda	Malacostraca	Amphipoda	2	0.0004	0.0006	0.0005	0.0010
	Thecostraca	Balanomorpha	2	0.0016	0.0036	0.0026	0.0052
	Branchiopoda	Diplostraca	10	0.0005	0.1020	0.0344	0.3439
	Copepoda	Calanoida	101	0.0001	0.1149	0.0132	1.3292
		Cyclopoida	9	0.0004	0.0036	0.0015	0.0135
		Copepoda indet.	6	0.0008	0.0066	0.0024	0.0147
	Malacostraca	Euphausiacea	19	0.0001	0.0040	0.0020	0.0378
	Ostracoda	Ostracoda indet.	1	0.0006	0.0006	0.0006	0.0006
Echinodermata	Echinoidea	Echinoidea indet.	4	0.0005	0.0008	0.0006	0.0025
	Ophiuroidea	Ophiuroidea indet.	5	0.0004	0.0027	0.0012	0.0062
	-	Egg/egg mass	9	0.0008	0.0109	0.0042	0.0380
Mollusca	Bivalvia	Bivalvia indet.	2	0.0004	0.0008	0.0006	0.0011
	Gastropoda	Gastropoda indet.	7	0.0009	0.0036	0.0016	0.0114
Annelida	Polychaeta	Polychaeta indet.	1	0.0004	0.0004	0.0004	0.0004
Chordata	Appendicularia	Copelata	12	0.0004	0.0169	0.0066	0.0796

Table B.3 Summary Statistics of Zooplankton Biomass Results from August 2024

Taxa Grouping	n	Minimum	Maximum	Average	Total
Chaetognatha	7	0.0003	0.0699	0.0155	0.1082
Cnidaria	9	0.0002	0.0502	0.0150	0.1354
Cladocera	9	0.0003	0.1912	0.0569	0.5122
Polychaeta	1	0.0010	0.0010	0.0010	0.0010
Remaining Organisms	9	0.0042	0.3619	0.1091	0.9820

Marine Zooplankton Enumeration and Identification Methods
Client: Stantec
Project: Grays Bay

Sample Inventory

Sample arrival: 10-Sept-24
Number of samples: 9
Number of jars: 9
Field screen size: 250 µm
Biologica project number: mz24-053

Upon arrival, the samples were examined and double-checked against the chain of custody to ensure that (1) all samples were accounted for, and (2) each sample had the appropriate number of jars as indicated on the COC. Any discrepancies were reported to the client and were resolved before further sample handling. Samples were assigned a unique internal identification number and stored in ascending order in the sample storage area. For processing, samples were analyzed in water and then transferred back into 10% Formalin for storage.

Sample Processing

Marine zooplankton samples were analyzed in 1-2 fractions as described below. All subsamples are obtained using a Folsom Splitter. Among the subsamples, a total count of a minimum of 300 organisms was identified.

(1) A "URL" fraction (Unique, Large, and Rare) comprised of Unique, large and rare organisms. These tend to have low abundance. The whole sample is scanned and these organisms are removed for identification. Ichthyoplankton are included in this fraction unless they have very high abundances.
(2) One fraction comprised of all remaining organisms in the sample. The number of fractions is determined by the size distribution and abundances of organisms in the sample. Counts are included in the fraction which most accurately captures the per-taxon abundances. All taxa (and stages) are identified in only one fraction.

The Coarse fraction was analyzed through a stereo microscope at 10–40x magnification. All organisms were identified by taxonomic experts to the lowest taxonomic level using a compound microscope (100–400x magnification), appropriate dissection tools, and standard taxonomic references. For copepods, the stage of development was also recorded (copepodite stages I–V) as is the sex for mature individuals (copepod stage VI).

In addition, non-copepod taxa for which typical life staging is not appropriate taxa were assigned a size stage consistent with sizing of the Zooplankton Taxonomy Laboratory at the Institute of Ocean Sciences (Sidney, BC). These size stages are s0 (<1.0mm not contributing significantly to biomass), s1 (1-5 mm), s2 (5-10 mm), s3 (10-15 mm), s4 (15-20 mm) and s5 (20-25 mm).

Zooplankton were identified to species wherever possible, although immature copepods lack differentiating features required for identification beyond order (e.g., Calanoida, Cyclopoida, or Harpacticoida). All identifications were performed using taxonomic references and collaborations with external experts, where necessary.

Table 1. Summary of zooplankton samples processed for Stantec Grays Bay, 2024.

Client Sample ID	Date Sampled	Biologica Sample ID	Tow Length (m)	Fraction	Split	Specimens Counted
ZP01	26-Aug-24	mz24-053-020	15	Fraction 1	9/16	352
				Whole	Whole	1
ZP03	26-Aug-24	mz24-053-021	30	Fraction 1	3/16	319
				Whole	Whole	46
ZP04	27-Aug-24	mz24-053-022	14	Whole	Whole	302
ZP05	27-Aug-24	mz24-053-023	11	Whole	Whole	79
ZP06	26-Aug-24	mz24-053-024	30	Fraction 1	3/16	270
				Whole	Whole	49
ZP07	24-Aug-24	mz24-053-025	18	Fraction 1	3/8	310
				Whole	Whole	4
ZP08	24-Aug-24	mz24-053-026	35	Fraction 1	3/32	259
				Whole	Whole	66
ZP09	24-Aug-24	mz24-053-027	1.4	Whole	Whole	78
ZP10	26-Aug-24	mz24-053-028	30	Fraction 1	1/4	325
				Whole	Whole	32

Specimens counted do not include memo organisms such as copepods, nematodes, or terrestrial insects

QA/QC

Ten percent (10%) of samples were reanalyzed to assess subsampling accuracy and consistency of enumeration. The sample(s) were chosen at random and processed at different times to reduce counting and identification bias. The percent agreement between QA samples is reported in Table 2.

Table 2. Summary of enumeration QA/QC results for Stantec Grays Bay, 2024.

Client Sample ID	Biologica Sample ID	Total Original Density (#/L)	Total QA Density (#/L)	Percent Agreement
ZP07	mz24-053-025	2.45E-01	2.41E-01	**98.46%**

Percent Agreement:
{100 – [(difference in density between samples/total density of original sample) x 100]} %

Biomass

Whole sample wet weight (WW) biomass (g) for each sample was calculated by direct weight of the major taxonomic groups as practicable; Chaetognatha, Cnidaria, Cladocera, Polychaeta. All remaining taxonomic groups were weighed collectvely. Weights were measured with an AND analytical balance to the nearest 0.01 mg.

Data

Densities (#/L) were calculated using the net diameter, 0.5 m, and tow depth (m) specified by the client.

Taxonomic data were recorded in Biologica's custom database. Results were provided to the Stantec project manager in Excel spreadsheets via email.

Methodological and Taxonomic References

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Appendix C Sediment Quality Results

C.1 Certificate of Analysis

CERTIFICATE OF ANALYSIS

Work Order	: **YL2401337**	Page	: 1 of 26
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Account Manager	: Oliver Gregg
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Project	: 123514868	Date Samples Received	: 29-Aug-2024 13:05
PO	: ----	Date Analysis Commenced	: 31-Aug-2024
C-O-C number	: 17-824755	Issue Date	: 09-Sep-2024 13:16
Sampler	: ----		
Site	: ----		
Quote number	: YL24-STAC100-001		
No. of samples received	: 21		
No. of samples analysed	: 21		

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*
Colby Bingham	Laboratory Supervisor	Inorganics, Saskatoon, Saskatchewan
Colby Bingham	Laboratory Supervisor	Metals, Saskatoon, Saskatchewan
George Huang	Supervisor - Inorganic	Metals, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Metals, Calgary, Alberta
Hedy Lai	Team Leader - Inorganics	Inorganics, Saskatoon, Saskatchewan
Hedy Lai	Team Leader - Inorganics	Sask Soils, Saskatoon, Saskatchewan
Joshua Stessun	Laboratory Analyst	Organics, Calgary, Alberta
Maria Painchaud	Laboratory Assistant	Inorganics, Saskatoon, Saskatchewan
Roseanne Drake	Lab Assistant	Organics, Edmonton, Alberta
Stella Chen	Laboratory Assistant	Sask Soils, Saskatoon, Saskatchewan
Yan Zhang	Team Leader - Organics	Organics, Edmonton, Alberta

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
dS/m	decisiemens per metre
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
pH units	pH units

<: 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*
DLHM	*Detection Limit Adjusted: Sample has high moisture content.*

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED20	DUP-X	SED09	SED8	SED18
					Client sampling date / time	23-Aug-2024 11:16	23-Aug-2024 11:17	23-Aug-2024 11:45	23-Aug-2024 12:18	23-Aug-2024 13:50
						YL2401337-001	YL2401337-002	YL2401337-003	YL2401337-004	YL2401337-005
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/EO	0.25	%		16.0	15.6	18.2	37.2	34.5
Particle Size										
Gravel (>2mm)	----	EC183E/SK	1.0	%		2.6	3.0	<1.0	<1.0	<1.0
Sand (2.0mm - 0.063mm)	----	EC183E/SK	1.0	%		95.6	95.2	93.4	9.1	2.3
Sand (2.0mm - 0.2mm)	----	EC183E/SK	1.0	%		89.5	89.6	92.0	1.2	<1.0
Sand (0.2mm - 0.063mm)	----	EC183E/SK	1.0	%		6.1	5.6	1.4	7.9	1.6
Silt (0.063mm - 0.004mm)	----	EC183E/SK	1.0	%		1.8	1.8	2.5	35.7	25.8
Clay (<0.004mm)	----	EC183E/SK	1.0	%		<1.0	<1.0	4.0	55.2	71.7
Grain size curve	----	E185/SK	-	-		See Attached	See Attached	See Attached	See Attached	See Attached
Percent Passing										
Passing (0.0312mm)	----	E183/SK	1.0	%		1.6	1.5	5.1	84.2	96.6
Passing (2.0mm)	----	E181/SK	1.0	%		97.4	97.0	99.9	100	99.8
Passing (4.75mm)	----	E181/SK	1.0	%		99.5	99.4	100	100	99.9
Passing (0.020mm)	----	E183/SK	1.0	%		1.4	<1.0	5.0	78.8	93.7
Passing (1.0mm)	----	E182/SK	1.0	%		82.0	80.2	93.8	99.9	99.8
Passing (9.5mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.005mm)	----	E183/SK	1.0	%		<1.0	<1.0	4.0	59.4	75.3
Passing (0.841mm)	----	E182/SK	1.0	%		78.6	76.6	91.5	99.9	99.8
Passing (19mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.004mm)	----	E183/SK	1.0	%		<1.0	<1.0	4.0	55.2	71.7
Passing (0.50mm)	----	E182/SK	1.0	%		38.5	36.6	38.5	99.7	99.7
Passing (25.4mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.002mm)	----	E183/SK	1.0	%		<1.0	<1.0	3.4	41.7	54.4
Passing (0.420mm)	----	E182/SK	1.0	%		29.1	27.3	26.3	99.6	99.7
Passing (38.1mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.250mm)	----	E182/SK	1.0	%		11.1	10.4	8.2	99.2	99.3
Passing (50.8mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.149mm)	----	E182/SK	1.0	%		3.6	3.5	7.6	98.2	98.8

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED20	DUP-X	SED09	SED8	SED18
					Client sampling date / time	23-Aug-2024 11:16	23-Aug-2024 11:17	23-Aug-2024 11:45	23-Aug-2024 12:18	23-Aug-2024 13:50
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-001	YL2401337-002	YL2401337-003	YL2401337-004	YL2401337-005
						Result	Result	Result	Result	Result
Percent Passing										
Passing (76.2mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.125mm)	----	E182/SK	1.0	%		3.0	2.9	7.5	96.4	98.4
Passing (0.075mm)	----	E182/SK	1.0	%		1.7	1.6	7.3	92.7	97.7
Passing (0.063mm)	----	E182/SK	1.0	%		1.8	1.8	6.5	90.9	97.5
Passing (0.05mm)	----	E182/SK	1.0	%		1.9	1.9	5.8	89.0	97.4
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.141	0.155	0.162	0.891	0.458
Metals										
Antimony	7440-36-0	E440/SK	0.10	mg/kg		0.11	<0.10	<0.10	0.11	0.17
Arsenic	7440-38-2	E440/SK	0.10	mg/kg		4.78	5.23	3.72	6.90	9.61
Barium	7440-39-3	E440/SK	0.50	mg/kg		7.88	9.38	7.50	57.5	121
Beryllium	7440-41-7	E440/SK	0.10	mg/kg		0.12	0.13	0.13	0.49	0.83
Cadmium	7440-43-9	E440/SK	0.020	mg/kg		<0.020	<0.020	<0.020	0.025	0.043
Chromium	7440-47-3	E440/SK	0.50	mg/kg		16.4	21.2	18.7	36.0	71.8
Cobalt	7440-48-4	E440/SK	0.10	mg/kg		4.09	5.42	3.93	9.26	17.5
Copper	7440-50-8	E440/SK	0.50	mg/kg		4.11	4.96	4.42	23.6	38.9
Lead	7439-92-1	E440/SK	0.50	mg/kg		4.45	4.17	3.69	7.92	11.6
Mercury	7439-97-6	E510/SK	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	0.0099	0.0066
Molybdenum	7439-98-7	E440/SK	0.10	mg/kg		0.37	0.43	0.43	0.80	0.84
Nickel	7440-02-0	E440/SK	0.50	mg/kg		10.0	13.3	11.5	22.5	43.5
Selenium	7782-49-2	E440/SK	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Silver	7440-22-4	E440/SK	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	0.10
Thallium	7440-28-0	E440/SK	0.050	mg/kg		<0.050	<0.050	<0.050	0.188	0.318
Tin	7440-31-5	E440/SK	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	7440-61-1	E440/SK	0.050	mg/kg		0.673	0.504	0.482	1.26	1.99
Vanadium	7440-62-2	E440/SK	0.20	mg/kg		22.6	24.2	17.0	35.4	70.4
Zinc	7440-66-6	E440/SK	2.0	mg/kg		24.5	32.1	26.4	49.9	96.8
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED20	DUP-X	SED09	SED8	SED18
					Client sampling date / time	23-Aug-2024 11:16	23-Aug-2024 11:17	23-Aug-2024 11:45	23-Aug-2024 12:18	23-Aug-2024 13:50
						YL2401337-001	YL2401337-002	YL2401337-003	YL2401337-004	YL2401337-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.040	mg/kg		<0.040	<0.040	<0.040	<0.040	<0.040
Styrene	100-42-5	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	108-88-3	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, m+p-	179601-23-1	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylene, o-	95-47-6	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes, total	1330-20-7	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
BTEX, total	----	E611A/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
BTEX+Styrene, total	n/a	E611A/CG	0.15	mg/kg		<0.15	<0.15	<0.15	<0.15	<0.15
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%		71.9	75.5	70.3	77.0	77.6
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%		79.1	90.0	82.5	79.8	84.8
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	208-96-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acridine	260-94-6	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	120-12-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benz(a)anthracene	56-55-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	50-32-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b+j)fluoranthene	n/a	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b+j+k)fluoranthene	n/a	E641A/EO	0.075	mg/kg		<0.075	<0.075	<0.075	<0.075	<0.075
Benzo(g,h,i)perylene	191-24-2	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	207-08-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	218-01-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	53-70-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	206-44-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	86-73-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	90-12-0	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Methylnaphthalene, 1+2-	----	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 2-	91-57-6	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED20	DUP-X	SED09	SED8	SED18
					Client sampling date / time	23-Aug-2024 11:16	23-Aug-2024 11:17	23-Aug-2024 11:45	23-Aug-2024 12:18	23-Aug-2024 13:50
						YL2401337-001	YL2401337-002	YL2401337-003	YL2401337-004	YL2401337-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Naphthalene	91-20-3	E641A/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Pyrene	129-00-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Quinoline	91-22-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/EO	0.065	mg/kg		<0.065	<0.065	<0.065	<0.065	<0.065
IACR (CCME)	----	E641A/EO	0.60	-		<0.60	<0.60	<0.60	<0.60	<0.60
IACR AB (coarse)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
IACR AB (fine)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
PAHs, total (BC Sched 3.4)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
PAHs, total (EPA 16)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A/EO	0.1	%		119	103	107	130	92.6
Chrysene-d12	1719-03-5	E641A/EO	0.1	%		71.4	70.6	71.7	85.5	73.6
Naphthalene-d8	1146-65-2	E641A/EO	0.1	%		90.9	100	95.3	97.5	101
Phenanthrene-d10	1517-22-2	E641A/EO	0.1	%		90.7	91.8	64.2	98.7	90.0
Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1221	11104-28-2	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1232	11141-16-5	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1242	53469-21-9	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1248	12672-29-6	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1254	11097-69-1	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1260	11096-82-5	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1262	37324-23-5	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Aroclor 1268	11100-14-4	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Polychlorinated biphenyls [PCBs], total	----	E685/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.011 DLHM	<0.011 DLHM
Polychlorinated Biphenyls Surrogates										
Decachlorobiphenyl	2051-24-3	E685/EO	0.01	%		72.8	80.5	81.6	82.2	82.6

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED07	SED19	SED16	SED05	SED14
					Client sampling date / time	23-Aug-2024 14:15	23-Aug-2024 14:35	24-Aug-2024 13:57	24-Aug-2024 14:10	25-Aug-2024 10:12
						YL2401337-006	YL2401337-007	YL2401337-008	YL2401337-009	YL2401337-010
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/EO	0.25	%		38.4	40.4	32.0	37.6	31.4
pH (1:2 soil:CaCl2-aq)	----	E108B/SK	0.10	pH units		----	----	----	6.78	----
Particle Size										
Gravel (>2mm)	----	EC183E/SK	1.0	%		<1.0	<1.0	14.5	8.2	6.6
Sand (2.0mm - 0.063mm)	----	EC183E/SK	1.0	%		5.2	3.4	42.9	15.7	36.0
Sand (2.0mm - 0.2mm)	----	EC183E/SK	1.0	%		<1.0	<1.0	13.1	6.4	29.7
Sand (0.2mm - 0.063mm)	----	EC183E/SK	1.0	%		4.9	3.1	29.8	9.3	6.3
Silt (0.063mm - 0.004mm)	----	EC183E/SK	1.0	%		40.3	40.7	21.2	28.8	20.9
Clay (<0.004mm)	----	EC183E/SK	1.0	%		54.5	55.9	21.4	47.3	36.5
Grain size curve	----	E185/SK	-	-		See Attached	See Attached	See Attached	See Attached	See Attached
Percent Passing										
Passing (0.0312mm)	----	E183/SK	1.0	%		86.9	90.3	36.8	71.8	55.8
Passing (2.0mm)	----	E181/SK	1.0	%		100	100	85.5	91.8	93.4
Passing (4.75mm)	----	E181/SK	1.0	%		100	100	91.0	94.0	95.2
Passing (0.020mm)	----	E183/SK	1.0	%		79.9	85.1	33.4	68.1	53.3
Passing (1.0mm)	----	E182/SK	1.0	%		99.9	100	83.9	90.4	81.1
Passing (9.5mm)	----	E181/SK	1.0	%		100	100	92.9	97.6	96.1
Passing (0.005mm)	----	E183/SK	1.0	%		58.5	60.2	23.5	51.1	40.2
Passing (0.841mm)	----	E182/SK	1.0	%		99.9	99.9	83.6	90.2	79.0
Passing (19mm)	----	E181/SK	1.0	%		100	100	92.9	100	97.5
Passing (0.004mm)	----	E183/SK	1.0	%		54.5	55.9	21.4	47.3	36.5
Passing (0.50mm)	----	E182/SK	1.0	%		99.9	99.9	81.8	89.3	70.0
Passing (25.4mm)	----	E181/SK	1.0	%		100	100	92.9	100	100
Passing (0.002mm)	----	E183/SK	1.0	%		41.6	40.9	14.6	33.6	25.4
Passing (0.420mm)	----	E182/SK	1.0	%		99.9	99.9	81.4	89.0	68.0
Passing (38.1mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.250mm)	----	E182/SK	1.0	%		99.8	99.8	78.4	86.6	64.6
Passing (50.8mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.149mm)	----	E182/SK	1.0	%		99.5	99.6	64.5	83.9	62.5

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED07	SED19	SED16	SED05	SED14
					Client sampling date / time	23-Aug-2024 14:15	23-Aug-2024 14:35	24-Aug-2024 13:57	24-Aug-2024 14:10	25-Aug-2024 10:12
						YL2401337-006	YL2401337-007	YL2401337-008	YL2401337-009	YL2401337-010
						Result	Result	Result	Result	Result
Percent Passing										
Passing (76.2mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.125mm)	----	E182/SK	1.0	%		98.6	99.2	58.0	81.7	61.0
Passing (0.075mm)	----	E182/SK	1.0	%		96.8	98.3	44.6	77.2	57.8
Passing (0.063mm)	----	E182/SK	1.0	%		94.8	96.6	42.6	76.1	57.4
Passing (0.05mm)	----	E182/SK	1.0	%		92.7	94.8	40.4	75.0	57.1
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.730	0.677	0.578	0.446	0.382
Saturated Paste Extractables										
Conductivity, saturated paste	----	E102/SK	0.020	dS/m		----	----	----	30.8	----
Sodium adsorption ratio [SAR]	----	EC102/SK	0.10	-		----	----	----	30.9	----
% Saturation	----	E141/SK	1.0	%		----	----	----	71.1	----
Calcium, soluble ion content	7440-70-2	EC485/CG	5.0	mg/kg		----	----	----	92.4	----
Calcium, soluble ion content	7440-70-2	E485/CG	5.0	mg/L		----	----	----	130	----
Magnesium, soluble ion content	7439-95-4	EC485/CG	5.0	mg/kg		----	----	----	218	----
Magnesium, soluble ion content	7439-95-4	E485/CG	5.0	mg/L		----	----	----	306	----
Potassium, soluble ion content	7440-09-7	EC485/CG	5.0	mg/kg		----	----	----	88.9	----
Potassium, soluble ion content	7440-09-7	E485/CG	5.0	mg/L		----	----	----	125	----
Sodium, soluble ion content	17341-25-2	EC485/CG	5.0	mg/kg		----	----	----	2010	----
Sodium, soluble ion content	17341-25-2	E485/CG	5.0	mg/L		----	----	----	2830	----
Metals										
Antimony	7440-36-0	E440/SK	0.10	mg/kg		0.15	0.15	0.11	0.15	0.14
Arsenic	7440-38-2	E440/SK	0.10	mg/kg		10.7	11.2	4.72	6.58	5.58
Barium	7440-39-3	E440/SK	0.50	mg/kg		94.8	108	65.2	91.9	85.8
Beryllium	7440-41-7	E440/SK	0.10	mg/kg		0.70	0.68	0.41	0.61	0.56
Cadmium	7440-43-9	E440/SK	0.020	mg/kg		0.034	0.042	0.035	0.038	0.034
Chromium	7440-47-3	E440/SK	0.50	mg/kg		58.5	64.6	45.5	58.4	52.6
Cobalt	7440-48-4	E440/SK	0.10	mg/kg		14.3	15.3	9.50	12.6	11.7
Copper	7440-50-8	E440/SK	0.50	mg/kg		37.1	37.7	20.3	28.8	24.9
Lead	7439-92-1	E440/SK	0.50	mg/kg		11.4	10.9	6.28	9.45	8.44
Mercury	7439-97-6	E510/SK	0.0050	mg/kg		0.0102	0.0110	0.0094	0.0119	0.0118

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED07	SED19	SED16	SED05	SED14
					Client sampling date / time	23-Aug-2024 14:15	23-Aug-2024 14:35	24-Aug-2024 13:57	24-Aug-2024 14:10	25-Aug-2024 10:12
						YL2401337-006	YL2401337-007	YL2401337-008	YL2401337-009	YL2401337-010
						Result	Result	Result	Result	Result
Metals										
Molybdenum	7439-98-7	E440/SK	0.10	mg/kg		1.04	0.89	1.81	2.03	1.56
Nickel	7440-02-0	E440/SK	0.50	mg/kg		35.0	38.1	26.5	34.0	31.2
Selenium	7782-49-2	E440/SK	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Silver	7440-22-4	E440/SK	0.10	mg/kg		0.13	0.10	<0.10	0.10	<0.10
Thallium	7440-28-0	E440/SK	0.050	mg/kg		0.277	0.280	0.151	0.233	0.214
Tin	7440-31-5	E440/SK	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	7440-61-1	E440/SK	0.050	mg/kg		1.78	1.77	1.24	1.66	1.45
Vanadium	7440-62-2	E440/SK	0.20	mg/kg		59.3	63.5	46.7	57.7	52.8
Zinc	7440-66-6	E440/SK	2.0	mg/kg		81.1	86.9	51.1	72.2	63.8
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.040	mg/kg		<0.040	<0.040	<0.040	<0.040	<0.040
Styrene	100-42-5	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	108-88-3	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, m+p-	179601-23-1	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylene, o-	95-47-6	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes, total	1330-20-7	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
BTEX, total	----	E611A/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
BTEX+Styrene, total	n/a	E611A/CG	0.15	mg/kg		<0.15	<0.15	<0.15	<0.15	<0.15
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%		70.5	79.8	76.7	72.2	77.0
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%		82.5	82.3	82.0	74.6	82.6
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	208-96-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acridine	260-94-6	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	120-12-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benz(a)anthracene	56-55-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	50-32-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED07	SED19	SED16	SED05	SED14
					Client sampling date / time	23-Aug-2024 14:15	23-Aug-2024 14:35	24-Aug-2024 13:57	24-Aug-2024 14:10	25-Aug-2024 10:12
						YL2401337-006	YL2401337-007	YL2401337-008	YL2401337-009	YL2401337-010
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Benzo(b+j)fluoranthene	n/a	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b+j+k)fluoranthene	n/a	E641A/EO	0.075	mg/kg		<0.075	<0.075	<0.075	<0.075	<0.075
Benzo(g,h,i)perylene	191-24-2	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	207-08-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	218-01-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	53-70-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	206-44-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	86-73-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	90-12-0	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Methylnaphthalene, 1+2-	----	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 2-	91-57-6	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	91-20-3	E641A/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Pyrene	129-00-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Quinoline	91-22-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/EO	0.065	mg/kg		<0.065	<0.065	<0.065	<0.065	<0.065
IACR (CCME)	----	E641A/EO	0.60	-		<0.60	<0.60	<0.60	<0.60	<0.60
IACR AB (coarse)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
IACR AB (fine)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
PAHs, total (BC Sched 3.4)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
PAHs, total (EPA 16)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A/EO	0.1	%		103	84.8	87.1	70.5	111
Chrysene-d12	1719-03-5	E641A/EO	0.1	%		80.4	73.3	68.5	68.2	75.7
Naphthalene-d8	1146-65-2	E641A/EO	0.1	%		119	89.1	84.7	100	120
Phenanthrene-d10	1517-22-2	E641A/EO	0.1	%		87.6	61.4	72.7	69.9	116
Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1221	11104-28-2	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED07	SED19	SED16	SED05	SED14
					Client sampling date / time	23-Aug-2024 14:15	23-Aug-2024 14:35	24-Aug-2024 13:57	24-Aug-2024 14:10	25-Aug-2024 10:12
						YL2401337-006	YL2401337-007	YL2401337-008	YL2401337-009	YL2401337-010
						Result	Result	Result	Result	Result
Polychlorinated Biphenyls										
Aroclor 1232	11141-16-5	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1242	53469-21-9	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1248	12672-29-6	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1254	11097-69-1	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1260	11096-82-5	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1262	37324-23-5	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Aroclor 1268	11100-14-4	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Polychlorinated biphenyls [PCBs], total	----	E685/EO	0.010	mg/kg		<0.011 DLHM	<0.012 DLHM	<0.011 DLHM	<0.011 DLHM	<0.010
Polychlorinated Biphenyls Surrogates										
Decachlorobiphenyl	2051-24-3	E685/EO	0.01	%		89.4	91.8	86.8	93.0	87.6

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED13	SED11	SED04	SED15	SED12
					Client sampling date / time	25-Aug-2024 10:35	25-Aug-2024 10:55	25-Aug-2024 11:22	25-Aug-2024 11:35	25-Aug-2024 12:50
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-011	YL2401337-012	YL2401337-013	YL2401337-014	YL2401337-015
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/EO	0.25	%		32.2	44.9	34.2	36.0	31.6
pH (1:2 soil:CaCl2-aq)	----	E108B/SK	0.10	pH units		----	----	7.24	----	----
Particle Size										
Gravel (>2mm)	----	EC183E/SK	1.0	%		13.9	1.3	29.4	<1.0	13.8
Sand (2.0mm - 0.063mm)	----	EC183E/SK	1.0	%		36.2	5.8	24.1	8.8	20.2
Sand (2.0mm - 0.2mm)	----	EC183E/SK	1.0	%		28.2	3.4	20.6	1.3	6.6
Sand (0.2mm - 0.063mm)	----	EC183E/SK	1.0	%		8.0	2.4	3.5	7.5	13.6
Silt (0.063mm - 0.004mm)	----	EC183E/SK	1.0	%		21.9	24.4	15.3	37.4	17.6
Clay (<0.004mm)	----	EC183E/SK	1.0	%		28.0	68.5	31.2	53.8	48.4
Grain size curve	----	E185/SK	-	-		See Attached	See Attached	See Attached	See Attached	See Attached
Percent Passing										
Passing (0.0312mm)	----	E183/SK	1.0	%		47.0	91.7	45.2	87.0	64.6
Passing (2.0mm)	----	E181/SK	1.0	%		86.1	98.7	70.6	100	86.2
Passing (4.75mm)	----	E181/SK	1.0	%		92.9	99.8	80.7	100	87.1
Passing (0.020mm)	----	E183/SK	1.0	%		44.8	90.4	43.0	82.0	63.4
Passing (1.0mm)	----	E182/SK	1.0	%		76.1	97.8	61.2	99.9	85.4
Passing (9.5mm)	----	E181/SK	1.0	%		98.4	100	90.8	100	88.1
Passing (0.005mm)	----	E183/SK	1.0	%		31.5	73.8	33.6	59.2	51.2
Passing (0.841mm)	----	E182/SK	1.0	%		74.4	97.7	59.6	99.9	85.3
Passing (19mm)	----	E181/SK	1.0	%		100	100	97.0	100	88.6
Passing (0.004mm)	----	E183/SK	1.0	%		28.0	68.5	31.2	53.8	48.4
Passing (0.50mm)	----	E182/SK	1.0	%		65.8	96.8	55.0	99.8	84.2
Passing (25.4mm)	----	E181/SK	1.0	%		100	100	100	100	92.2
Passing (0.002mm)	----	E183/SK	1.0	%		19.5	51.2	23.6	39.0	38.9
Passing (0.420mm)	----	E182/SK	1.0	%		63.7	96.6	53.8	99.8	84.0
Passing (38.1mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.250mm)	----	E182/SK	1.0	%		59.2	95.6	50.7	99.3	82.2
Passing (50.8mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.149mm)	----	E182/SK	1.0	%		56.3	94.8	49.0	98.0	76.1

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED13	SED11	SED04	SED15	SED12
					Client sampling date / time	25-Aug-2024 10:35	25-Aug-2024 10:55	25-Aug-2024 11:22	25-Aug-2024 11:35	25-Aug-2024 12:50
						YL2401337-011	YL2401337-012	YL2401337-013	YL2401337-014	YL2401337-015
						Result	Result	Result	Result	Result
Percent Passing										
Passing (76.2mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.125mm)	----	E182/SK	1.0	%		54.4	94.2	48.3	96.1	73.1
Passing (0.075mm)	----	E182/SK	1.0	%		50.6	93.1	46.8	92.2	66.9
Passing (0.063mm)	----	E182/SK	1.0	%		49.9	92.9	46.5	91.2	66.0
Passing (0.05mm)	----	E182/SK	1.0	%		49.2	92.6	46.2	90.2	65.0
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.337	0.249	0.470	0.499	0.211
Saturated Paste Extractables										
Conductivity, saturated paste	----	E102/SK	0.020	dS/m		----	----	31.5	----	----
Sodium adsorption ratio [SAR]	----	EC102/SK	0.10	-		----	----	28.3	----	----
% Saturation	----	E141/SK	1.0	%		----	----	66.8	----	----
Calcium, soluble ion content	7440-70-2	EC485/CG	5.0	mg/kg		----	----	69.5	----	----
Calcium, soluble ion content	7440-70-2	E485/CG	5.0	mg/L		----	----	104	----	----
Magnesium, soluble ion content	7439-95-4	EC485/CG	5.0	mg/kg		----	----	166	----	----
Magnesium, soluble ion content	7439-95-4	E485/CG	5.0	mg/L		----	----	249	----	----
Potassium, soluble ion content	7440-09-7	EC485/CG	5.0	mg/kg		----	----	72.8	----	----
Potassium, soluble ion content	7440-09-7	E485/CG	5.0	mg/L		----	----	109	----	----
Sodium, soluble ion content	17341-25-2	EC485/CG	5.0	mg/kg		----	----	1560	----	----
Sodium, soluble ion content	17341-25-2	E485/CG	5.0	mg/L		----	----	2330	----	----
Metals										
Antimony	7440-36-0	E440/SK	0.10	mg/kg		0.16	0.23	0.15	0.18	0.13
Arsenic	7440-38-2	E440/SK	0.10	mg/kg		4.94	8.28	7.44	7.65	5.37
Barium	7440-39-3	E440/SK	0.50	mg/kg		84.0	116	95.1	101	85.8
Beryllium	7440-41-7	E440/SK	0.10	mg/kg		0.55	0.80	0.64	0.72	0.56
Cadmium	7440-43-9	E440/SK	0.020	mg/kg		0.043	0.117	0.040	0.051	0.025
Chromium	7440-47-3	E440/SK	0.50	mg/kg		72.0	56.0	93.7	61.8	45.3
Cobalt	7440-48-4	E440/SK	0.10	mg/kg		10.9	15.5	14.4	14.2	11.5
Copper	7440-50-8	E440/SK	0.50	mg/kg		25.2	34.4	29.8	32.9	25.7
Lead	7439-92-1	E440/SK	0.50	mg/kg		8.28	10.5	9.27	10.7	7.13
Mercury	7439-97-6	E510/SK	0.0050	mg/kg		0.0097	0.0085	0.0067	0.0136	0.0052

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED13	SED11	SED04	SED15	SED12
					Client sampling date / time	25-Aug-2024 10:35	25-Aug-2024 10:55	25-Aug-2024 11:22	25-Aug-2024 11:35	25-Aug-2024 12:50
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-011	YL2401337-012	YL2401337-013	YL2401337-014	YL2401337-015
						Result	Result	Result	Result	Result
Metals										
Molybdenum	7439-98-7	E440/SK	0.10	mg/kg		4.60	0.98	5.41	1.87	0.75
Nickel	7440-02-0	E440/SK	0.50	mg/kg		43.0	35.0	55.7	36.3	28.0
Selenium	7782-49-2	E440/SK	0.20	mg/kg		<0.20	<0.20	<0.20	0.22	<0.20
Silver	7440-22-4	E440/SK	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
Thallium	7440-28-0	E440/SK	0.050	mg/kg		0.212	0.275	0.221	0.258	0.195
Tin	7440-31-5	E440/SK	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	7440-61-1	E440/SK	0.050	mg/kg		1.52	2.29	1.57	2.02	1.48
Vanadium	7440-62-2	E440/SK	0.20	mg/kg		51.7	57.5	59.2	63.8	48.2
Zinc	7440-66-6	E440/SK	2.0	mg/kg		60.0	78.0	73.0	81.8	55.3
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.040	mg/kg		<0.040	<0.040	<0.040	<0.040	<0.040
Styrene	100-42-5	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	108-88-3	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, m+p-	179601-23-1	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylene, o-	95-47-6	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes, total	1330-20-7	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
BTEX, total	----	E611A/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
BTEX+Styrene, total	n/a	E611A/CG	0.15	mg/kg		<0.15	<0.15	<0.15	<0.15	<0.15
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%		76.0	76.2	71.3	77.9	73.3
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%		79.7	79.8	77.1	82.7	76.1
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	208-96-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acridine	260-94-6	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	120-12-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benz(a)anthracene	56-55-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	50-32-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED13	SED11	SED04	SED15	SED12
					Client sampling date / time	25-Aug-2024 10:35	25-Aug-2024 10:55	25-Aug-2024 11:22	25-Aug-2024 11:35	25-Aug-2024 12:50
						YL2401337-011	YL2401337-012	YL2401337-013	YL2401337-014	YL2401337-015
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Benzo(b+j)fluoranthene	n/a	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b+j+k)fluoranthene	n/a	E641A/EO	0.075	mg/kg		<0.075	<0.075	<0.075	<0.075	<0.075
Benzo(g,h,i)perylene	191-24-2	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	207-08-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	218-01-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	53-70-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	206-44-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	86-73-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	90-12-0	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Methylnaphthalene, 1+2-	----	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 2-	91-57-6	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	91-20-3	E641A/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Pyrene	129-00-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Quinoline	91-22-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/EO	0.065	mg/kg		<0.065	<0.065	<0.065	<0.065	<0.065
IACR (CCME)	----	E641A/EO	0.60	-		<0.60	<0.60	<0.60	<0.60	<0.60
IACR AB (coarse)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
IACR AB (fine)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
PAHs, total (BC Sched 3.4)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
PAHs, total (EPA 16)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A/EO	0.1	%		94.9	76.4	78.6	66.9	73.6
Chrysene-d12	1719-03-5	E641A/EO	0.1	%		66.4	65.7	62.8	71.0	70.2
Naphthalene-d8	1146-65-2	E641A/EO	0.1	%		81.7	79.6	89.2	86.0	93.1
Phenanthrene-d10	1517-22-2	E641A/EO	0.1	%		88.0	76.6	70.6	71.0	74.2
Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1221	11104-28-2	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED13	SED11	SED04	SED15	SED12
					Client sampling date / time	25-Aug-2024 10:35	25-Aug-2024 10:55	25-Aug-2024 11:22	25-Aug-2024 11:35	25-Aug-2024 12:50
						YL2401337-011	YL2401337-012	YL2401337-013	YL2401337-014	YL2401337-015
						Result	Result	Result	Result	Result
Polychlorinated Biphenyls										
Aroclor 1232	11141-16-5	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1242	53469-21-9	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1248	12672-29-6	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1254	11097-69-1	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1260	11096-82-5	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1262	37324-23-5	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Aroclor 1268	11100-14-4	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Polychlorinated biphenyls [PCBs], total	----	E685/EO	0.010	mg/kg		<0.010	<0.013 DLHM	<0.010	<0.011 DLHM	<0.010
Polychlorinated Biphenyls Surrogates										
Decachlorobiphenyl	2051-24-3	E685/EO	0.01	%		84.8	86.5	89.1	90.5	90.9

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED17	DUP-Y	SED06	SED03	SED01
					Client sampling date / time	26-Aug-2024 09:40	26-Aug-2024 09:41	26-Aug-2024 10:03	26-Aug-2024 10:12	26-Aug-2024 11:34
						YL2401337-016	YL2401337-017	YL2401337-018	YL2401337-019	YL2401337-020
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/EO	0.25	%		34.5	35.1	35.8	38.2	32.5
Particle Size										
Gravel (>2mm)	----	EC183E/SK	1.0	%		<1.0	1.4	<1.0	<1.0	<1.0
Sand (2.0mm - 0.063mm)	----	EC183E/SK	1.0	%		<1.0	<1.0	7.2	3.3	18.1
Sand (2.0mm - 0.2mm)	----	EC183E/SK	1.0	%		<1.0	<1.0	5.0	<1.0	1.0
Sand (0.2mm - 0.063mm)	----	EC183E/SK	1.0	%		<1.0	<1.0	2.2	2.3	17.1
Silt (0.063mm - 0.004mm)	----	EC183E/SK	1.0	%		22.2	22.8	21.2	29.8	46.2
Clay (<0.004mm)	----	EC183E/SK	1.0	%		77.1	75.2	71.6	66.9	35.7
Grain size curve	----	E185/SK	-	-		See Attached	See Attached	See Attached	See Attached	See Attached
Percent Passing										
Passing (0.0312mm)	----	E183/SK	1.0	%		99.5	98.5	90.9	94.2	68.1
Passing (2.0mm)	----	E181/SK	1.0	%		100	98.6	100	100	100
Passing (4.75mm)	----	E181/SK	1.0	%		100	98.9	100	100	100
Passing (0.020mm)	----	E183/SK	1.0	%		99.2	98.1	89.6	92.0	58.6
Passing (1.0mm)	----	E182/SK	1.0	%		99.9	98.5	99.4	99.9	99.9
Passing (9.5mm)	----	E181/SK	1.0	%		100	98.9	100	100	100
Passing (0.005mm)	----	E183/SK	1.0	%		83.4	81.1	75.5	72.4	38.3
Passing (0.841mm)	----	E182/SK	1.0	%		99.9	98.5	99.3	99.9	99.9
Passing (19mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.004mm)	----	E183/SK	1.0	%		77.1	75.2	71.6	66.9	35.7
Passing (0.50mm)	----	E182/SK	1.0	%		99.8	98.4	97.9	99.6	99.8
Passing (25.4mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.002mm)	----	E183/SK	1.0	%		57.9	55.7	53.6	45.7	27.2
Passing (0.420mm)	----	E182/SK	1.0	%		99.8	98.4	97.5	99.6	99.8
Passing (38.1mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.250mm)	----	E182/SK	1.0	%		99.7	98.2	95.5	99.2	99.6
Passing (50.8mm)	----	E181/SK	1.0	%		100	100	100	100	100
Passing (0.149mm)	----	E182/SK	1.0	%		99.6	98.1	94.4	98.8	98.2
Passing (76.2mm)	----	E181/SK	1.0	%		100	100	100	100	100

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED17	DUP-Y	SED06	SED03	SED01
					Client sampling date / time	26-Aug-2024 09:40	26-Aug-2024 09:41	26-Aug-2024 10:03	26-Aug-2024 10:12	26-Aug-2024 11:34
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-016	YL2401337-017	YL2401337-018	YL2401337-019	YL2401337-020
						Result	Result	Result	Result	Result
Percent Passing										
Passing (0.125mm)	----	E182/SK	1.0	%		99.5	98.0	94.1	98.3	94.2
Passing (0.075mm)	----	E182/SK	1.0	%		99.2	97.7	93.4	97.2	85.9
Passing (0.063mm)	----	E182/SK	1.0	%		99.3	98.0	92.8	96.7	81.9
Passing (0.05mm)	----	E182/SK	1.0	%		99.5	98.2	92.2	96.2	77.6
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.283	0.287	0.362	0.473	0.608
Metals										
Antimony	7440-36-0	E440/SK	0.10	mg/kg		0.17	0.19	0.21	0.19	0.18
Arsenic	7440-38-2	E440/SK	0.10	mg/kg		7.38	7.52	8.65	7.91	6.61
Barium	7440-39-3	E440/SK	0.50	mg/kg		114	117	130	123	84.2
Beryllium	7440-41-7	E440/SK	0.10	mg/kg		0.82	0.90	0.90	0.86	0.61
Cadmium	7440-43-9	E440/SK	0.020	mg/kg		0.087	0.080	0.073	0.054	0.044
Chromium	7440-47-3	E440/SK	0.50	mg/kg		70.0	70.7	76.3	72.5	50.1
Cobalt	7440-48-4	E440/SK	0.10	mg/kg		16.8	17.1	17.5	16.7	11.5
Copper	7440-50-8	E440/SK	0.50	mg/kg		35.8	36.5	37.7	35.2	27.3
Lead	7439-92-1	E440/SK	0.50	mg/kg		10.7	11.6	11.8	11.5	9.98
Mercury	7439-97-6	E510/SK	0.0050	mg/kg		0.0062	0.0060	0.0103	0.0124	0.0127
Molybdenum	7439-98-7	E440/SK	0.10	mg/kg		0.85	0.88	1.30	1.30	2.20
Nickel	7440-02-0	E440/SK	0.50	mg/kg		43.4	43.5	45.1	42.3	28.8
Selenium	7782-49-2	E440/SK	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	0.20
Silver	7440-22-4	E440/SK	0.10	mg/kg		0.13	0.15	0.10	0.10	<0.10
Thallium	7440-28-0	E440/SK	0.050	mg/kg		0.309	0.338	0.320	0.306	0.212
Tin	7440-31-5	E440/SK	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	7440-61-1	E440/SK	0.050	mg/kg		2.17	2.22	2.26	2.13	2.05
Vanadium	7440-62-2	E440/SK	0.20	mg/kg		66.0	67.5	74.3	71.3	59.7
Zinc	7440-66-6	E440/SK	2.0	mg/kg		89.9	91.1	98.3	94.5	72.6
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg		<0.015	<0.015	<0.015	<0.015	<0.015
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.040	mg/kg		<0.040	<0.040	<0.040	<0.040	<0.040

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED17	DUP-Y	SED06	SED03	SED01
					Client sampling date / time	26-Aug-2024 09:40	26-Aug-2024 09:41	26-Aug-2024 10:03	26-Aug-2024 10:12	26-Aug-2024 11:34
						YL2401337-016	YL2401337-017	YL2401337-018	YL2401337-019	YL2401337-020
						Result	Result	Result	Result	Result
Volatile Organic Compounds [Fuels]										
Styrene	100-42-5	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	108-88-3	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Xylene, m+p-	179601-23-1	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylene, o-	95-47-6	E611A/CG	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes, total	1330-20-7	E611A/CG	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
BTEX, total	----	E611A/CG	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
BTEX+Styrene, total	n/a	E611A/CG	0.15	mg/kg		<0.15	<0.15	<0.15	<0.15	<0.15
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%		76.1	74.6	75.6	71.5	70.4
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%		79.6	77.7	83.6	72.9	79.2
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	208-96-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Acridine	260-94-6	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	120-12-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benz(a)anthracene	56-55-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	50-32-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b+j)fluoranthene	n/a	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b+j+k)fluoranthene	n/a	E641A/EO	0.075	mg/kg		<0.075	<0.075	<0.075	<0.075	<0.075
Benzo(g,h,i)perylene	191-24-2	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	207-08-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	218-01-9	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	53-70-3	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	206-44-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	86-73-7	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	90-12-0	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Methylnaphthalene, 1+2-	----	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 2-	91-57-6	E641A/EO	0.030	mg/kg		<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	91-20-3	E641A/EO	0.010	mg/kg		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SED17	DUP-Y	SED06	SED03	SED01
					Client sampling date / time	26-Aug-2024 09:40	26-Aug-2024 09:41	26-Aug-2024 10:03	26-Aug-2024 10:12	26-Aug-2024 11:34
						YL2401337-016	YL2401337-017	YL2401337-018	YL2401337-019	YL2401337-020
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Phenanthrene	85-01-8	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Pyrene	129-00-0	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
Quinoline	91-22-5	E641A/EO	0.050	mg/kg		<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/EO	0.065	mg/kg		<0.065	<0.065	<0.065	<0.065	<0.065
IACR (CCME)	----	E641A/EO	0.60	-		<0.60	<0.60	<0.60	<0.60	<0.60
IACR AB (coarse)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
IACR AB (fine)	----	E641A/EO	0.10	-		<0.10	<0.10	<0.10	<0.10	<0.10
PAHs, total (BC Sched 3.4)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
PAHs, total (EPA 16)	n/a	E641A/EO	0.20	mg/kg		<0.20	<0.20	<0.20	<0.20	<0.20
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A/EO	0.1	%		107	72.3	88.4	100	98.8
Chrysene-d12	1719-03-5	E641A/EO	0.1	%		68.3	63.5	67.6	63.4	69.3
Naphthalene-d8	1146-65-2	E641A/EO	0.1	%		94.9	68.6	82.8	76.7	83.7
Phenanthrene-d10	1517-22-2	E641A/EO	0.1	%		88.8	71.4	79.8	89.6	89.8
Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1221	11104-28-2	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1232	11141-16-5	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1242	53469-21-9	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1248	12672-29-6	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1254	11097-69-1	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1260	11096-82-5	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1262	37324-23-5	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Aroclor 1268	11100-14-4	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Polychlorinated biphenyls [PCBs], total	----	E685/EO	0.010	mg/kg		<0.010	<0.011 DLHM	<0.011 DLHM	<0.010	<0.010
Polychlorinated Biphenyls Surrogates										
Decachlorobiphenyl	2051-24-3	E685/EO	0.01	%		99.1	100	101	110	105

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED10	----	----	----	----
					Client sampling date / time	27-Aug-2024 09:24	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-021	--------	--------	--------	--------
						Result	----	----	----	----
Physical Tests										
Moisture	----	E144/EO	0.25	%		33.5	----	----	----	----
Particle Size										
Gravel (>2mm)	----	EC183E/SK	1.0	%		<1.0	----	----	----	----
Sand (2.0mm - 0.063mm)	----	EC183E/SK	1.0	%		2.5	----	----	----	----
Sand (2.0mm - 0.2mm)	----	EC183E/SK	1.0	%		<1.0	----	----	----	----
Sand (0.2mm - 0.063mm)	----	EC183E/SK	1.0	%		2.0	----	----	----	----
Silt (0.063mm - 0.004mm)	----	EC183E/SK	1.0	%		32.6	----	----	----	----
Clay (<0.004mm)	----	EC183E/SK	1.0	%		64.9	----	----	----	----
Grain size curve	----	E185/SK	-	-		See Attached	----	----	----	----
Percent Passing										
Passing (0.0312mm)	----	E183/SK	1.0	%		93.5	----	----	----	----
Passing (2.0mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (4.75mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (0.020mm)	----	E183/SK	1.0	%		90.6	----	----	----	----
Passing (1.0mm)	----	E182/SK	1.0	%		99.9	----	----	----	----
Passing (9.5mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (0.005mm)	----	E183/SK	1.0	%		70.8	----	----	----	----
Passing (0.841mm)	----	E182/SK	1.0	%		99.9	----	----	----	----
Passing (19mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (0.004mm)	----	E183/SK	1.0	%		64.9	----	----	----	----
Passing (0.50mm)	----	E182/SK	1.0	%		99.8	----	----	----	----
Passing (25.4mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (0.002mm)	----	E183/SK	1.0	%		46.3	----	----	----	----
Passing (0.420mm)	----	E182/SK	1.0	%		99.8	----	----	----	----
Passing (38.1mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (0.250mm)	----	E182/SK	1.0	%		99.6	----	----	----	----
Passing (50.8mm)	----	E181/SK	1.0	%		100	----	----	----	----
Passing (0.149mm)	----	E182/SK	1.0	%		99.4	----	----	----	----
Passing (76.2mm)	----	E181/SK	1.0	%		100	----	----	----	----

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED10	----	----	----	----
					Client sampling date / time	27-Aug-2024 09:24	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-021	--------	--------	--------	--------
						Result	----	----	----	----
Percent Passing										
Passing (0.125mm)	----	E182/SK	1.0	%		99.1	----	----	----	----
Passing (0.075mm)	----	E182/SK	1.0	%		98.5	----	----	----	----
Passing (0.063mm)	----	E182/SK	1.0	%		97.5	----	----	----	----
Passing (0.05mm)	----	E182/SK	1.0	%		96.5	----	----	----	----
Organic / Inorganic Carbon										
Carbon, total organic [TOC]	----	EC356/SK	0.050	%		0.407	----	----	----	----
Metals										
Antimony	7440-36-0	E440/SK	0.10	mg/kg		0.22	----	----	----	----
Arsenic	7440-38-2	E440/SK	0.10	mg/kg		12.1	----	----	----	----
Barium	7440-39-3	E440/SK	0.50	mg/kg		132	----	----	----	----
Beryllium	7440-41-7	E440/SK	0.10	mg/kg		0.92	----	----	----	----
Cadmium	7440-43-9	E440/SK	0.020	mg/kg		0.082	----	----	----	----
Chromium	7440-47-3	E440/SK	0.50	mg/kg		78.2	----	----	----	----
Cobalt	7440-48-4	E440/SK	0.10	mg/kg		18.6	----	----	----	----
Copper	7440-50-8	E440/SK	0.50	mg/kg		39.2	----	----	----	----
Lead	7439-92-1	E440/SK	0.50	mg/kg		12.2	----	----	----	----
Mercury	7439-97-6	E510/SK	0.0050	mg/kg		0.0144	----	----	----	----
Molybdenum	7439-98-7	E440/SK	0.10	mg/kg		0.77	----	----	----	----
Nickel	7440-02-0	E440/SK	0.50	mg/kg		47.3	----	----	----	----
Selenium	7782-49-2	E440/SK	0.20	mg/kg		0.21	----	----	----	----
Silver	7440-22-4	E440/SK	0.10	mg/kg		0.13	----	----	----	----
Thallium	7440-28-0	E440/SK	0.050	mg/kg		0.335	----	----	----	----
Tin	7440-31-5	E440/SK	2.0	mg/kg		<2.0	----	----	----	----
Uranium	7440-61-1	E440/SK	0.050	mg/kg		2.27	----	----	----	----
Vanadium	7440-62-2	E440/SK	0.20	mg/kg		77.4	----	----	----	----
Zinc	7440-66-6	E440/SK	2.0	mg/kg		104	----	----	----	----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/CG	0.0050	mg/kg		<0.0050	----	----	----	----
Ethylbenzene	100-41-4	E611A/CG	0.015	mg/kg		<0.015	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/CG	0.040	mg/kg		<0.040	----	----	----	----

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)									
				Client sample ID	SED10	----	----	----	----
				Client sampling date / time	27-Aug-2024 09:24	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401337-021	--------	--------	--------	--------
					Result	----	----	----	----
Volatile Organic Compounds [Fuels]									
Styrene	100-42-5	E611A/CG	0.050	mg/kg	<0.050	----	----	----	----
Toluene	108-88-3	E611A/CG	0.050	mg/kg	<0.050	----	----	----	----
Xylene, m+p-	179601-23-1	E611A/CG	0.030	mg/kg	<0.030	----	----	----	----
Xylene, o-	95-47-6	E611A/CG	0.030	mg/kg	<0.030	----	----	----	----
Xylenes, total	1330-20-7	E611A/CG	0.050	mg/kg	<0.050	----	----	----	----
BTEX, total	----	E611A/CG	0.10	mg/kg	<0.10	----	----	----	----
BTEX+Styrene, total	n/a	E611A/CG	0.15	mg/kg	<0.15	----	----	----	----
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	E611A/CG	0.10	%	73.3	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611A/CG	0.10	%	75.8	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Acenaphthylene	208-96-8	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Acridine	260-94-6	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Anthracene	120-12-7	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/EO	0.075	mg/kg	<0.075	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Chrysene	218-01-9	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Fluoranthene	206-44-0	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Fluorene	86-73-7	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/EO	0.030	mg/kg	<0.030	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A/EO	0.050	mg/kg	<0.050	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/EO	0.030	mg/kg	<0.030	----	----	----	----
Naphthalene	91-20-3	E641A/EO	0.010	mg/kg	<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	SED10	----	----	----	----
					Client sampling date / time	27-Aug-2024 09:24	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401337-021	--------	--------	--------	--------
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Phenanthrene	85-01-8	E641A/EO	0.050	mg/kg		<0.050	----	----	----	----
Pyrene	129-00-0	E641A/EO	0.050	mg/kg		<0.050	----	----	----	----
Quinoline	91-22-5	E641A/EO	0.050	mg/kg		<0.050	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/EO	0.065	mg/kg		<0.065	----	----	----	----
IACR (CCME)	----	E641A/EO	0.60	-		<0.60	----	----	----	----
IACR AB (coarse)	----	E641A/EO	0.10	-		<0.10	----	----	----	----
IACR AB (fine)	----	E641A/EO	0.10	-		<0.10	----	----	----	----
PAHs, total (BC Sched 3.4)	n/a	E641A/EO	0.20	mg/kg		<0.20	----	----	----	----
PAHs, total (EPA 16)	n/a	E641A/EO	0.20	mg/kg		<0.20	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A/EO	0.1	%		106	----	----	----	----
Chrysene-d12	1719-03-5	E641A/EO	0.1	%		97.5	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/EO	0.1	%		118	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/EO	0.1	%		112	----	----	----	----
Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1221	11104-28-2	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1232	11141-16-5	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1242	53469-21-9	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1248	12672-29-6	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1254	11097-69-1	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1260	11096-82-5	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1262	37324-23-5	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Aroclor 1268	11100-14-4	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Polychlorinated biphenyls [PCBs], total	----	E685/EO	0.010	mg/kg		<0.011 DLHM	----	----	----	----
Polychlorinated Biphenyls Surrogates										
Decachlorobiphenyl	2051-24-3	E685/EO	0.01	%		96.7	----	----	----	----

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **YL2401337**	Page	: 1 of 33
Client	: **Stantec Consulting Ltd.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Account Manager	: Oliver Gregg
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Project	: 123514868	Date Samples Received	: 29-Aug-2024 13:05
PO	: ----	Issue Date	: 09-Sep-2024 13:17
C-O-C number	: 17-824755		
Sampler	: ----		
Site	: ----		
Quote number	: YL24-STAC100-001		
No. of samples received	: 21		
No. of samples analysed	: 21		

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)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Metals	YL2401337-001	SED20	Chromium	7440-47-3	E440	38.0 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	YL2401337-001	SED20	Nickel	7440-02-0	E440	38.3 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	YL2401337-001	SED20	Zinc	7440-66-6	E440	32.0 % DUP-H	30%	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: **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
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
DUP-Y	E510	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED01	E510	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED03	E510	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED06	E510	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED17	E510	26-Aug-2024	06-Sep-2024	28 days	11 days	✓	06-Sep-2024	28 days	11 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Double bagged HDPE										
SED04	E510	25-Aug-2024	06-Sep-2024	28 days	12 days	✓	06-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED11	E510	25-Aug-2024	06-Sep-2024	28 days	12 days	✓	06-Sep-2024	28 days	12 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*
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED12	E510	25-Aug-2024	06-Sep-2024	28 days	12 days	✓	06-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED13	E510	25-Aug-2024	06-Sep-2024	28 days	12 days	✓	06-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED14	E510	25-Aug-2024	06-Sep-2024	28 days	12 days	✓	06-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED15	E510	25-Aug-2024	06-Sep-2024	28 days	12 days	✓	06-Sep-2024	28 days	12 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Double bagged HDPE										
SED05	E510	24-Aug-2024	06-Sep-2024	28 days	13 days	✓	06-Sep-2024	28 days	13 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED16	E510	24-Aug-2024	06-Sep-2024	28 days	13 days	✓	06-Sep-2024	28 days	13 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
DUP-X	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED07	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED09	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 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
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED18	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED19	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED20	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED8	E510	23-Aug-2024	06-Sep-2024	28 days	14 days	✓	06-Sep-2024	28 days	14 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap										
SED10	E510	27-Aug-2024	05-Sep-2024	28 days	9 days	✓	06-Sep-2024	28 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
DUP-Y	E440	26-Aug-2024	06-Sep-2024	180 days	11 days	✓	06-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED01	E440	26-Aug-2024	06-Sep-2024	180 days	11 days	✓	06-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED03	E440	26-Aug-2024	06-Sep-2024	180 days	11 days	✓	06-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED06	E440	26-Aug-2024	06-Sep-2024	180 days	11 days	✓	06-Sep-2024	180 days	11 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*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED17	E440	26-Aug-2024	06-Sep-2024	180 days	11 days	✓	06-Sep-2024	180 days	11 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Double bagged HDPE										
SED04	E440	25-Aug-2024	06-Sep-2024	180 days	12 days	✓	06-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED11	E440	25-Aug-2024	06-Sep-2024	180 days	12 days	✓	06-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED12	E440	25-Aug-2024	06-Sep-2024	180 days	12 days	✓	06-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED13	E440	25-Aug-2024	06-Sep-2024	180 days	12 days	✓	06-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED14	E440	25-Aug-2024	06-Sep-2024	180 days	12 days	✓	06-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED15	E440	25-Aug-2024	06-Sep-2024	180 days	12 days	✓	06-Sep-2024	180 days	12 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Double bagged HDPE										
SED05	E440	24-Aug-2024	06-Sep-2024	180 days	13 days	✓	06-Sep-2024	180 days	13 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED16	E440	24-Aug-2024	06-Sep-2024	180 days	13 days	✓	06-Sep-2024	180 days	13 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
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
DUP-X	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED07	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED09	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED18	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED19	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED20	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED8	E440	23-Aug-2024	06-Sep-2024	180 days	14 days	✓	06-Sep-2024	180 days	14 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap										
SED10	E440	27-Aug-2024	05-Sep-2024	180 days	9 days	✓	06-Sep-2024	180 days	10 days	✓
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Double bagged HDPE										
SED04	E185	25-Aug-2024	----	----	----		07-Sep-2024	----	13 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
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Double bagged HDPE										
SED05	E185	24-Aug-2024	----	----	----		07-Sep-2024	----	14 days	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
DUP-X	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
DUP-Y	E185	26-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED01	E185	26-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED03	E185	26-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED06	E185	26-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED07	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED09	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED10	E185	27-Aug-2024	----	----	----		07-Sep-2024	----	----	

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
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED11	E185	25-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED12	E185	25-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED13	E185	25-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED14	E185	25-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED15	E185	25-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED16	E185	24-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED17	E185	26-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED18	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED19	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	

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
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED20	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Glass soil jar/Teflon lined cap										
SED8	E185	23-Aug-2024	----	----	----		07-Sep-2024	----	----	
Percent Passing : Particle Size Analysis - Hydrometer										
Double bagged HDPE										
SED05	E183	24-Aug-2024	03-Sep-2024	365 days	10 days	✓	03-Sep-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED16	E183	24-Aug-2024	03-Sep-2024	365 days	10 days	✓	03-Sep-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
DUP-X	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED07	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED09	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED18	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED19	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 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
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED20	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED8	E183	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED10	E183	27-Aug-2024	03-Sep-2024	365 days	7 days	✓	03-Sep-2024	365 days	7 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
DUP-Y	E183	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED01	E183	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED03	E183	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED06	E183	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED17	E183	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Double bagged HDPE										
SED04	E183	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 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
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED11	E183	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED12	E183	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED13	E183	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED14	E183	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Hydrometer										
Glass soil jar/Teflon lined cap										
SED15	E183	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Double bagged HDPE										
SED05	E182	24-Aug-2024	03-Sep-2024	365 days	10 days	✓	03-Sep-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED16	E182	24-Aug-2024	03-Sep-2024	365 days	10 days	✓	03-Sep-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
DUP-X	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED07	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 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
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED09	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED18	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED19	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED20	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED8	E182	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED10	E182	27-Aug-2024	03-Sep-2024	365 days	7 days	✓	03-Sep-2024	365 days	7 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
DUP-Y	E182	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED01	E182	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED03	E182	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 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
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED06	E182	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED17	E182	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Double bagged HDPE										
SED04	E182	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED11	E182	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED12	E182	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED13	E182	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED14	E182	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Glass soil jar/Teflon lined cap										
SED15	E182	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Double bagged HDPE										
SED05	E181	24-Aug-2024	03-Sep-2024	365 days	10 days	✓	03-Sep-2024	365 days	10 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
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED16	E181	24-Aug-2024	03-Sep-2024	365 days	10 days	✓	03-Sep-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
DUP-X	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED07	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED09	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED18	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED19	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED20	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED8	E181	23-Aug-2024	03-Sep-2024	365 days	11 days	✓	03-Sep-2024	365 days	11 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED10	E181	27-Aug-2024	03-Sep-2024	365 days	7 days	✓	03-Sep-2024	365 days	7 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
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
DUP-Y	E181	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED01	E181	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED03	E181	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED06	E181	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED17	E181	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	365 days	8 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Double bagged HDPE										
SED04	E181	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED11	E181	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED12	E181	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED13	E181	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 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
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED14	E181	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
Glass soil jar/Teflon lined cap										
SED15	E181	25-Aug-2024	03-Sep-2024	365 days	9 days	✓	03-Sep-2024	365 days	9 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED05	E144	24-Aug-2024	----	----	----		03-Sep-2024	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED16	E144	24-Aug-2024	----	----	----		03-Sep-2024	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
DUP-X	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED07	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED09	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED18	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED19	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 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
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED20	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED8	E144	23-Aug-2024	----	----	----		03-Sep-2024	----	11 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED10	E144	27-Aug-2024	----	----	----		03-Sep-2024	----	7 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
DUP-Y	E144	26-Aug-2024	----	----	----		03-Sep-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED01	E144	26-Aug-2024	----	----	----		03-Sep-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED03	E144	26-Aug-2024	----	----	----		03-Sep-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED06	E144	26-Aug-2024	----	----	----		03-Sep-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED17	E144	26-Aug-2024	----	----	----		03-Sep-2024	----	8 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED04	E144	25-Aug-2024	----	----	----		03-Sep-2024	----	9 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
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED11	E144	25-Aug-2024	----	----	----		03-Sep-2024	----	9 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED12	E144	25-Aug-2024	----	----	----		03-Sep-2024	----	9 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED13	E144	25-Aug-2024	----	----	----		03-Sep-2024	----	9 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED14	E144	25-Aug-2024	----	----	----		03-Sep-2024	----	9 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap										
SED15	E144	25-Aug-2024	----	----	----		03-Sep-2024	----	9 days	
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction)										
Double bagged HDPE										
SED04	E108B	25-Aug-2024	06-Sep-2024	----	----		06-Sep-2024	0 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction)										
Double bagged HDPE										
SED05	E108B	24-Aug-2024	06-Sep-2024	----	----		06-Sep-2024	0 days	13 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED04	E685	25-Aug-2024	31-Aug-2024	365 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED11	E685	25-Aug-2024	31-Aug-2024	365 days	6 days	✓	31-Aug-2024	40 days	0 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
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED12	E685	25-Aug-2024	31-Aug-2024	365 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED13	E685	25-Aug-2024	31-Aug-2024	365 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED14	E685	25-Aug-2024	31-Aug-2024	365 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED15	E685	25-Aug-2024	31-Aug-2024	365 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED05	E685	24-Aug-2024	31-Aug-2024	365 days	7 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED10	E685	27-Aug-2024	03-Sep-2024	365 days	7 days	✓	03-Sep-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
SED16	E685	24-Aug-2024	31-Aug-2024	365 days	7 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
DUP-X	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap										
DUP-Y	E685	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	40 days	0 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*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED01	E685	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED03	E685	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED06	E685	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED07	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED09	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED17	E685	26-Aug-2024	03-Sep-2024	365 days	8 days	✓	03-Sep-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED18	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED19	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED20	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 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
Polychlorinated Biphenyls : PCB Aroclors by GC-ECD										
Glass soil jar/Teflon lined cap SED8	E685	23-Aug-2024	31-Aug-2024	365 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED10	E641A	27-Aug-2024	31-Aug-2024	14 days	4 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap DUP-Y	E641A	26-Aug-2024	31-Aug-2024	14 days	5 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED01	E641A	26-Aug-2024	31-Aug-2024	14 days	5 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED03	E641A	26-Aug-2024	31-Aug-2024	14 days	5 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED06	E641A	26-Aug-2024	31-Aug-2024	14 days	5 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED17	E641A	26-Aug-2024	31-Aug-2024	14 days	5 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED04	E641A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED11	E641A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	40 days	0 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
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED12	E641A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED13	E641A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED14	E641A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED15	E641A	25-Aug-2024	31-Aug-2024	14 days	6 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED05	E641A	24-Aug-2024	31-Aug-2024	14 days	7 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED16	E641A	24-Aug-2024	31-Aug-2024	14 days	7 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap DUP-X	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED07	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap SED09	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 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
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap										
SED18	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap										
SED19	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap										
SED20	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap										
SED8	E641A	23-Aug-2024	31-Aug-2024	14 days	8 days	✓	31-Aug-2024	40 days	0 days	✓
Saturated Paste Extractables : Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste)										
Glass soil jar/Teflon lined cap										
SED04	E485	25-Aug-2024	04-Sep-2024	180 days	10 days	✓	05-Sep-2024	180 days	1 days	✓
Saturated Paste Extractables : Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste)										
Glass soil jar/Teflon lined cap										
SED05	E485	24-Aug-2024	04-Sep-2024	180 days	11 days	✓	05-Sep-2024	180 days	1 days	✓
Saturated Paste Extractables : Conductivity in Soil (Saturated Paste)										
Double bagged HDPE										
SED04	E102	25-Aug-2024	04-Sep-2024	30 days	10 days	✓	04-Sep-2024	30 days	10 days	✓
Saturated Paste Extractables : Conductivity in Soil (Saturated Paste)										
Double bagged HDPE										
SED05	E102	24-Aug-2024	04-Sep-2024	30 days	11 days	✓	04-Sep-2024	30 days	11 days	✓
Saturated Paste Extractables : Saturation Percentage										
Double bagged HDPE										
SED04	E141	25-Aug-2024	04-Sep-2024	----	----		04-Sep-2024	0 days	10 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*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Saturated Paste Extractables : Saturation Percentage										
Double bagged HDPE										
SED05	E141	24-Aug-2024	04-Sep-2024	----	----		04-Sep-2024	0 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED05	E611A	24-Aug-2024	03-Sep-2024	40 days	10 days	✓	03-Sep-2024	40 days	10 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED16	E611A	24-Aug-2024	03-Sep-2024	40 days	10 days	✓	03-Sep-2024	40 days	10 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
DUP-X	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED07	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED09	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED18	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED19	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial										
SED20	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 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
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED8	E611A	23-Aug-2024	03-Sep-2024	40 days	11 days	✓	03-Sep-2024	40 days	11 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED10	E611A	27-Aug-2024	03-Sep-2024	40 days	7 days	✓	03-Sep-2024	40 days	7 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial DUP-Y	E611A	26-Aug-2024	03-Sep-2024	40 days	8 days	✓	03-Sep-2024	40 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED01	E611A	26-Aug-2024	03-Sep-2024	40 days	8 days	✓	03-Sep-2024	40 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED03	E611A	26-Aug-2024	03-Sep-2024	40 days	8 days	✓	03-Sep-2024	40 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED06	E611A	26-Aug-2024	03-Sep-2024	40 days	8 days	✓	03-Sep-2024	40 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED17	E611A	26-Aug-2024	03-Sep-2024	40 days	8 days	✓	03-Sep-2024	40 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED04	E611A	25-Aug-2024	03-Sep-2024	40 days	9 days	✓	03-Sep-2024	40 days	9 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED11	E611A	25-Aug-2024	03-Sep-2024	40 days	9 days	✓	03-Sep-2024	40 days	9 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*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED12	E611A	25-Aug-2024	03-Sep-2024	40 days	9 days	✓	03-Sep-2024	40 days	9 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED13	E611A	25-Aug-2024	03-Sep-2024	40 days	9 days	✓	03-Sep-2024	40 days	9 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED14	E611A	25-Aug-2024	03-Sep-2024	40 days	9 days	✓	03-Sep-2024	40 days	9 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass soil methanol vial SED15	E611A	25-Aug-2024	03-Sep-2024	40 days	9 days	✓	03-Sep-2024	40 days	9 days	✓

Legend & Qualifier Definitions

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)							
BTEX by Headspace GC-MS	E611A	1629805	2	40	5.0	5.0	✓
Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste)	E485	1632460	1	2	50.0	5.0	✓
Conductivity in Soil (Saturated Paste)	E102	1630705	1	17	5.8	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1629882	2	38	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1629881	2	38	5.2	5.0	✓
Moisture Content by Gravimetry	E144	1629785	2	38	5.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1627911	2	21	9.5	5.0	✓
Particle Size Analysis - Hydrometer	E183	1630728	2	21	9.5	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	1630726	2	21	9.5	5.0	✓
PCB Aroclors by GC-ECD	E685	1627904	2	26	7.6	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction)	E108B	1633194	1	20	5.0	5.0	✓
Saturation Percentage	E141	1630704	1	19	5.2	5.0	✓
Laboratory Control Samples (LCS)							
BTEX by Headspace GC-MS	E611A	1629805	2	40	5.0	5.0	✓
Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste)	E485	1632460	2	2	100.0	10.0	✓
Conductivity in Soil (Saturated Paste)	E102	1630705	2	17	11.7	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	1629882	4	38	10.5	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1629881	4	38	10.5	10.0	✓
Moisture Content by Gravimetry	E144	1629785	2	38	5.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1627911	2	21	9.5	5.0	✓
Particle Size Analysis - Hydrometer	E183	1630728	2	21	9.5	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	1630726	2	21	9.5	5.0	✓
Particle Size Analysis - Sieve >2mm	E181	1630725	2	21	9.5	5.0	✓
PCB Aroclors by GC-ECD	E685	1627904	2	26	7.6	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction)	E108B	1633194	2	20	10.0	10.0	✓
Saturation Percentage	E141	1630704	2	19	10.5	10.0	✓
Method Blanks (MB)							
BTEX by Headspace GC-MS	E611A	1629805	2	40	5.0	5.0	✓
Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste)	E485	1632460	1	2	50.0	5.0	✓
Conductivity in Soil (Saturated Paste)	E102	1630705	1	17	5.8	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1629882	2	38	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1629881	2	38	5.2	5.0	✓
Moisture Content by Gravimetry	E144	1629785	2	38	5.2	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1627911	2	21	9.5	5.0	✓
PCB Aroclors by GC-ECD	E685	1627904	2	26	7.6	5.0	✓

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*
Matrix Spikes (MS)							
BTEX by Headspace GC-MS	E611A	1629805	2	40	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS	E641A	1627911	1	21	4.7	5.0	✗
PCB Aroclors by GC-ECD	E685	1627904	2	26	7.6	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 Soil (Saturated Paste)	E102 ALS Environmental - Saskatoon	Soil/Solid	CSSS Ch. 15 (mod)/APHA 2510 (mod)/AER D50	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a filtered extract from a soil sample prepared using the saturated paste procedure. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction)	E108B ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 16.3	A 10g portion of dried (<60°C) and ground (10 mesh/2 mm) sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Saturation Percentage	E141 ALS Environmental - Saskatoon	Soil/Solid	CSSS Ch. 15 (mod)/AER D50	Saturation Percentage (SP) is determined as the total volume of water present in a saturated paste (in mL) divided by the dry weight of the sample (in grams), expressed as a percentage.
Moisture Content by Gravimetry	E144 ALS Environmental - Edmonton	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.
Particle Size Analysis - Sieve >2mm	E181 ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material retained on the sieve is then further sieved through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Sieve <2mm	E182 ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material passed through the sieve is then further disaggregated using calgon solution and passed through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Hydrometer	E183 ALS Environmental - Saskatoon	Soil/Solid	ASTM D7928-21 (mod)	Soil material is separated from coarse material (>2mm). A specimen is then disaggregated through mixing with Calgon solution. The material is then suspended in solution wherein regular hydrometer readings are taken at specific time intervals. The principles of Stokes' Law are applied to determine the amount of material remaining in solution as well as the maximum particle size remaining in solution at the specified time.
Grain Size Report (Attachment) Hydrometer/Sieve Method	E185 ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913/D7928	A grain size curve is a graphical representation of the particle sizing of a sample representing the percent passing against the effective particle size.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Metals in Soil/Solid by CRC ICPMS	E440 ALS Environmental - Saskatoon	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.
Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste)	E485 ALS Environmental - Calgary	Soil/Solid	CSSS CH15/EPA 6010B/AER D50	A soil extract produced by the saturated paste extraction procedure is analyzed for Calcium, Magnesium, Potassium, Sodium, Boron, and Sulfur (as SO4) by ICPOES.
Mercury in Soil/Solid by CVAAS	E510 ALS Environmental - Saskatoon	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl, followed by CVAAS analysis.
BTEX by Headspace GC-MS	E611A ALS Environmental - Calgary	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	E641A ALS Environmental - Edmonton	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.
PCB Aroclors by GC-ECD	E685 ALS Environmental - Edmonton	Soil/Solid	EPA 8082A (mod)	PCB Aroclors are analyzed by GC-ECD
Sodium Adsorption Ratio (SAR) Saturated Paste	EC102 ALS Environmental - Saskatoon	Soil/Solid	CCME Sodium Adsorption Ratio (SAR)	The Sodium Adsorption Ratio (SAR) for a sample is calculated from the Sodium, Calcium, and Magnesium concentrations from sediment paste extract.
Particle Size Analysis (Hydrometer) - MMER Classification	EC183E ALS Environmental - Saskatoon	Soil/Solid	Metal Mining Technical Guidance for Environmental Effects Monitoring (2012)	The particle size determination is performed by various methods to generate a Grain Size curve. The data from the curve is then used to produce particle size ranges based on the Metal Mining Effluent Regulations (MMER) classification system for Environmental Effects Monitoring.
Total Organic Carbon (Calculated) in soil	EC356 ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 21.2	Total Organic Carbon (TOC) is calculated by the difference between total carbon (TC) and total inorganic carbon (TIC).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ca, K, Mg, Na, B and S by ICPOES (Saturated Paste) (mg/kg)	EC485 ALS Environmental - Calgary	Soil/Solid	CSSS CH15/EPA 6010B	A soil extract produced by the saturated paste extraction procedure is analyzed for Calcium, Magnesium, Potassium, Sodium, Boron, and Sulfur (as SO4) by ICPOES. Results are calculated in mg/kg using Saturation Percentage.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil : 0.01CaCl2	EP108B ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 16.3	A 10g portion of dried (<60°C) and ground (10 mesh/2 mm) sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Digestion for Metals and Mercury	EP440 ALS Environmental - Saskatoon	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 - Calgary	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 - Edmonton	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.
PCB Aroclors Extraction	EP685 ALS Environmental - Edmonton	Soil/Solid	EPA 3570/3550C (mod)	Samples are subsampled and PCBs are extracted with solvents using a mechanical shaking extractor.Water is added to the extract and the resulting hexane extract undergoes one or more of the following clean-up procedures (if required): florisil clean-up, silica gel clean-up, sulphur clean-up and/or sulphuric acid clean-up.
Dry and Grind in Soil/Solid <60°C	EPP442 ALS Environmental - Saskatoon	Soil/Solid	Soil Sampling and Methods of Analysis, Carter 2008	After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests.

QUALITY CONTROL REPORT

Work Order	: **YL2401337**	Page	: 1 of 21
Client	: Stantec Consulting Ltd.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Conor McCracken	Account Manager	: Oliver Gregg
Address	: 4910 53 Street Yellowknife NT Canada X1A 2P4	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 250 655 5371	Telephone	: 1 867 445 7143
Project	: 123514868	Date Samples Received	: 29-Aug-2024 13:05
PO	: ----	Date Analysis Commenced	: 31-Aug-2024
C-O-C number	: 17-824755	Issue Date	: 09-Sep-2024 13:17
Sampler	: ----		
Site	: ----		
Quote number	: YL24-STAC100-001		
No. of samples received	: 21		
No. of samples analysed	: 21		

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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Yan Zhang	Team Leader - Organics	Edmonton Organics, Edmonton, Alberta

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: 1629785)											
FC2402337-034	Anonymous	Moisture	----	E144	0.25	%	10.6	11.0	3.56%	20%	----
Physical Tests (QC Lot: 1630250)											
YL2401337-004	SED8	Moisture	----	E144	0.25	%	37.2	36.9	0.816%	20%	----
Physical Tests (QC Lot: 1633194)											
SK2404686-028	Anonymous	pH (1:2 soil:CaCl2-aq)	----	E108B	0.10	pH units	6.03	6.08	0.826%	10%	----
Percent Passing (QC Lot: 1630726)											
YL2401337-001	SED20	Passing (0.05mm)	----	E182	1.0	%	1.9	1.9	0.003	Diff <2x LOR	----
		Passing (0.063mm)	----	E182	1.0	%	1.8	1.8	0.004	Diff <2x LOR	----
		Passing (0.075mm)	----	E182	1.0	%	1.7	1.6	0.01	Diff <2x LOR	----
		Passing (0.125mm)	----	E182	1.0	%	3.0	3.2	0.2	Diff <2x LOR	----
		Passing (0.149mm)	----	E182	1.0	%	3.6	3.9	0.3	Diff <2x LOR	----
		Passing (0.250mm)	----	E182	1.0	%	11.1	11.8	0.6	Diff <2x LOR	----
		Passing (0.420mm)	----	E182	1.0	%	29.1	30.3	4.02%	15%	----
		Passing (0.50mm)	----	E182	1.0	%	38.5	39.7	3.04%	15%	----
		Passing (0.841mm)	----	E182	1.0	%	78.6	79.7	1.36%	15%	----
		Passing (1.0mm)	----	E182	1.0	%	82.0	82.9	1.13%	15%	----
Percent Passing (QC Lot: 1630728)											
YL2401337-001	SED20	Passing (0.002mm)	----	E183	1.0	%	<1.0	<1.0	0	Diff <2x LOR	----
		Passing (0.004mm)	----	E183	1.0	%	<1.0	<1.0	0	Diff <2x LOR	----
		Passing (0.005mm)	----	E183	1.0	%	<1.0	<1.0	0	Diff <2x LOR	----
		Passing (0.020mm)	----	E183	1.0	%	1.4	1.0	0.4	Diff <2x LOR	----
		Passing (0.0312mm)	----	E183	1.0	%	1.6	1.6	0.002	Diff <2x LOR	----
Percent Passing (QC Lot: 1630730)											
YL2401337-021	SED10	Passing (0.05mm)	----	E182	1.0	%	96.5	96.3	0.212%	15%	----
		Passing (0.063mm)	----	E182	1.0	%	97.5	97.5	0.0581%	15%	----
		Passing (0.075mm)	----	E182	1.0	%	98.5	98.5	0.0810%	15%	----
		Passing (0.125mm)	----	E182	1.0	%	99.1	99.2	0.0887%	15%	----
		Passing (0.149mm)	----	E182	1.0	%	99.4	99.5	0.0924%	15%	----
		Passing (0.250mm)	----	E182	1.0	%	99.6	99.7	0.116%	15%	----
		Passing (0.420mm)	----	E182	1.0	%	99.8	99.8	0.0903%	15%	----

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*
Percent Passing (QC Lot: 1630730) - continued											
YL2401337-021	SED10	Passing (0.50mm)	----	E182	1.0	%	99.8	99.9	0.0842%	15%	----
		Passing (0.841mm)	----	E182	1.0	%	99.9	100	0.0601%	15%	----
		Passing (1.0mm)	----	E182	1.0	%	99.9	100	0.0517%	15%	----
Percent Passing (QC Lot: 1630731)											
YL2401337-021	SED10	Passing (0.002mm)	----	E183	1.0	%	46.3	47.2	1.82%	15%	----
		Passing (0.004mm)	----	E183	1.0	%	64.9	65.6	0.985%	15%	----
		Passing (0.005mm)	----	E183	1.0	%	70.8	71.0	0.360%	15%	----
		Passing (0.020mm)	----	E183	1.0	%	90.6	90.2	0.495%	15%	----
		Passing (0.0312mm)	----	E183	1.0	%	93.5	93.0	0.440%	15%	----
Saturated Paste Extractables (QC Lot: 1630704)											
RG2401360-001	Anonymous	% Saturation	----	E141	1.0	%	68.0	68.3	0.418%	20%	----
Saturated Paste Extractables (QC Lot: 1630705)											
RG2401360-001	Anonymous	Conductivity, saturated paste	----	E102	20	µS/cm	4.41 dS/m	4490	1.80%	20%	----
Saturated Paste Extractables (QC Lot: 1632460)											
YL2401337-009	SED05	Calcium, soluble ion content	7440-70-2	E485	5.0	mg/L	130	129	0.593%	30%	----
		Magnesium, soluble ion content	7439-95-4	E485	5.0	mg/L	306	304	0.572%	30%	----
		Potassium, soluble ion content	7440-09-7	E485	5.0	mg/L	125	124	0.903%	30%	----
		Sodium, soluble ion content	17341-25-2	E485	5.0	mg/L	2830	2800	0.798%	30%	----
Metals (QC Lot: 1629881)											
YL2401337-001	SED20	Antimony	7440-36-0	E440	0.10	mg/kg	0.11	<0.10	0.009	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	4.78	5.62	16.2%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	7.88	10.2	26.2%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.12	0.12	0.003	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Chromium	7440-47-3	E440	0.50	mg/kg	16.4	24.1	38.0%	30%	DUP-H
		Cobalt	7440-48-4	E440	0.10	mg/kg	4.09	5.51	29.6%	30%	----
		Copper	7440-50-8	E440	0.50	mg/kg	4.11	5.11	21.7%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	4.45	4.31	3.16%	40%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	0.37	0.52	0.15	Diff <2x LOR	----
		Nickel	7440-02-0	E440	0.50	mg/kg	10.0	14.8	38.3%	30%	DUP-H
		Selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	<2.0	<2.0	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*
Metals (QC Lot: 1629881) - continued											
YL2401337-001	SED20	Uranium	7440-61-1	E440	0.050	mg/kg	0.673	0.549	20.3%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	22.6	27.8	20.5%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	24.5	33.9	32.0%	30%	DUP-H
Metals (QC Lot: 1629882)											
YL2401337-001	SED20	Mercury	7439-97-6	E510	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
Metals (QC Lot: 1635325)											
YL2401275-001	Anonymous	Antimony	7440-36-0	E440	0.10	mg/kg	0.24	0.19	0.05	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	2.73	2.72	0.504%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	56.4	58.8	4.26%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.83	0.77	7.41%	30%	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	0.414	0.474	13.4%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	36.9	34.6	6.49%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	21.4	22.2	3.50%	30%	----
		Copper	7440-50-8	E440	0.50	mg/kg	102	105	2.54%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	5.83	5.32	9.04%	40%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	14.2	12.9	9.93%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	40.8	39.9	2.05%	30%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	1.27	1.27	0.0003	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	0.23	0.22	0.01	Diff <2x LOR	----
		Thallium	7440-28-0	E440	0.050	mg/kg	0.192	0.159	0.033	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	<2.0	<2.0	0	Diff <2x LOR	----
		Uranium	7440-61-1	E440	0.050	mg/kg	8.91	8.17	8.68%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	27.2	27.6	1.59%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	131	134	2.45%	30%	----
Metals (QC Lot: 1635326)											
YL2401275-001	Anonymous	Mercury	7439-97-6	E510	0.0050	mg/kg	0.0673	0.0666	1.01%	40%	----
Volatile Organic Compounds (QC Lot: 1629805)											
SK2404683-001	Anonymous	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	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611A	0.050	mg/kg	<0.050	<0.050	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	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611A	0.050	mg/kg	<0.050	<0.050	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*
Volatile Organic Compounds (QC Lot: 1629808)											
CG2412419-001	Anonymous	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	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611A	0.050	mg/kg	<0.050	<0.050	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	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 1627911)											
YL2401337-001	SED20	Acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acridine	260-94-6	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Naphthalene	91-20-3	E641A	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Phenanthrene	85-01-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Pyrene	129-00-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Quinoline	91-22-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 1627912)											
YL2401337-021	SED10	Acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acridine	260-94-6	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	<0.050	<0.050	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: 1627912) - continued											
YL2401337-021	SED10	Benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Naphthalene	91-20-3	E641A	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Phenanthrene	85-01-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Pyrene	129-00-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Quinoline	91-22-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
Polychlorinated Biphenyls (QC Lot: 1627904)											
YL2401337-001	SED20	Aroclor 1016	12674-11-2	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
Polychlorinated Biphenyls (QC Lot: 1629744)											
SK2404686-001	Anonymous	Aroclor 1016	12674-11-2	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E685	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E685	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*
Polychlorinated Biphenyls (QC Lot: 1629744) - continued											
SK2404686-001	Anonymous	Aroclor 1268	11100-14-4	E685	0.010	mg/kg	<0.010	<0.010	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: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1629785)						
Moisture	----	E144	0.25	%	<0.25	----
Physical Tests (QCLot: 1630250)						
Moisture	----	E144	0.25	%	<0.25	----
Saturated Paste Extractables (QCLot: 1630705)						
Conductivity, saturated paste	----	E102	20	µS/cm	<20	----
Saturated Paste Extractables (QCLot: 1632460)						
Calcium, soluble ion content	7440-70-2	E485	5	mg/L	<5.0	----
Magnesium, soluble ion content	7439-95-4	E485	5	mg/L	<5.0	----
Potassium, soluble ion content	7440-09-7	E485	5	mg/L	<5.0	----
Sodium, soluble ion content	17341-25-2	E485	5	mg/L	<5.0	----
Metals (QCLot: 1629881)						
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	----
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	----
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	----
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	----
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	----
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	----
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	----
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	----
Tin	7440-31-5	E440	2	mg/kg	<2.0	----
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Metals (QCLot: 1629882)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
Metals (QCLot: 1635325)						

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Metals (QCLot: 1635325) - continued						
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	----
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	----
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	----
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	----
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	----
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	----
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	----
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	----
Tin	7440-31-5	E440	2	mg/kg	<2.0	----
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Metals (QCLot: 1635326)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
Volatile Organic Compounds (QCLot: 1629805)						
Benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	----
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611A	0.05	mg/kg	<0.050	----
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	----
Volatile Organic Compounds (QCLot: 1629808)						
Benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	----
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611A	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611A	0.05	mg/kg	<0.050	----
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1629808) - continued						
Xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1627911)						
Acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
Acridine	260-94-6	E641A	0.05	mg/kg	<0.050	----
Anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
Chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
Fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
Pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
Quinoline	91-22-5	E641A	0.05	mg/kg	<0.050	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1627912)						
Acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
Acridine	260-94-6	E641A	0.05	mg/kg	<0.050	----
Anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
Chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1627912) - continued						
Fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
Pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
Quinoline	91-22-5	E641A	0.05	mg/kg	<0.050	----
Polychlorinated Biphenyls (QCLot: 1627904)						
Aroclor 1016	12674-11-2	E685	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E685	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E685	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E685	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E685	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E685	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E685	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E685	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E685	0.01	mg/kg	<0.010	----
Polychlorinated Biphenyls (QCLot: 1629744)						
Aroclor 1016	12674-11-2	E685	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E685	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E685	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E685	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E685	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E685	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E685	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E685	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E685	0.01	mg/kg	<0.010	----

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: 1629785)									
Moisture	----	E144	0.25	%	50 %	94.8	90.0	110	----
Physical Tests (QCLot: 1630250)									
Moisture	----	E144	0.25	%	50 %	96.1	90.0	110	----
Physical Tests (QCLot: 1633194)									
pH (1:2 soil:CaCl2-aq)	----	E108B	----	pH units	7 pH units	101	97.0	103	----
Saturated Paste Extractables (QCLot: 1630704)									
% Saturation	----	E141	----	%	100 %	101	80.0	120	----
Saturated Paste Extractables (QCLot: 1630705)									
Conductivity, saturated paste	----	E102	20	µS/cm	1000 µS/cm	100	80.0	120	----
Saturated Paste Extractables (QCLot: 1632460)									
Calcium, soluble ion content	7440-70-2	E485	5	mg/L	50 mg/L	94.4	80.0	120	----
Magnesium, soluble ion content	7439-95-4	E485	5	mg/L	50 mg/L	95.5	80.0	120	----
Potassium, soluble ion content	7440-09-7	E485	5	mg/L	50 mg/L	91.6	80.0	120	----
Sodium, soluble ion content	17341-25-2	E485	5	mg/L	50 mg/L	94.5	80.0	120	----
Metals (QCLot: 1629881)									
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	95.0	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	95.9	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	88.7	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	92.6	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	94.0	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	93.5	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	94.2	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	96.0	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	98.7	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	93.1	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	99.6	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	91.4	80.0	120	----
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	95.4	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	94.1	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	89.5	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: 1629881) - continued									
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	95.4	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	93.0	80.0	120	----
Metals (QCLot: 1629882)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	103	80.0	120	----
Metals (QCLot: 1635325)									
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	109	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	104	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	110	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	97.5	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	103	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	104	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	105	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	106	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	102	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	108	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	102	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	107	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	97.2	80.0	120	----
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	99.8	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	104	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	97.3	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	107	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	101	80.0	120	----
Metals (QCLot: 1635326)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	106	80.0	120	----
Volatile Organic Compounds (QCLot: 1629805)									
Benzene	71-43-2	E611A	0.005	mg/kg	2.5 mg/kg	99.2	70.0	130	----
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	2.5 mg/kg	83.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.04	mg/kg	2.5 mg/kg	102	70.0	130	----
Styrene	100-42-5	E611A	0.05	mg/kg	2.5 mg/kg	96.1	70.0	130	----
Toluene	108-88-3	E611A	0.05	mg/kg	2.5 mg/kg	87.9	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	5 mg/kg	94.4	70.0	130	----
Xylene, o-	95-47-6	E611A	0.03	mg/kg	2.5 mg/kg	92.2	70.0	130	----
Volatile Organic Compounds (QCLot: 1629808)									
Benzene	71-43-2	E611A	0.005	mg/kg	2.5 mg/kg	86.1	70.0	130	----

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
Volatile Organic Compounds (QCLot: 1629808) - continued									
Ethylbenzene	100-41-4	E611A	0.015	mg/kg	2.5 mg/kg	87.2	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.04	mg/kg	2.5 mg/kg	96.7	70.0	130	----
Styrene	100-42-5	E611A	0.05	mg/kg	2.5 mg/kg	91.5	70.0	130	----
Toluene	108-88-3	E611A	0.05	mg/kg	2.5 mg/kg	94.6	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	5 mg/kg	88.9	70.0	130	----
Xylene, o-	95-47-6	E611A	0.03	mg/kg	2.5 mg/kg	95.3	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1627911)									
Acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	100	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	103	60.0	130	----
Acridine	260-94-6	E641A	0.05	mg/kg	0.5 mg/kg	78.2	60.0	130	----
Anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	110	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	84.2	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	97.1	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	92.3	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	103	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	83.8	60.0	130	----
Chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	95.2	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	98.9	60.0	130	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	109	60.0	130	----
Fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	98.0	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	75.4	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	107	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	95.0	60.0	130	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	96.1	50.0	130	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	82.7	60.0	130	----
Pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	109	60.0	130	----
Quinoline	91-22-5	E641A	0.05	mg/kg	0.5 mg/kg	88.0	60.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1627912)									
Acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	96.3	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	97.4	60.0	130	----
Acridine	260-94-6	E641A	0.05	mg/kg	0.5 mg/kg	105	60.0	130	----
Anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	103	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	81.1	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	92.7	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	110	60.0	130	----

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
Polycyclic Aromatic Hydrocarbons (QCLot: 1627912) - continued									
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	108	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	88.5	60.0	130	----
Chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	85.9	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	105	60.0	130	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	104	60.0	130	----
Fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	97.0	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	80.2	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	106	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	83.4	60.0	130	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	99.2	50.0	130	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	85.4	60.0	130	----
Pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	106	60.0	130	----
Quinoline	91-22-5	E641A	0.05	mg/kg	0.5 mg/kg	88.0	60.0	130	----
Polychlorinated Biphenyls (QCLot: 1627904)									
Aroclor 1260	11096-82-5	E685	0.01	mg/kg	0.05 mg/kg	67.2	65.0	130	----
Polychlorinated Biphenyls (QCLot: 1629744)									
Aroclor 1260	11096-82-5	E685	0.01	mg/kg	0.05 mg/kg	78.4	65.0	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: **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: 1629805)										
SK2404683-001	Anonymous	Benzene	71-43-2	E611A	2.26 mg/kg	2.52 mg/kg	89.8	60.0	140	----
		Ethylbenzene	100-41-4	E611A	1.66 mg/kg	2.52 mg/kg	65.8	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	2.32 mg/kg	2.52 mg/kg	92.1	60.0	140	----
		Styrene	100-42-5	E611A	1.86 mg/kg	2.52 mg/kg	73.6	60.0	140	----
		Toluene	108-88-3	E611A	1.88 mg/kg	2.52 mg/kg	74.7	60.0	140	----
		Xylene, m+p-	179601-23-1	E611A	3.48 mg/kg	5.05 mg/kg	69.0	60.0	140	----
		Xylene, o-	95-47-6	E611A	1.68 mg/kg	2.52 mg/kg	66.7	60.0	140	----
Volatile Organic Compounds (QCLot: 1629808)										
CG2412419-001	Anonymous	Benzene	71-43-2	E611A	2.14 mg/kg	2.2 mg/kg	97.3	60.0	140	----
		Ethylbenzene	100-41-4	E611A	1.72 mg/kg	2.2 mg/kg	78.4	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	2.13 mg/kg	2.2 mg/kg	97.1	60.0	140	----
		Styrene	100-42-5	E611A	1.87 mg/kg	2.2 mg/kg	85.3	60.0	140	----
		Toluene	108-88-3	E611A	1.85 mg/kg	2.2 mg/kg	84.2	60.0	140	----
		Xylene, m+p-	179601-23-1	E611A	3.63 mg/kg	4.39 mg/kg	82.7	60.0	140	----
		Xylene, o-	95-47-6	E611A	1.90 mg/kg	2.2 mg/kg	86.6	60.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1627911)										
YL2401337-002	DUP-X	Acenaphthene	83-32-9	E641A	0.429 mg/kg	0.423 mg/kg	101	50.0	140	----
		Acenaphthylene	208-96-8	E641A	0.402 mg/kg	0.423 mg/kg	95.1	50.0	140	----
		Acridine	260-94-6	E641A	0.391 mg/kg	0.423 mg/kg	92.4	50.0	140	----
		Anthracene	120-12-7	E641A	0.514 mg/kg	0.423 mg/kg	121	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A	0.321 mg/kg	0.423 mg/kg	75.9	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A	0.378 mg/kg	0.423 mg/kg	89.3	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.280 mg/kg	0.423 mg/kg	66.0	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.520 mg/kg	0.423 mg/kg	123	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.371 mg/kg	0.423 mg/kg	87.7	50.0	140	----
		Chrysene	218-01-9	E641A	0.350 mg/kg	0.423 mg/kg	82.8	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.326 mg/kg	0.423 mg/kg	77.0	50.0	140	----
		Fluoranthene	206-44-0	E641A	0.425 mg/kg	0.423 mg/kg	100	50.0	140	----
		Fluorene	86-73-7	E641A	0.478 mg/kg	0.423 mg/kg	113	50.0	140	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.370 mg/kg	0.423 mg/kg	87.5	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.564 mg/kg	0.423 mg/kg	133	50.0	140	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.309 mg/kg	0.423 mg/kg	73.1	50.0	140	----
		Naphthalene	91-20-3	E641A	0.441 mg/kg	0.423 mg/kg	104	50.0	140	----
		Phenanthrene	85-01-8	E641A	0.278 mg/kg	0.423 mg/kg	65.7	50.0	140	----
		Pyrene	129-00-0	E641A	0.519 mg/kg	0.423 mg/kg	122	50.0	140	----
		Quinoline	91-22-5	E641A	0.345 mg/kg	0.423 mg/kg	81.6	50.0	140	----
Polychlorinated Biphenyls (QCLot: 1627904)										
YL2401337-002	DUP-X	Aroclor 1260	11096-82-5	E685	0.029 mg/kg	0.039 mg/kg	74.3	65.0	130	----

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
Polychlorinated Biphenyls (QCLot: 1629744)										
SK2404686-016	Anonymous	Aroclor 1260	11096-82-5	E685	0.061 mg/kg	0.049 mg/kg	125	65.0	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
Physical Tests (QCLot: 1633194)									
QC-1633194-002	RM	pH (1:2 soil:CaCl2-aq)	----	E108B	7.6 pH units	98.7	94.0	106	----
Percent Passing (QCLot: 1630725)									
QC-1630725-001	RM	Passing (19mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (2.0mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (25.4mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (38.1mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (4.75mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (50.8mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (76.2mm)	----	E181	100 %	100	90.0	110	----
QC-1630725-001	RM	Passing (9.5mm)	----	E181	100 %	100	90.0	110	----
Percent Passing (QCLot: 1630726)									
QC-1630726-001	RM	Passing (0.05mm)	----	E182	54.1 %	97.0	90.0	110	----
QC-1630726-001	RM	Passing (0.063mm)	----	E182	57.1 %	98.3	90.8	109	----
QC-1630726-001	RM	Passing (0.075mm)	----	E182	60.2 %	99.0	91.4	109	----
QC-1630726-001	RM	Passing (0.125mm)	----	E182	68.2 %	99.1	92.7	107	----
QC-1630726-001	RM	Passing (0.149mm)	----	E182	72 %	99.1	93.1	107	----
QC-1630726-001	RM	Passing (0.250mm)	----	E182	82.3 %	99.3	94.1	106	----
QC-1630726-001	RM	Passing (0.420mm)	----	E182	89.9 %	99.6	94.6	105	----
QC-1630726-001	RM	Passing (0.50mm)	----	E182	91.2 %	99.6	94.7	105	----
QC-1630726-001	RM	Passing (0.841mm)	----	E182	95.6 %	99.7	94.9	105	----
QC-1630726-001	RM	Passing (1.0mm)	----	E182	96.3 %	99.7	94.9	105	----
Percent Passing (QCLot: 1630728)									
QC-1630728-001	RM	Passing (0.002mm)	----	E183	24.6 %	85.0	76.0	124	----
QC-1630728-001	RM	Passing (0.004mm)	----	E183	29.3 %	87.6	80.0	120	----
QC-1630728-001	RM	Passing (0.005mm)	----	E183	31.2 %	89.1	82.0	118	----
QC-1630728-001	RM	Passing (0.020mm)	----	E183	43.3 %	93.2	87.0	113	----
QC-1630728-001	RM	Passing (0.0312mm)	----	E183	48.2 %	94.7	88.0	112	----
Percent Passing (QCLot: 1630729)									
QC-1630729-001	RM	Passing (19mm)	----	E181	100 %	100	90.0	110	----
QC-1630729-001	RM	Passing (2.0mm)	----	E181	100 %	100	90.0	110	----
QC-1630729-001	RM	Passing (25.4mm)	----	E181	100 %	100	90.0	110	----
QC-1630729-001	RM	Passing (38.1mm)	----	E181	100 %	100	90.0	110	----

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report: RM Target Concentration	Recovery (%): RM	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Percent Passing (QCLot: 1630729) - continued									
QC-1630729-001	RM	Passing (4.75mm)	----	E181	100 %	100	90.0	110	----
QC-1630729-001	RM	Passing (50.8mm)	----	E181	100 %	100	90.0	110	----
QC-1630729-001	RM	Passing (76.2mm)	----	E181	100 %	100	90.0	110	----
QC-1630729-001	RM	Passing (9.5mm)	----	E181	100 %	100	90.0	110	----
Percent Passing (QCLot: 1630730)									
QC-1630730-001	RM	Passing (0.05mm)	----	E182	54.1 %	97.2	90.0	110	----
QC-1630730-001	RM	Passing (0.063mm)	----	E182	57.1 %	98.6	90.8	109	----
QC-1630730-001	RM	Passing (0.075mm)	----	E182	60.2 %	99.5	91.4	109	----
QC-1630730-001	RM	Passing (0.125mm)	----	E182	68.2 %	99.5	92.7	107	----
QC-1630730-001	RM	Passing (0.149mm)	----	E182	72 %	99.6	93.1	107	----
QC-1630730-001	RM	Passing (0.250mm)	----	E182	82.3 %	99.6	94.1	106	----
QC-1630730-001	RM	Passing (0.420mm)	----	E182	89.9 %	99.8	94.6	105	----
QC-1630730-001	RM	Passing (0.50mm)	----	E182	91.2 %	99.8	94.7	105	----
QC-1630730-001	RM	Passing (0.841mm)	----	E182	95.6 %	99.7	94.9	105	----
QC-1630730-001	RM	Passing (1.0mm)	----	E182	96.3 %	99.7	94.9	105	----
Percent Passing (QCLot: 1630731)									
QC-1630731-001	RM	Passing (0.002mm)	----	E183	24.6 %	88.0	76.0	124	----
QC-1630731-001	RM	Passing (0.004mm)	----	E183	29.3 %	90.8	80.0	120	----
QC-1630731-001	RM	Passing (0.005mm)	----	E183	31.2 %	91.6	82.0	118	----
QC-1630731-001	RM	Passing (0.020mm)	----	E183	43.3 %	93.3	87.0	113	----
QC-1630731-001	RM	Passing (0.0312mm)	----	E183	48.2 %	94.4	88.0	112	----
Saturated Paste Extractables (QCLot: 1630704)									
QC-1630704-002	RM	% Saturation	----	E141	45.7 %	101	70.0	130	----
Saturated Paste Extractables (QCLot: 1630705)									
QC-1630705-003	RM	Conductivity, saturated paste	----	E102	9680 µS/cm	94.2	70.0	130	----
Saturated Paste Extractables (QCLot: 1632460)									
QC-1632460-003	RM	Calcium, soluble ion content	7440-70-2	E485	778 mg/L	99.3	70.0	130	----
QC-1632460-003	RM	Magnesium, soluble ion content	7439-95-4	E485	417 mg/L	96.7	70.0	130	----
QC-1632460-003	RM	Potassium, soluble ion content	7440-09-7	E485	137 mg/L	76.9	70.0	130	----
QC-1632460-003	RM	Sodium, soluble ion content	17341-25-2	E485	1180 mg/L	96.0	70.0	130	----
Metals (QCLot: 1629881)									
QC-1629881-003	RM	Antimony	7440-36-0	E440	24.8 mg/kg	93.7	70.0	130	----
QC-1629881-003	RM	Arsenic	7440-38-2	E440	21.2 mg/kg	82.2	70.0	130	----
QC-1629881-003	RM	Barium	7440-39-3	E440	788 mg/kg	86.3	70.0	130	----
QC-1629881-003	RM	Beryllium	7440-41-7	E440	1.82 mg/kg	80.7	70.0	130	----
QC-1629881-003	RM	Cadmium	7440-43-9	E440	2.15 mg/kg	83.5	70.0	130	----
QC-1629881-003	RM	Chromium	7440-47-3	E440	56.9 mg/kg	85.5	70.0	130	----

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report: RM Target Concentration	Recovery (%): RM	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Metals (QCLot: 1629881) - continued									
QC-1629881-003	RM	Cobalt	7440-48-4	E440	32 mg/kg	83.8	70.0	130	----
QC-1629881-003	RM	Copper	7440-50-8	E440	969 mg/kg	86.8	70.0	130	----
QC-1629881-003	RM	Lead	7439-92-1	E440	919 mg/kg	89.9	70.0	130	----
QC-1629881-003	RM	Molybdenum	7439-98-7	E440	25.1 mg/kg	92.7	70.0	130	----
QC-1629881-003	RM	Nickel	7440-02-0	E440	1000 mg/kg	79.0	70.0	130	----
QC-1629881-003	RM	Selenium	7782-49-2	E440	1.04 mg/kg	76.8	60.0	140	----
QC-1629881-003	RM	Silver	7440-22-4	E440	8.98 mg/kg	85.5	70.0	130	----
QC-1629881-003	RM	Thallium	7440-28-0	E440	0.907 mg/kg	86.0	70.0	130	----
QC-1629881-003	RM	Tin	7440-31-5	E440	3.79 mg/kg	90.0	40.0	160	----
QC-1629881-003	RM	Uranium	7440-61-1	E440	3.97 mg/kg	76.8	70.0	130	----
QC-1629881-003	RM	Vanadium	7440-62-2	E440	66.2 mg/kg	84.6	70.0	130	----
QC-1629881-003	RM	Zinc	7440-66-6	E440	828 mg/kg	83.1	70.0	130	----
Metals (QCLot: 1629882)									
QC-1629882-003	RM	Mercury	7439-97-6	E510	0.068 mg/kg	104	70.0	130	----
Metals (QCLot: 1635325)									
QC-1635325-003	RM	Antimony	7440-36-0	E440	24.8 mg/kg	95.6	70.0	130	----
QC-1635325-003	RM	Arsenic	7440-38-2	E440	21.2 mg/kg	83.3	70.0	130	----
QC-1635325-003	RM	Barium	7440-39-3	E440	788 mg/kg	91.0	70.0	130	----
QC-1635325-003	RM	Beryllium	7440-41-7	E440	1.82 mg/kg	78.6	70.0	130	----
QC-1635325-003	RM	Cadmium	7440-43-9	E440	2.15 mg/kg	88.2	70.0	130	----
QC-1635325-003	RM	Chromium	7440-47-3	E440	56.9 mg/kg	86.0	70.0	130	----
QC-1635325-003	RM	Cobalt	7440-48-4	E440	32 mg/kg	85.8	70.0	130	----
QC-1635325-003	RM	Copper	7440-50-8	E440	969 mg/kg	89.1	70.0	130	----
QC-1635325-003	RM	Lead	7439-92-1	E440	919 mg/kg	90.2	70.0	130	----
QC-1635325-003	RM	Molybdenum	7439-98-7	E440	25.1 mg/kg	92.5	70.0	130	----
QC-1635325-003	RM	Nickel	7440-02-0	E440	1000 mg/kg	84.0	70.0	130	----
QC-1635325-003	RM	Selenium	7782-49-2	E440	1.04 mg/kg	99.9	60.0	140	----
QC-1635325-003	RM	Silver	7440-22-4	E440	8.98 mg/kg	85.6	70.0	130	----
QC-1635325-003	RM	Thallium	7440-28-0	E440	0.907 mg/kg	86.9	70.0	130	----
QC-1635325-003	RM	Tin	7440-31-5	E440	3.79 mg/kg	92.2	40.0	160	----
QC-1635325-003	RM	Uranium	7440-61-1	E440	3.97 mg/kg	73.9	70.0	130	----
QC-1635325-003	RM	Vanadium	7440-62-2	E440	66.2 mg/kg	87.2	70.0	130	----
QC-1635325-003	RM	Zinc	7440-66-6	E440	828 mg/kg	85.3	70.0	130	----
Metals (QCLot: 1635326)									
QC-1635326-003	RM	Mercury	7439-97-6	E510	0.068 mg/kg	103	70.0	130	----

SEDIMENT

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 824755

Page 1 of 2

Report To	Contact and company name below will appear on the final report
Company:	STANTEC
Contact:	Conor McCracken
Phone:	
	Company address below will appear on the final report
Street:	
City/Province:	Sidney BC
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☐ ~~EXCEL~~ ☐ ~~EDD (DIGITAL)~~

Quality Control (QC) Report with Report ☑ YES ☐ NO

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax (1) amy.mackay@stantec.com

Email 2 (2) conor.mccracken@stantec.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax

Email 2

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #: YL24-STAC100-001

Job #: 123514868

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#

Major/Minor Code: | Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (lab use only):

ALS Contact: Brent Mack | Sampler: AM/CM/EH

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Particle Size	total metals	PAHs	PCBs	BTEX	TOC	Salinity saturated paste	moisture	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	SED 20	23-Aug-24	1116	~~Sed~~ SEDIMENT	5	X	X	X	X	X	X		X		
	~~SED~~ DUP-X		1117		5	X	X	X	X	X	X		X		
	SED 09		1145		5	X	X	X	X	X	X		X		
	SED 08		1218		5	X	X	X	X	X	X		X		
	SED 18		1350		5	X	X	X	X	X	X		X		
	SED 07		1415		5	X	X	X	X	X	X		X		
	SED 19		1435		5	X	X	X	X	X	X		X		
	SED 16	24-Aug-24	1357		5	X	X	X	X	X	X		X		
	SED 05		1410		5	X	X	X	X	X	X	X	X		
	SED 14	25-Aug-24	1012		5	X	X	X	X	X	X		X		
	SED 13		1035		5	X	X	X	X	X	X		X		
	SED 11		1055		5	X	X	X	X	X	X		X		

Environmental Division
Yellowknife
Work Order Reference
YL2401337

Telephone : +1 867 873 5693

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

CCME

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ | Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
1.8							

SHIPMENT RELEASE (client use)

Released by: Amy MacKay | Date: Aug 1/24 | Time:

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: MA | Date: Aug 29/24 | Time: 13:05

FINAL SHIPMENT RECEPTION (lab use only)

Received by: | Date: | Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

SEDIMENT

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 - 824783

Page 2 of 2

Report To	Contact and company name below will appear on the final report
Company:	Stantec
Contact:	Conor McCracken
Phone:	
	Company address below will appear on the final report
Street:	Sidney BC
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: (1) amy.mackay@stantec.com
Email 2: (2) conor.mccracken@stantec.com
Email 3:

Invoice Distribution

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax:
Email 2:

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☒ Standard TAT if received by 3 pm * business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #: YL24-STAC100-001
Job #: 123514868
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#:
Major/Minor Code: | Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only):

ALS Contact: Brent Mack | Sampler: Am/CM/EH

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Particle Size	total metals	PAHs	PCBs	BTEX	TOC	Salinity, saturated paste	moisture	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	SED 04	25-Aug-24	11:22	SEDIMENT	5	X	X	X	X	X	X	X	X		
	SED 15		11:35		5	X	X	X	X	X	X		X		
	SED 12		12:50		5	X	X	X	X	X	X		X		
	SED 17	26-Aug-24	0940		5	X	X	X	X	X	X		X		
	DUP-Y		0941		5	X	X	X	X	X	X		X		
	SED 06		1003		5	X	X	X	X	X	X		X		
	SED 03		1012		5	X	X	X	X	X	X		X		
	SED 01		1134		5	X	X	X	X	X	X		X		
	SED 10	27-Aug-24	924		5	X	X	X	X	X	X		X		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO
Are samples for human consumption/ use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

CCME

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations: Yes ☐ No ☐
Ice Packs ☐ Ice Cubes ☐ | Custody seal intact: Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Amy MacKay	Date: Aug	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

C.2 QAQC Results

Table C.2-1 Quality Assurance and Quality Control Results for Sediment Quality Analysis, August 2024

Parameter	Units	QA/QC					
		SED20	DUP-X	RPD	SED17	DUP-Y	RPD
General							
Moisture Content	%	16.0	15.6	2.5	34.5	35.1	1.7
Total Organic Carbon	%	0.141	0.155	9.5	0.283	0.287	1.4
Grain Size							
% Clay (<4um)	%	<1.0	<1.0	-	77.1	75.2	2.5
% Gravel (>2mm)	%	2.6	3	14	<1.0	1.4	-
% Sand (0.2mm-0.063mm)	%	6.1	5.6	8.5	<1.0	<1.0	-
% Sand (2.0mm - 0.063mm)	%	95.6	95.2	0.42	<1.0	<1.0	-
% Sand (2.0mm - 0.2mm)	%	89.5	89.6	0.11	<1.0	<1.0	-
% Silt (0.063mm-4um)	%	1.8	1.8	0.0	22.2	22.8	2.7
Percent Passing							
passing (19 mm)	%	100	100	0	100	100	0.0
passing (2.0 mm)	%	97.4	97	0.41	100	98.6	1.4
passing (25.4 mm)	%	100	100	0	100	100	0
passing (38.1 mm)	%	100	100	0	100	100	0
passing (4.75 mm)	%	99.5	99.4	0.10	100	98.9	1.1
passing (50.8 mm)	%	100	100	0	100	100	0
passing (76.2 mm)	%	100	100	0	100	100	0
passing (9.5 mm)	%	100	100	0	100	98.9	1.1
passing (0.05 mm)	%	1.9	1.9	0	99.5	98.2	1.3
passing (0.063 mm)	%	1.8	1.8	0	99.3	98	1.3
passing (0.075 mm)	%	1.7	1.6	6.1	99.2	97.7	1.5
passing (0.125 mm)	%	3	2.9	3.4	99.5	98.0	1.5
passing (0.149 mm)	%	3.6	3.5	2.8	99.6	98.1	1.5
passing (0.250 mm)	%	11.1	10.4	6.5	99.7	98.2	1.5
passing (0.420 mm)	%	29.1	27.3	6.4	99.8	98.4	1.4
passing (0.50 mm)	%	38.5	36.6	5.1	99.8	98.4	1.4
passing (0.841 mm)	%	78.6	76.6	2.6	99.9	98.5	1.4
passing (1.0 mm)	%	82	80.2	2.2	99.9	98.5	1.4
passing (0.002 mm)	%	<1.0	<1.0	-	57.9	55.7	3.9
passing (0.004 mm)	%	<1.0	<1.0	-	77.1	75.2	2.5
passing (0.005 mm)	%	<1.0	<1.0	-	83.4	81.1	2.8
passing (0.020 mm)	%	1.4	<1.0	-	99.2	98.1	1.1
passing (0.0312 mm)	%	1.6	1.5	6.5	99.5	98.5	1.0
Metals							
Antimony	mg/kg	0.11	0.10	9.5	0.17	0.19	11
Arsenic	mg/kg	4.78	5.23	9.0	7.38	7.52	1.9
Barium	mg/kg	7.88	9.38	17	114	117	2.6
Beryllium	mg/kg	0.12	0.13	8.0	0.82	0.90	9.3
Cadmium	mg/kg	<0.020	<0.020	-	0.09	0.08	8.4
Chromium	mg/kg	16.4	21.2	26	70.0	70.7	1.0
Cobalt	mg/kg	4.09	5.42	28	16.8	17.1	1.8
Copper	mg/kg	4.11	4.96	19	35.8	36.5	1.9
Lead	mg/kg	4.45	4.17	6.5	10.7	11.6	8.1
Mercury	mg/kg	<0.0050	<0.0050	-	0.01	0.01	3.3
Molybdenum	mg/kg	0.37	0.43	15	0.85	0.88	3.5
Nickel	mg/kg	10.00	13.30	28	43.40	43.50	0.2
Selenium	mg/kg	<0.20	<0.20	-	<0.20	<0.20	-
Silver	mg/kg	<0.10	<0.10	-	0.13	0.15	14
Thallium	mg/kg	<0.050	<0.050	-	0.31	0.34	9.0
Tin	mg/kg	<2.0	<2.0	-	<2.0	<2.0	-
Uranium	mg/kg	0.67	0.50	29	2.17	2.22	2.3

Table C.2-1 Quality Assurance and Quality Control Results for Sediment Quality Analysis, August 2024

Parameter	Units	QA/QC					
		SED20	DUP-X	RPD	SED17	DUP-Y	RPD
Vanadium	mg/kg	22.6	24.2	6.8	66.0	67.5	2.2
Zinc	mg/kg	24.5	32.1	27	89.9	91.1	1.3
Petroleum Hydrocarbons							
Benzene	mg/kg	<0.0050	<0.0050	-	<0.0050	<0.0050	-
BTEX+Styrene, total	mg/kg	<0.15	<0.15	-	<0.15	<0.15	-
Ethylbenzene	mg/kg	<0.015	<0.015	-	<0.015	<0.015	-
Methyl tert-butyl ether (MTBE)	mg/kg	<0.040	<0.040	-	<0.040	<0.040	-
Styrene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Toluene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Total BTEX (Calc)	mg/kg	<0.10	<0.10	-	<0.10	<0.10	-
Xylene, m & p-	mg/kg	<0.030	<0.030	-	<0.030	<0.030	-
Xylene, o-	mg/kg	<0.030	<0.030	-	<0.030	<0.030	-
Xylenes, Total	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Acenaphthylene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Acridine	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Anthracene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Benzo(a)anthracene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Benzo(a)pyrene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Benzo(b)pyridine (Quinoline)	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Benzo(b/j)fluoranthene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Benzo(b+j+k)fluoranthene	mg/kg	<0.075	<0.075	-	<0.075	<0.075	-
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Benzo(k)fluoranthene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Chrysene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Dibenzo(a,h)anthracene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Fluoranthene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Fluorene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Index of Additive Cancer Risk	none	<0.60	<0.60	-	<0.60	<0.60	-
Index of Additive Cancer Risk (C)	none	<0.10	<0.10	-	<0.10	<0.10	-
Index of Additive Cancer Risk (F)	none	<0.10	<0.10	-	<0.10	<0.10	-
Methylnaphthalene (Total)	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Methylnaphthalene, 1-	mg/kg	<0.030	<0.030	-	<0.030	<0.030	-
Methylnaphthalene, 2-	mg/kg	<0.030	<0.030	-	<0.030	<0.030	-
Naphthalene	mg/kg	<0.010	<0.010	-	<0.010	<0.010	-
PAH Toxicity Equivalency (PAH TE(	mg/kg	<0.065	<0.065	-	<0.065	<0.065	-
Phenanthrene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Pyrene	mg/kg	<0.050	<0.050	-	<0.050	<0.050	-
Total PAH	mg/kg	<0.20	<0.20	-	<0.20	<0.20	-
Total PAH (BC Sched 3.4)	mg/kg	<0.20	<0.20	-	<0.20	<0.20	-
PCBs							
Aroclor 1016	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1221	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1232	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1242	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1248	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1254	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1260	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1262	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-
Aroclor 1268	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-

Table C.2-1 Quality Assurance and Quality Control Results for Sediment Quality Analysis, August 2024

Parameter	Units	QA/QC					
		SED20	DUP-X	RPD	SED17	DUP-Y	RPD
Polychlorinated Biphenyls (PCBs)	mg/kg	<0.010	<0.010	-	<0.010	<0.011	-

Notes:

Grey highlighted text indicates a RPD greater than 20%.

[a] The RPD was calculated using < LRL results at the LRL if one result in a duplicate pair was below the LRL.

C.3 Sediment Quality Results

Table C.3-1 Sediment Quality Data in Grays Bay, August 2024

Parameter	Units	CCME SQG-MAL		SED1	SED3	SED4	SED5	SED6	SED7	SED8	SED9	SED10	SED11	SED12	SED13	SED14	SED15	SED16	SED17	SED18	SED19	SED20	Summary Statistics				
		ISQG	PEL																				n	Min	Max	Mean	Std Dev
General																											
Moisture Content	%	-	-	32.5	38.2	34.2	37.6	35.8	38.4	37.2	18.2	33.5	44.9	31.6	32.2	31.4	36.0	32.0	34.5	34.5	40.4	16.0	19	16.0	44.9	33.6	6.8
pH, lab	S.U.	-	-	-	-	7.24	6.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6.78	7.24	7.01	0.33
Total Organic Carbon	%	-	-	0.608	0.473	0.470	0.446	0.362	0.730	0.891	0.162	0.407	0.249	0.211	0.337	0.382	0.499	0.578	0.283	0.458	0.677	0.141	19	0.141	0.891	0.440	0.197
Grain Size																											
% Clay (<4um)	%	-	-	35.7	66.9	31.2	47.3	71.6	54.5	55.2	4.0	64.9	68.5	48.4	28.0	36.5	53.8	21.4	77.1	71.7	55.9	<1.0	19	<1.0	77.1	47.0	22.4
% Gravel (>2mm)	%	-	-	<1.0	<1.0	29.4	8.2	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	13.8	13.9	6.6	<1.0	14.5	<1.0	<1.0	<1.0	2.6	19	<1.0	29.4	5.3	7.6
% Sand (0.2mm-0.063mm)	%	-	-	17.1	2.3	3.5	9.3	2.2	4.9	7.9	1.4	2.0	2.4	13.6	8.0	6.3	7.5	29.8	<1.0	1.6	3.1	6.1	19	<1.0	29.8	6.8	7.0
% Sand (2.0mm - 0.063mm)	%	-	-	18.1	3.3	24.1	15.7	7.2	5.2	9.1	93.4	2.5	5.8	20.2	36.2	36.0	8.8	42.9	<1.0	2.3	3.4	95.6	19	<1.0	95.6	22.7	28.3
% Sand (2.0mm - 0.2mm)	%	-	-	1.0	<1.0	20.6	6.4	5.0	<1.0	1.2	92.0	<1.0	3.4	6.6	28.2	29.7	1.3	13.1	<1.0	<1.0	<1.0	89.5	19	<1.0	92.0	16.0	27.9
% Silt (0.063mm-4um)	%	-	-	46.2	29.8	15.3	28.8	21.2	40.3	35.7	2.5	32.6	24.4	17.6	21.9	20.9	37.4	21.2	22.2	25.8	40.7	1.8	19	1.8	46.2	25.6	11.9
Percent Passing																											
passing (19 mm)	%	-	-	100.0	100.0	97.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	88.6	100.0	97.5	100.0	92.9	100.0	100.0	100.0	100.0	19	88.6	100.0	98.7	3.0
passing (2.0 mm)	%	-	-	100.0	100.0	70.6	91.8	100.0	100.0	100.0	99.9	100.0	98.7	86.2	86.1	93.4	100.0	85.5	100.0	99.8	100.0	97.4	19	70.6	100.0	95.2	8.0
passing (25.4 mm)	%	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.2	100.0	100.0	100.0	92.9	100.0	100.0	100.0	100.0	19	92.2	100.0	99.2	2.4
passing (38.1 mm)	%	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	19	100.0	100.0	100.0	0.0
passing (4.75 mm)	%	-	-	100.0	100.0	80.7	94.0	100.0	100.0	100.0	100.0	100.0	99.8	87.1	92.9	95.2	100.0	91.0	100.0	99.9	100.0	99.5	19	80.7	100.0	96.8	5.5
passing (50.8 mm)	%	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	19	100.0	100.0	100.0	0.0
passing (76.2 mm)	%	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	19	100.0	100.0	100.0	0.0
passing (9.5 mm)	%	-	-	100.0	100.0	90.8	97.6	100.0	100.0	100.0	100.0	100.0	100.0	88.1	98.4	96.1	100.0	92.9	100.0	100.0	100.0	100.0	19	88.1	100.0	98.1	3.6
passing (0.05 mm)	%	-	-	77.6	96.2	46.2	75.0	92.2	92.7	89.0	5.8	96.5	92.6	65.0	49.2	57.1	90.2	40.4	99.5	97.4	94.8	1.9	19	1.9	99.5	71.5	30.5
passing (0.063 mm)	%	-	-	81.9	96.7	46.5	76.1	92.8	94.8	90.9	6.5	97.5	92.9	66.0	49.9	57.4	91.2	42.6	99.3	97.5	96.6	1.8	19	1.8	99.3	72.6	30.7
passing (0.075 mm)	%	-	-	85.9	97.2	46.8	77.2	93.4	96.8	92.7	7.3	98.5	93.1	66.9	50.6	57.8	92.2	44.6	99.2	97.7	98.3	1.7	19	1.7	99.2	73.6	30.9
passing (0.125 mm)	%	-	-	94.2	98.3	48.3	81.7	94.1	98.6	96.4	7.5	99.1	94.2	73.1	54.4	61.0	96.1	58.0	99.5	98.4	99.2	3.0	19	3.0	99.5	76.6	30.5
passing (0.149 mm)	%	-	-	98.2	98.8	49.0	83.9	94.4	99.5	98.2	7.6	99.4	94.8	76.1	56.3	62.5	98.0	64.5	99.6	98.8	99.6	3.6	19	3.6	99.6	78.0	30.5
passing (0.250 mm)	%	-	-	99.6	99.2	50.7	86.6	95.5	99.8	99.2	8.2	99.6	95.6	82.2	59.2	64.6	99.3	78.4	99.7	99.3	99.8	11.1	19	8.2	99.8	80.4	29.2
passing (0.420 mm)	%	-	-	99.8	99.6	53.8	89.0	97.5	99.9	99.6	26.3	99.8	96.6	84.0	63.7	68.0	99.8	81.4	99.8	99.7	99.9	29.1	19	26.3	99.9	83.5	24.2
passing (0.50 mm)	%	-	-	99.8	99.6	55.0	89.3	97.9	99.9	99.7	38.5	99.8	96.8	84.2	65.8	70.0	99.8	81.8	99.8	99.7	99.9	38.5	19	38.5	99.9	85.0	21.2
passing (0.841 mm)	%	-	-	99.9	99.9	59.6	90.2	99.3	99.9	99.9	91.5	99.9	97.7	85.3	74.4	79.0	99.9	83.6	99.9	99.8	99.9	78.6	19	59.6	99.9	91.5	11.7
passing (1.0 mm)	%	-	-	99.9	99.9	61.2	90.4	99.4	99.9	99.9	93.8	99.9	97.8	85.4	76.1	81.1	99.9	83.9	99.9	99.8	100.0	82.0	19	61.2	100.0	92.1	11.0
passing (0.002 mm)	%	-	-	27.2	45.7	23.6	33.6	53.6	41.6	41.7	3.4	46.3	51.2	38.9	19.5	25.4	39.0	14.6	57.9	54.4	40.9	<1.0	19	<1.0	57.9	34.7	16.7
passing (0.004 mm)	%	-	-	35.7	66.9	31.2	47.3	71.6	54.5	55.2	4.0	64.9	68.5	48.4	28.0	36.5	53.8	21.4	77.1	71.7	55.9	<1.0	19	<1.0	77.1	47.0	22.4
passing (0.005 mm)	%	-	-	38.3	72.4	33.6	51.1	75.5	58.5	59.4	4.0	70.8	73.8	51.2	31.5	40.2	59.2	23.5	83.4	75.3	60.2	<1.0	19	<1.0	83.4	50.7	23.9
passing (0.020 mm)	%	-	-	58.6	92.0	43.0	68.1	89.6	79.9	78.8	5.0	90.6	90.4	63.4	44.8	53.3	82.0	33.4	99.2	93.7	85.1	1.4	19	1.4	99.2	65.9	29.3
passing (0.0312 mm)	%	-	-	68.1	94.2	45.2	71.8	90.9	86.9	84.2	5.1	93.5	91.7	64.6	47.0	55.8	87.0	36.8	99.5	96.6	90.3	1.6	19	1.6	99.5	69.0	30.0
Saturated Paste Extractables																											
Percent Saturation	%	-	-	-	-	66.8	71.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	66.8	71.1	69.0	3.0
Sodium Adsorption Ratio (SAR)	none	-	-	-	-	28.3	30.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	28.3	30.9	29.6	1.8
Conductivity in Saturated Paste	dS/m	-	-	-	-	31.5	30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	30.8	31.5	31.2	0.5
Calcium	mg/L	-	-	-	-	104	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	104	130	117	18
Magnesium	mg/L	-	-	-	-	249	306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	249	306	278	40
Potassium	mg/L	-	-	-	-	109	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	109	125	117	11
Sodium Ion (Na+)	mg/L	-	-	-	-	2,330	2,830	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2330	2830	2580	354
Sodium Ion (Na+)	mg/kg	-	-	-	-	1,560	2,010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1560	2010	1785	318
Calcium	mg/kg	-	-	-	-	69.5	92.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	70	92	81	16
Magnesium	mg/kg	-	-	-	-	166	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	166	218	192	37
Potassium	mg/kg	-	-	-	-	72.8	88.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	72.8	88.9	80.9	11.4
Metals																											
Antimony	mg/kg	-	-	0.18	0.19	0.15	0.15	0.21	0.15	0.11	<0.10	0.22	0.23	0.13	0.16	0.14	0.18	0.11	0.17	0.17	0.15	0.11	19	<0.10	0.2	0.2	0.0
Arsenic	mg/kg	7.24	41.6	6.61	**7.91**	**7.44**	6.58	**8.65**	**10.7**	6.9	3.72	**12.1**	**8.28**	5.37	4.94	5.58	**7.65**	4.72	**7.38**	**9.61**	**11.2**	4.78	19	3.72	**12.1**	**7.37**	2.33
Barium	mg/kg	-	-	84.2	123	95.1	91.9	130	94.8	57.5	7.5	132	116	85.8	84	85.8	101	65.2	114	121	108	7.88	19	7.50	132.00	89.72	35.35
Beryllium	mg/kg	-	-	0.61	0.86	0.64	0.61	0.90	0.70	0.49	0.13	0.92	0.80	0.56	0.55	0.56	0.72	0.41	0.82	0.83	0.68	0.12	19	0.12	0.92	0.63	0.23
Cadmium	mg/kg	0.70	4.2	0.044	0.054	0.040	0.038	0.073	0.034	0.025	<0.020	0.082	0.117	0.025	0.043	0.034	0.051	0.035	0.087	0.043	0.042	<0.020	19	<0.020	0.117	0.048	0.025
Chromium	mg/kg	52.3	160	50.1	**72.5**	**93.7**	**58.4**	**76.3**	**58.5**	36.0	18.7	**78.2**	**56.0**	45.3	**72.0**	**52.6**	**61.8**	45.5	**70.0**	**71.8**	**64.6**	16.4	19	16.4	**93.7**	**57.8**	19.7
Cobalt	mg/kg	-	-	11.5	16.7	14.4	12.6	17.5	14.3	9.26	3.93	18.6	15.5	11.5	10.9	11.7	14.2	9.5	16.8	17.5	15.3	4.09	19	3.9	18.6	12.9	4.2
Copper	mg/kg	18.7	108	**27.3**	**35.2**	**29.8**	**28.8**	**37.7**	**37.1**	**23.6**	4.42	**39.2**	**34.4**	**25.7**	**25.2**	**24.9**	**32.9**	**20.3**	**35.8**	**38.9**	**37.7**	4.11	19	4.1	**39.2**	**28.6**	10.3
Lead	mg/kg	30.2	112	9.98	11.5	9.27	9.45	11.8	11.4	7.92	3.69	12.2	10.5	7.13	8.28	8.44	10.7	6.28	10.7	11.6	10.9	4.45	19	3.7	12.2	9.3	2.5
Mercury	mg/kg	0.13	0.70	0.0127	0.0124	0.0067	0.0119	0.0103	0.0102	0.0099	<0.0050	0.0144	0.0085	0.0052	0.0097	0.0118	0.0136	0.0094	0.0062	0.0066	0.011	<0.0050	19	<0.0050	0.0144	0.0095	0.0030

Table C.3-1 Sediment Quality Data in Grays Bay, August 2024

Parameter	Units	CCME SQG-MAL		SED1	SED3	SED4	SED5	SED6	SED7	SED8	SED9	SED10	SED11	SED12	SED13	SED14	SED15	SED16	SED17	SED18	SED19	SED20	Summary Statistics				
		ISQG	PEL																				n	Min	Max	Mean	Std Dev
Molybdenum	mg/kg	-	-	2.2	1.3	5.41	2.03	1.3	1.04	0.8	0.43	0.77	0.98	0.75	4.6	1.56	1.87	1.81	0.85	0.84	0.89	0.37	19	0.37	5.41	1.57	1.33
Nickel	mg/kg	-	-	28.8	42.3	55.7	34.0	45.1	35.0	22.5	11.5	47.3	35.0	28.0	43.0	31.2	36.3	26.5	43.4	43.5	38.1	10.0	19	10.0	55.7	34.6	11.7
Selenium	mg/kg	-	-	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	19	<0.20	0.22	0.20	0.01
Silver	mg/kg	-	-	<0.10	0.10	<0.10	0.10	0.10	0.13	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.13	0.10	0.10	<0.10	19	<0.10	0.13	0.10	0.01
Thallium	mg/kg	-	-	0.212	0.306	0.221	0.233	0.32	0.277	0.188	<0.050	0.335	0.275	0.195	0.212	0.214	0.258	0.151	0.309	0.318	0.28	<0.050	19	<0.050	0.335	0.232	0.082
Tin	mg/kg	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	19	<2.0	<2.0	<2.0	-
Uranium	mg/kg	-	-	2.05	2.13	1.57	1.66	2.26	1.78	1.26	0.482	2.27	2.29	1.48	1.52	1.45	2.02	1.24	2.17	1.99	1.77	0.673	19	0.48	2.29	1.69	0.52
Vanadium	mg/kg	-	-	59.7	71.3	59.2	57.7	74.3	59.3	35.4	17	77.4	57.5	48.2	51.7	52.8	63.8	46.7	66	70.4	63.5	22.6	19	17.0	77.4	55.5	16.2
Zinc	mg/kg	124	271	72.6	94.5	73	72.2	98.3	81.1	49.9	26.4	104	78	55.3	60	63.8	81.8	51.1	89.9	96.8	86.9	24.5	19	24.5	104.0	71.6	22.8
Volatile Organic Compounds																											
Benzene	mg/kg	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	19	<0.0050	<0.0050	<0.0050	-
BTEX+Styrene, total	mg/kg	-	-	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	19	<0.15	<0.15	<0.15	-
Ethylbenzene	mg/kg	-	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	19	<0.015	<0.015	<0.015	-
Methyl tert-butyl ether	mg/kg	-	-	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	19	<0.040	<0.040	<0.040	-
Styrene	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Toluene	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Total BTEX (Calc)	mg/kg	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	19	<0.10	<0.10	<0.10	-
Xylene, m & p-	mg/kg	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	19	<0.030	<0.030	<0.030	-
Xylene, o-	mg/kg	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	19	<0.030	<0.030	<0.030	-
Xylenes, Total	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Polycyclic Aromatic Hydrocarbons																											
Acenaphthene	mg/kg	0.00671	0.0889	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	19	**<0.050**	**<0.050**	**<0.050**	-
Acenaphthylene	mg/kg	0.00587	0.128	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	19	**<0.050**	**<0.050**	**<0.050**	-
Acridine	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Anthracene	mg/kg	0.0469	0.245	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	19	**<0.050**	**<0.050**	**<0.050**	-
Benzo(a)anthracene	mg/kg	0.0748	0.693	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Benzo(a)pyrene	mg/kg	0.0888	0.763	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Benzo(b)pyridine (Quinoline)	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Benzo(b/j)fluoranthene	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Benzo(b+j+k)fluoranthene	mg/kg	-	-	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	19	<0.075	<0.075	<0.075	-
Benzo(g,h,i)perylene	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Benzo(k)fluoranthene	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Chrysene	mg/kg	0.108	0.846	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Dibenzo(a,h)anthracene	mg/kg	0.00622	0.135	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	19	**<0.050**	**<0.050**	**<0.050**	-
Fluoranthene	mg/kg	0.113	1.494	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Fluorene	mg/kg	0.0212	0.144	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	**<0.050**	19	**<0.050**	**<0.050**	**<0.050**	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Index of Additive Cancer Risk (CC	none	-	-	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	19	<0.60	<0.60	<0.60	-
Index of Additive Cancer Risk (Cc	none	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	19	<0.10	<0.10	<0.10	-
Index of Additive Cancer Risk (Fir	none	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	19	<0.10	<0.10	<0.10	-
Methylnaphthalene (Total)	mg/kg	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Methylnaphthalene, 1-	mg/kg	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	19	<0.030	<0.030	<0.030	-
Methylnaphthalene, 2-	mg/kg	0.0202	0.201	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	**<0.030**	19	**<0.030**	**<0.030**	**<0.030**	-
Naphthalene	mg/kg	0.0346	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	19	<0.010	<0.010	<0.010	-
PAH Toxicity Equivalency	mg/kg	-	-	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	19	<0.065	<0.065	<0.065	-
Phenanthrene	mg/kg	0.0867	0.544	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Pyrene	mg/kg	0.153	1.398	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	<0.050	<0.050	<0.050	-
Total PAH	mg/kg	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	19	<0.20	<0.20	<0.20	-
Total PAH (BC Sched 3.4)	mg/kg	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	19	<0.20	<0.20	<0.20	-
Polychlorinated Biphenyls																											
Aroclor 1016	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1221	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1232	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1242	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1248	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1254	mg/kg	0.0633	0.709	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1260	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-

Table C.3-1 Sediment Quality Data in Grays Bay, August 2024

Parameter	Units	CCME SQG-MAL		SED1	SED3	SED4	SED5	SED6	SED7	SED8	SED9	SED10	SED11	SED12	SED13	SED14	SED15	SED16	SED17	SED18	SED19	SED20	Summary Statistics				
		ISQG	PEL																				n	Min	Max	Mean	Std Dev
Aroclor 1262	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Aroclor 1268	mg/kg	-	-	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-
Polychlorinated Biphenyls	mg/kg	0.0215	0.189	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.011	<0.010	<0.011	<0.013	<0.010	<0.010	<0.010	<0.011	<0.011	<0.010	<0.011	<0.012	<0.010	19	<0.011	<0.011	<0.011	-

Notes:

SQG-MAL = sediment quality guidelines for the protection of marine aquatic life; ISQG = interim sediment quality guidelines; PEL = probable effect level.

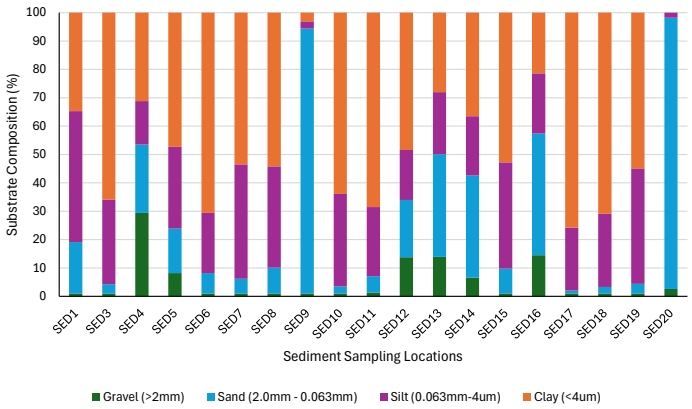
Bold text indicates an exceedance of the CCME ISQGL, italics text indicates an exceedance of the CCME PEL.

Notes:

CCME-MR	Canadian Council of Ministers of the Environment
A	Canadian Environmental Quality Guidelines, Sediment Quality Guidelines for the Protection of Aquatic Life, Interim Marine Sediment Quality Guideline
B	Canadian Environmental Quality Guidelines, Sediment Quality Guidelines for the Protection of Aquatic Life, Marine Probable Effect Levels
6.5[A]	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.

	15.8	24.9	26.5	13.6	20.4	9	23	2	36	20.1	1.6	25.6	22	17.5	6	41.2	2	26	2
Grain Size	**SED1**	**SED3**	**SED4**	**SED5**	**SED6**	**SED7**	**SED8**	**SED9**	**SED10**	**SED11**	**SED12**	**SED13**	**SED14**	**SED15**	**SED16**	**SED17**	**SED18**	**SED19**	**SED20**
Clay (<4um)	35.7	66.9	31.2	47.3	71.6	54.5	55.2	4.0	64.9	68.5	48.4	28.0	36.5	53.8	21.4	77.1	71.7	55.9	<1.0
Gravel (>2mm)	<1.0	<1.0	29.4	8.2	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	13.8	13.9	6.6	<1.0	14.5	<1.0	<1.0	<1.0	2.6
Sand (2.0mm - 0.063mm)	18.1	3.3	24.1	15.7	7.2	5.2	9.1	93.4	2.5	5.8	20.2	36.2	36.0	8.8	42.9	<1.0	2.3	3.4	95.6
Silt (0.063mm-4um)	46.2	29.8	15.3	28.8	21.2	40.3	35.7	2.5	32.6	24.4	17.6	21.9	20.9	37.4	21.2	22.2	25.8	40.7	1.8

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Parameter	Units	CCME SQG-MAL		Summary Statistics				
		ISQG	PEL	n	Min	Max	Mean	Std Dev
Particle Size								
Clay (<4um)	%	-	-	19	<1.0	77.1	47.0	22.4
Gravel (>2mm)	%	-	-	19	<1.0	29.4	5.3	7.6
Sand (2.0mm - 0.063mm)	%	-	-	19	<1.0	95.6	22.7	28.3
Silt (0.063mm-4um)	%	-	-	19	1.8	46.2	25.6	11.9
Metals								
Arsenic	mg/kg	7.24	41.6	19	3.72	**12.1**	**7.37**	2.33
Cadmium	mg/kg	0.70	4.2	19	<0.020	0.117	0.048	0.025
Chromium	mg/kg	52.3	160	19	16.4	**93.7**	**57.8**	19.7
Copper	mg/kg	18.7	108	19	4.1	**39.2**	**28.6**	10.3
Lead	mg/kg	30.2	112	19	3.7	12.2	9.3	2.5
Mercury	mg/kg	0.13	0.70	19	<0.0050	0.0144	0.0095	0.0030
Zinc	mg/kg	124	271	19	24.5	104.0	71.6	22.8
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	mg/kg	0.00671	0.0889	19	**<0.050**	**<0.050**	**<0.050**	-
Acenaphthylene	mg/kg	0.00587	0.128	19	**<0.050**	**<0.050**	**<0.050**	-
Anthracene	mg/kg	0.0469	0.245	19	**<0.050**	**<0.050**	**<0.050**	-
Benzo(a)anthracene	mg/kg	0.0748	0.693	19	<0.050	<0.050	<0.050	-
Benzo(a)pyrene	mg/kg	0.0888	0.763	19	<0.050	<0.050	<0.050	-
Chrysene	mg/kg	0.108	0.846	19	<0.050	<0.050	<0.050	-
Dibenzo(a,h)anthracene	mg/kg	0.00622	0.135	19	**<0.050**	**<0.050**	**<0.050**	-
Fluoranthene	mg/kg	0.113	1.494	19	<0.050	<0.050	<0.050	-
Fluorene	mg/kg	0.0212	0.144	19	**<0.050**	**<0.050**	**<0.050**	-
Methylnaphthalene, 2-	mg/kg	0.0202	0.201	19	**<0.030**	**<0.030**	**<0.030**	-
Naphthalene	mg/kg	0.0346	0.391	19	<0.010	<0.010	<0.010	-
Phenanthrene	mg/kg	0.0867	0.544	19	<0.050	<0.050	<0.050	-
Pyrene	mg/kg	0.153	1.398	19	<0.050	<0.050	<0.050	-
PCBs								
Aroclor 1254	mg/kg	0.0633	0.709	19	<0.011	<0.011	<0.011	-
Polychlorinated Biphenyls	mg/kg	0.0215	0.189	19	<0.011	<0.011	<0.011	-

	1.6	2	2	2	6	9	13.6	15.8	17.5	20.4	20.1	22	23	24.9	25.6	26	26.5	36	41.2
Grain Size	**SED12**	**SED09**	**SED18**	**SED20**	**SED16**	**SED07**	**SED05**	**SED01**	**SED15**	**SED06**	**SED11**	**SED14**	**SED08**	**SED03**	**SED13**	**SED19**	**SED04**	**SED10**	**SED17**
Gravel (>2mm)	13.8	<1.0	<1.0	2.6	14.5	<1.0	8.2	<1.0	<1.0	<1.0	1.3	6.6	<1.0	<1.0	13.9	<1.0	29.4	<1.0	<1.0
Sand (2.0mm - 0.063mm)	20.2	93.4	2.3	95.6	42.9	5.2	15.7	18.1	8.8	7.2	5.8	36.0	9.1	3.3	36.2	3.4	24.1	2.5	<1.0
Silt (0.063mm-4um)	17.6	2.5	25.8	1.8	21.2	40.3	28.8	46.2	37.4	21.2	24.4	20.9	35.7	29.8	21.9	40.7	15.3	32.6	22.2
Clay (<4um)	48.4	4.0	71.7	<1.0	21.4	54.5	47.3	35.7	53.8	71.6	68.5	36.5	55.2	66.9	28.0	55.9	31.2	64.9	77.1

Appendix D Benthic Invertebrate Analysis

Table D.1 Summary Statistics of Benthic Invertebrate Abundance Results from August 2024

Phylum	Class	Order	n	Min	Max	Mean	Total
Annelida	Clitellata	Enchytraeida	3	3	9	5	15
		Tubificida	8	1	45	10	82
	Polychaeta	-	179	1	238	15	2,637
		Eunicida	33	1	86	12	399
		Phyllodocida	120	1	319	26	3,095
		Sabellida	37	1	62	9	345
		Spionida	51	1	160	11	576
		Terebellida	122	1	645	30	3,632
	-	Sipuncula	2	2	7	4	9
Arthropoda	Malacostraca	Amphipoda	103	1	148	10	1,015
		Cumacea	27	1	208	32	864
		Decapoda	2	1	1	1	2
		Isopoda	16	1	5	2	26
		Tanaidacea	24	1	229	25	608
	Insecta	Diptera	2	1	1	1	2
Echinodermata	Holothuroidea	Molpadida	2	1	1	1	2
		-	2	1	1	1	2
	Ophiuroidea	-	7	1	8	3	21
Bryozoa	Gymnolaemata	Ctenostomatida	2	1	1	1	2
Cnidaria	Hexacorallia	Actiniaria	5	1	5	3	15
		Ceriantharia	4	1	4	2	8
	Staurozoa	Stauromedusae	2	1	1	1	2
	Hydrozoa	Anthoathecata	1	1	1	1	1
		Leptothecata	4	1	2	2	7
		Limnomedusae	2	1	2	2	3
Hemichordate	Enteropneusta	-	2	1	7	4	8
Nemertea	Hoplonemertea	Monostilifera	2	1	2	2	3
		-	5	1	3	2	9
	Palaeonemertea	Archinemertea	12	1	18	8	100
		Carinomiformes	1	1	1	1	1
		-	3	1	2	1	4
	Pilidiophora	Heteronemertea	14	1	11	6	80
	-	-	12	3	29	10	120
Platyhelminthes	-	-	3	1	3	2	5
Cephalorhyncha	Priapulida	Priapulomorpha	7	1	4	2	12
Mollusca	Bivalvia	Adapedonta	8	1	6	2	20
		Cardiida	37	1	37	5	203
		Carditida	20	1	9	4	70
		Lucinida	6	2	13	5	31
		Myida	9	1	6	3	24
		Mytilida	5	1	7	3	15
		Nuculanida	7	1	9	4	28
		-	10	1	24	4	45
	Gastropoda	Cephalaspidea	13	1	5	1	19
		Littorinimorpha	2	1	1	1	2
		Nudibranchia	6	1	7	2	15
		-	1	1	1	1	1

Table D.2 Summary Statistics of Benthic Invertebrate Density Results from August 2024

Phylum	Class	Order	n	Min	Max	Mean	Total
Annelida	Clitellata	Enchytraeida	3	57	172	96	287
		Tubificida	8	19	861	196	1,569
	Polychaeta	-	179	19	4,554	282	50,452
		Eunicida	33	19	1,645	231	7,634
		Phyllodocida	120	19	6,103	493	59,215
		Sabellida	37	19	1,186	178	6,601
		Spionida	51	19	3,061	216	11,020
		Terebellida	122	19	12,340	570	69,489
	-	Sipuncula	2	38	134	86	172
Arthropoda	Malacostraca	Amphipoda	103	19	2,832	189	19,420
		Cumacea	27	19	3,980	612	16,531
		Decapoda	2	19	19	19	38
		Isopoda	16	19	96	31	497
		Tanaidacea	24	19	4,381	485	11,633
	Insecta	Diptera	2	19	19	19	38
Echinodermata	Holothuroidea	Molpadida	2	19	19	19	38
		-	2	19	19	19	38
	Ophiuroidea	-	7	19	153	57	402
Bryozoa	Gymnolaemata	Ctenostomatida	2	19	19	19	38
Cnidaria	Hexacorallia	Actiniaria	5	19	96	57	287
		Ceriantharia	4	19	77	38	153
	Staurozoa	Stauromedusae	2	19	19	19	19
	Hydrozoa	Anthoathecata	4	19	38	33	134
		Leptothecata	2	19	38	29	57
		Limnomedusae	2	19	19	19	38
Hemichordate	Enteropneusta	-	2	19	134	77	153
Nemertea	Hoplonemertea	Monostilifera	2	19	38	29	57
		-	5	19	57	34	172
	Palaeonemertea	Archinemertea	12	19	344	159	1,913
		Carinomiformes	1	19	19	19	19
		-	3	19	38	26	77
	Pilidiophora	Heteronemertea	14	19	210	109	1,531
	-	-	12	57	555	191	2,296
Platyhelminthes	-	-	3	19	57	32	96
Cephalorhyncha	Priapulida	Priapulomorpha	7	19	77	33	230
Mollusca	Bivalvia	Adapedonta	8	19	115	48	383
		Cardiida	37	19	708	105	3,884
		Carditida	20	19	172	67	1,339
		Lucinida	6	38	249	99	593
		Myida	9	19	115	51	459
		Mytilida	5	19	134	57	287
		Nuculanida	7	19	172	77	536
		-	10	19	459	86	861
	Gastropoda	Cephalaspidea	13	19	96	28	364
		Littorinimorpha	2	19	19	19	38
		Nudibranchia	6	19	134	48	287
		-	1	19	19	19	19

Table D.3 Summary Statistics of Benthic Invertebrate Biomass Results from August 2024

Taxa Grouping	n	Min	Max	Mean	Total
Annelida	19	0.00061	1.95	0.561	10.7
Bryozoa	2	0.0143	0.014	0.014	0.029
Anthozoa	7	0.00002	0.398	0.079	0.551
Hydrozoa	6	0	0.025	0.009	0.055
Staurozoa	2	0.01516	0.073	0.044	0.088
Amphipoda	18	0.00093	0.441	0.106	1.91
Cumacea	15	0.00018	0.660	0.068	1.01
Decapoda	2	0.00219	0.026	0.014	0.028
Isopoda	12	0.00001	0.122	0.013	0.157
Tanaid	15	0.00000	0.092	0.015	0.220
Holothuroidea	3	0.00004	0.0059	0.0037	0.011
Ophiuroidea	7	0.00027	0.0099	0.0041	0.029
Hemichordata	2	0.00007	0.0019	0.0010	0.0019
Diptera	1	0.00075	0.00075	0.00075	0.00075
Bivalvia	15	0.00398	20.7	5.92	88.8
Gastropoda	12	0.00016	0.424	0.042	0.500
Nemertea	15	0.00352	0.098	0.037	0.562
Platyhelminthes	3	0.00011	0.060	0.020	0.061
Priapulida	7	0.00002	0.089	0.027	0.192

Marine Benthic Enumeration and Identification Methods
Client: Stantec
Project: Grays Bay
Protocol: EEM

Sample Inventory

Sample arrival: 10-Sept-24
Number of samples: 19
Number of jars: 24
Field screen size: 500 µm
Lab screen size: 500 µm
Biologica project number: mb24-053

The chain of custody documents were checked and approved with the client. Samples were transferred from formalin into 70% ethanol, and stained with Rose Bengal to aid in sorting. Each sample was provided a unique identification number and placed in the queue for analysis.

Table 1. Summary of benthic samples processed for Stantec Nunavut Grays Bay, 2024.

Client Sample ID	Date Sampled	Biologica Sample ID	Sub-sample	Organisms Counted
SED01	26-Aug-24	mb24-053-001	Whole	2,264
SED03	26-Aug-24	mb24-053-002	Whole	944
SED04	25-Aug-24	mb24-053-003	Whole	234
SED05	24-Aug-24	mb24-053-004	Whole	974
SED06	26-Aug-24	mb24-053-005	Whole	985
SED07	23-Aug-24	mb24-053-006	Whole	1,558
SED08	23-Aug-24	mb24-053-007	Whole	1,445
SED09	23-Aug-24	mb24-053-008	Whole	21
SED10	27-Aug-24	mb24-053-009	Whole	223
SED11	25-Aug-24	mb24-053-010	Whole	861
SED12	25-Aug-24	mb24-053-011	Whole	15
SED13	25-Aug-24	mb24-053-012	Whole	400
SED14	25-Aug-24	mb24-053-013	Whole	374
SED15	25-Aug-24	mb24-053-014	Whole	801
SED16	24-Aug-24	mb24-053-015	Whole	1,550
SED17	26-Aug-24	mb24-053-016	Whole	195
SED18	23-Aug-24	mb24-053-017	Whole	102
SED19	23-Aug-24	mb24-053-018	Whole	1,234
SED20	23-Aug-24	mb24-053-019	Whole	5

Sample Processing

Sorting:

All samples were sorted using dissecting microscopes at 10–40x magnification by trained personnel. All debris in each sample was checked microscopically, including leaves, elutriated gravel, and other large debris. To minimize potential sorter bias, samples were distributed among technicians such that no one person sorted all the replicates of a given sample or station. All Samples were sorted whole.

Sorting QA/QC:

To ensure sorting efficiency was >95%, whole and/or partial sub-samples were re-sorted. Sorting efficiency was calculated using the following equation (where total count = final total number of organisms in sample):

Sorting efficiency = [1−(# of organisms in spot check or re-sort / total organisms)] x 100
*Total organisms includes the original count and the number found from the re-sort

All samples checked must meet or exceed 95% sorting efficiency. Any samples falling below 95% sorting efficiency are re-sorted in their entirety, and additional checks are undertaken as necessary. For quality assurance, QA re-sorts were performed on one sample. The sample was randomly selected and re-sorted in its entirety. Refer to Table 2 for sorting efficiency results.

Table 2. Summary of sorting QA/QC results for Stantec Nunavut Grays Bay, 2024.

Client Sample ID	Biologica Sample ID	Sorting Efficiency QA Whole Resort
SED15	mb24-053-014	98.23%

Identification:

All organisms were identified using a combination of dissecting (10–40x) and compound (100–1000x) microscopes and standard taxonomic keys (see methodological and taxonomic references) to the level specified by the client: species or LPL (lowest practicable level). All specimens were archived in air-tight glass vials with glycerin and 70% ethanol for long-term storage. Taxonomic data were recorded in Biologica's custom database.

Any species new to Biologica's verified reference collections are confirmed by one of Biologica's secondary trained taxonomists.

Biomass:

Whole sample wet weight (WW) biomass for each sample was calculated by direct weight of the major taxonomic groups identified. Taxonomic groups were weighed with an AND analytical balance to the nearest 0.01 mg. For damaged and/or unavailable specimens, estimates from Biologica's biomass database were used.

Data

Densities (organisms/m^2) were calculated using the dimensions of a Standard Ponar 9"x9" (0.052267).

All data were recorded in Biologica's custom database. Results were provided to the Stantec project manager in Excel spreadsheets via email.

Arctic & General Taxonomic and Methodological References

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