DISTRICT OF HOPE

# Water Quality Monitoring Report
# January 1 – December 31, 2024


Prepared by
Stephen Glasson
Chief Utilities Operator

## Introduction

Under the British Columbia Drinking Water Protection Act and the British Columbia Drinking Water Protection Regulation (BCDWPA & BCDWPR) the District of Hope is required to conduct water quality monitoring on the community's water distribution system(s) and to publish the results in an annual report. This document fulfills that requirement by presenting a summary and discussion of all water quality sampling results for the year 2024. An overview of projects and events as they relate to drinking water in the District of Hope is also provided in this report.

## Please visit the following web sites for further information:

**Health Canada – Canadian drinking water guidelines**
http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php

**Ministry of Health – Drinking water health topics**
https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/current-health-issues/drinking-water-health-topics

**Health Link BC File #56 - Persons with compromised or Weakened Immune Systems**
https://www.rdn.bc.ca/cms/wpattachments/wpID2360atID5822.pdf

**District of Hope**
http://www.hope.ca

**District of Hope Water Master Plan**
**https://www.hope.ca/p/utilities**

**World Health Organization**
https://www.who.int/news-room/fact-sheets/detail/drinking-water

**Emergency Water Quality Contact Information**

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## 1.0 Acronyms

*AO: Aesthetic Objective*

*BCDWPA: British Columbia Drinking Water Protection Act*

*BCDWPR: British Columbia Drinking Water Protection*

*E.coli: Escherichia coli*

*EOCP: Environmental Operators Certification Program*

*GCDWQ: Guidelines for Canadian Drinking Water Quality*

*HAA: Haloacetic Acid*

*MAC: Maximum Acceptable Concentration*

*Mg/l: Milligrams per Liter*

*NTU: Nephelometric Turbidity Units PPB: Parts Per Billion*

*PPM: Parts Per Million*

*PRV: Pressure Regulating Valve*

*PVC: Polyvinyl Chloride*

*SCADA: Supervisory Control and Data Acquisition*

*UDF: Uni-directional Flushing*

*YTD: Year-to-Date*

## 2.0 Executive Summary

The District of Hope supplies drinking water to residential and commercial users within District limits. The District of Hope is dedicated to providing high quality, aesthetically pleasing drinking water to approximately 2500 lots with an approximate population of 6700. Our drinking water is primarily sourced from deep groundwater aquifers. The Lake of the Woods water system gets its water from Schkam lake. All of the water is delivered un-treated with the following exceptions. The Kawkawa Lake water system otherwise known as the 138 zone is chlorinated. This will be discussed further in 5.0 "Event Summary". The Lake of the Woods water is treated with media filters, cartridge filters and UV.

The District of Hope collects drinking water samples from 15 locations within the distribution system on a weekly basis and multiple other locations on a bi-weekly basis. This report includes a summary of those bacteriological sampling results collected from the district's five water distribution systems during 2024 as well as a discussion of projects and events affecting water quality within the District of Hope. A complete record of 2024 water quality sampling results can be found in the appendices of this report.

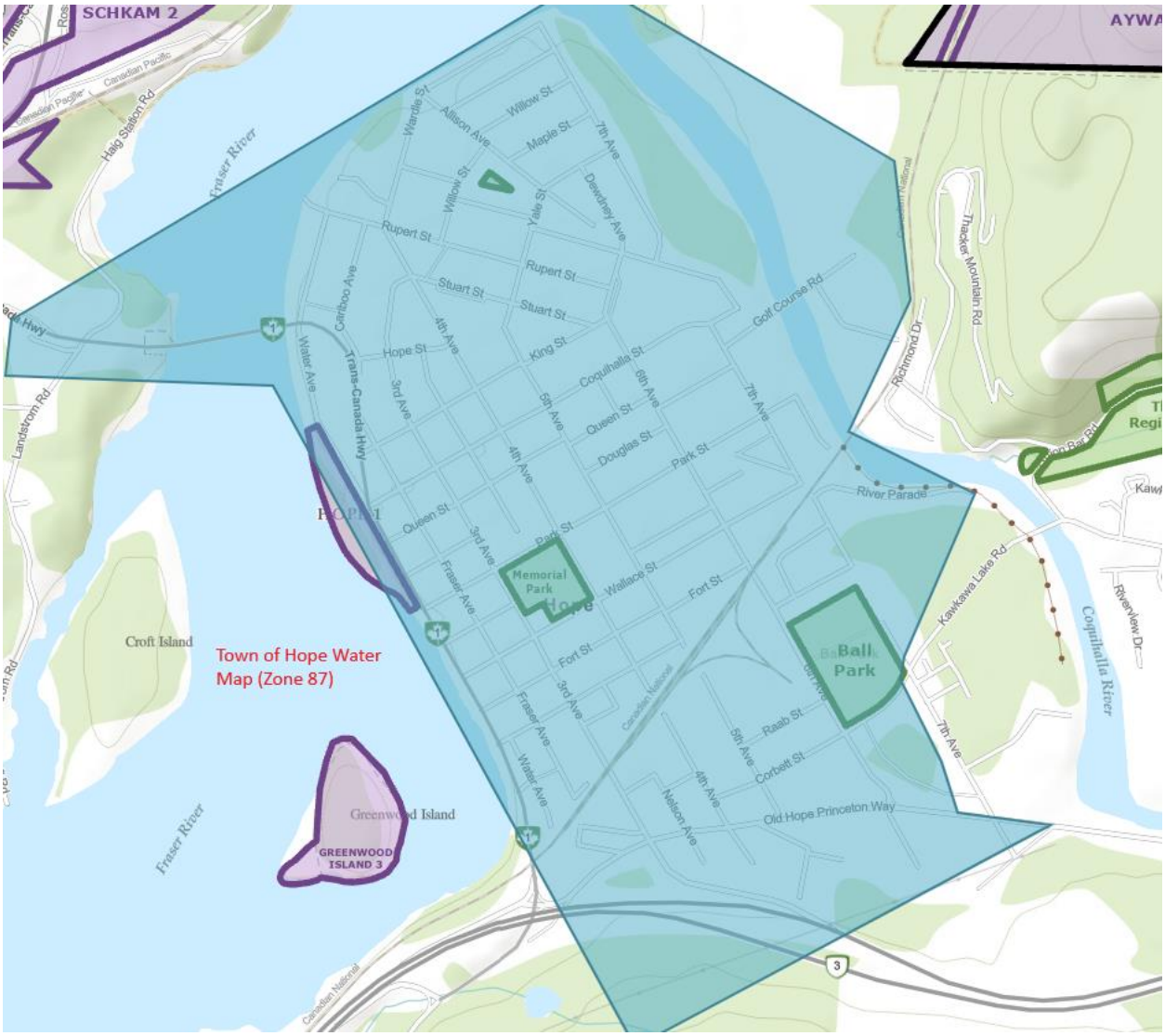
As part of our commitment to continual improvement, reliable service and high-water quality, the district completes operational and capital projects as well as water quality sampling on a regular and ongoing basis.

## 3.0 The Water Systems

**In 2024 the total volume of water produced for the district water system users was 1,391,972m3.**

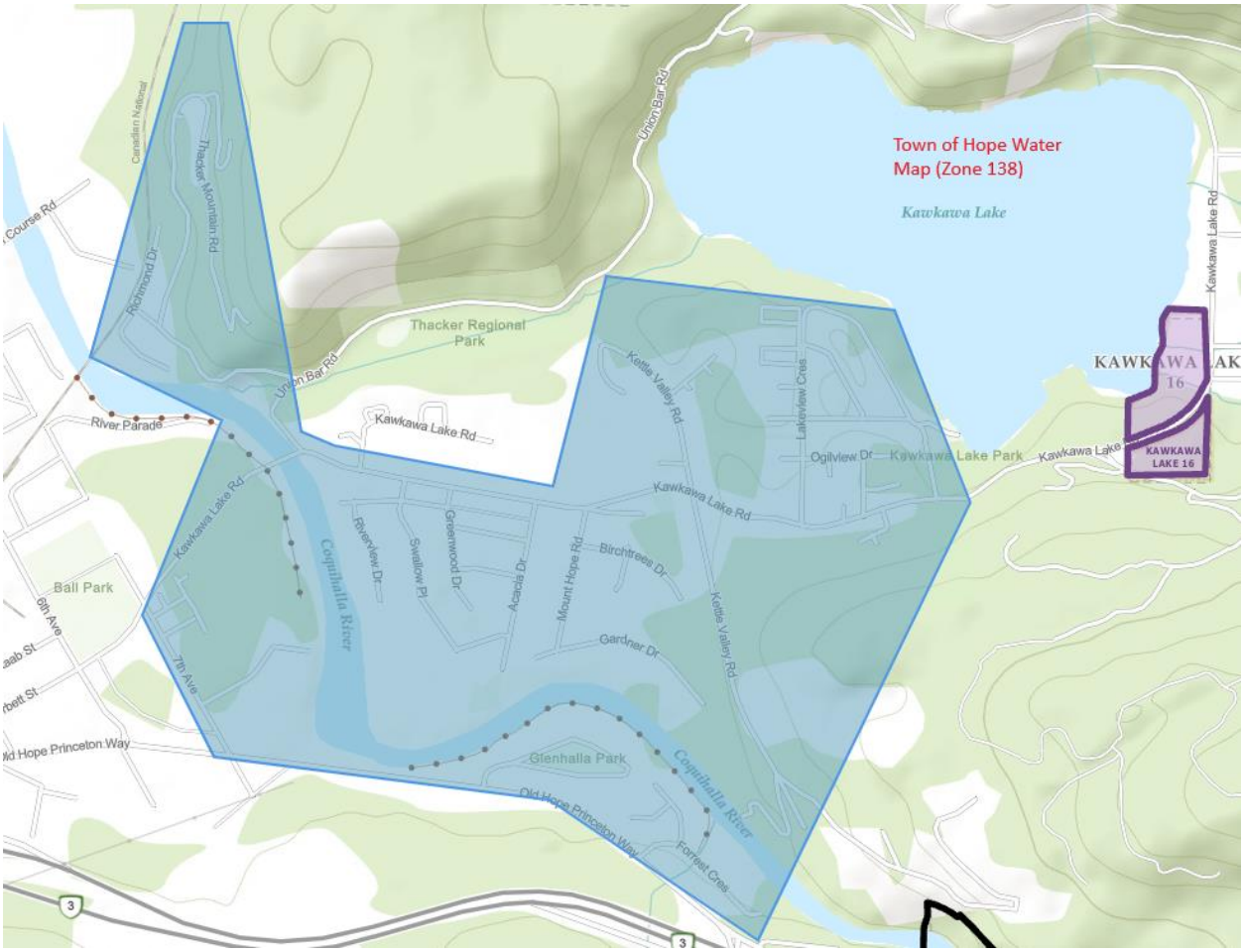
## 3.1 Town of Hope (87 zone)

Key components of this system are three deep groundwater wells which can pump a total of about 850gpm, a steel reservoir tank and a pressure reducing station. These well pumps supply drinking water and fire protection to the town of Hope and fill a 1,660,000L water reservoir located at the Mt Hope Lookout trailhead. This system has about 1400 connections.



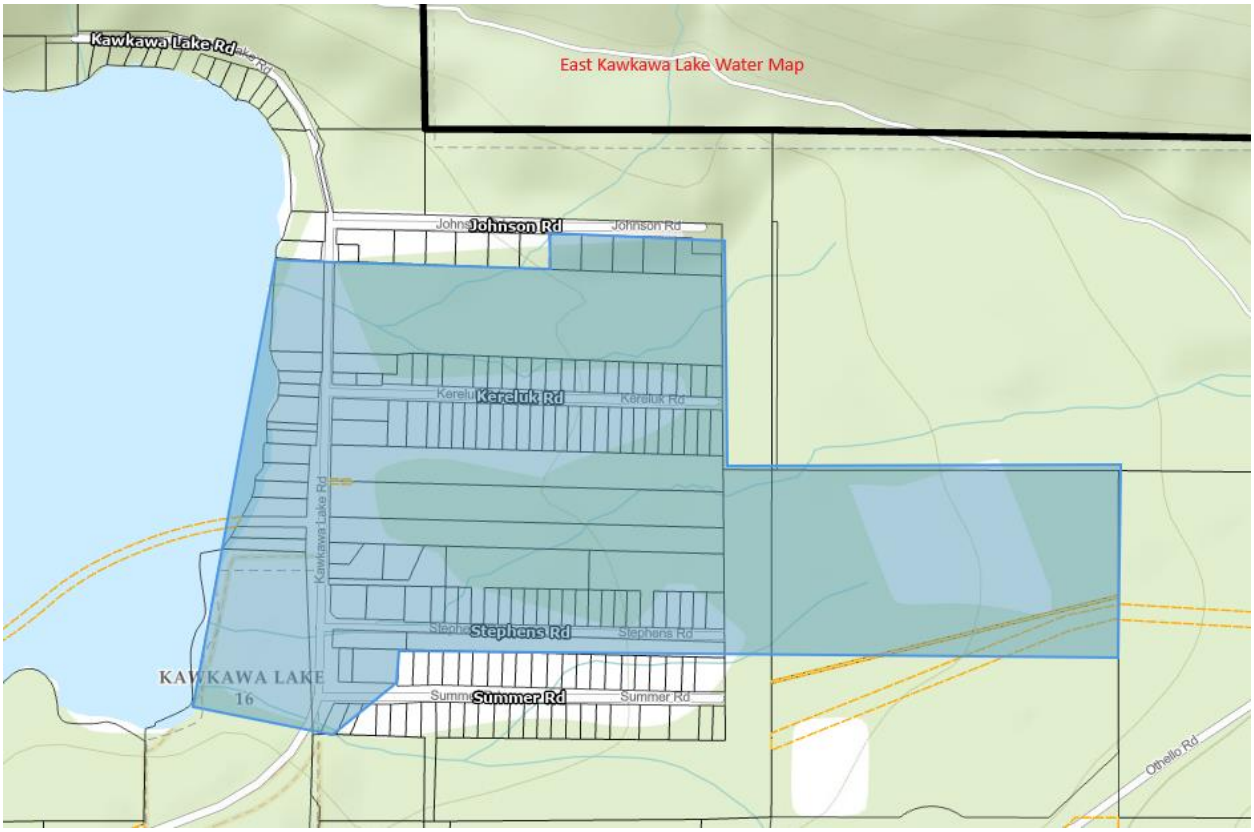
## 3.2 Kawkawa Lake (138 zone)

The Kawkawa Lake water system supplies water to about 540 properties between 7th Avenue and Kawkawa lake including the former 753 water system, Robertson and Forrest Crescents. This system is supplied currently by one source and is a deep groundwater well. This well produces approximately 800gpm and provides drinking water and fire protection. The reservoir is 1,660,000L and is located at the east end of town along Old Hope Princeton Way. This system is under a chlorination order by Fraseer Health due to an E-Coli event in November of 2024. This will be discussed further in 5.0 “2024 Event Summary”.



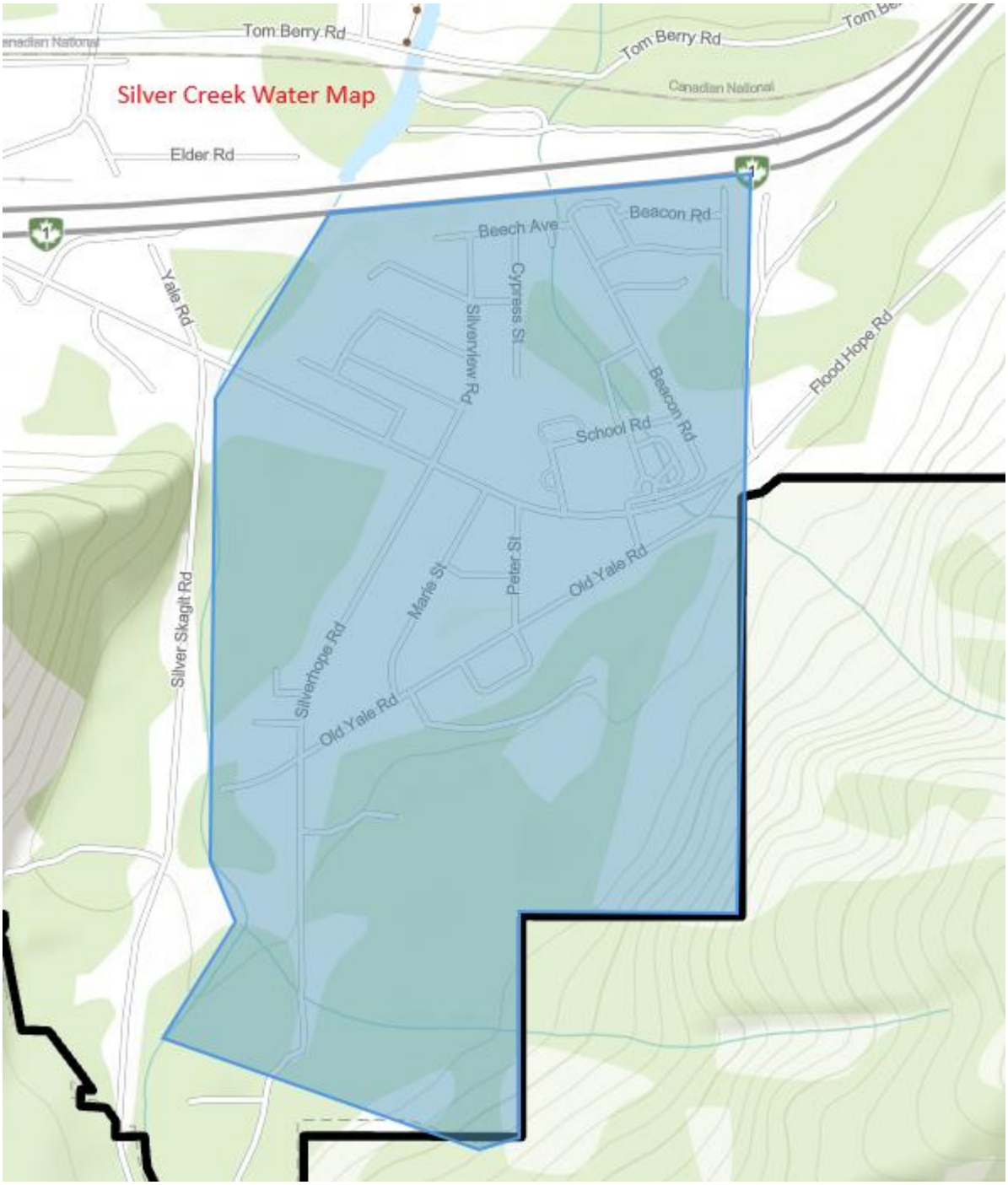
## 3.3 East Kawkawa Lake (EKL)

East Kawkawa lake water system is supplied by 1 deep groundwater well and services about 100 connections. This well produces about 396gpm and provides water to the residents on the east side of Kawkawa lake only. There is one reservoir that has a capacity of 53,000L. Fire protection is limited due to the small reservoir capacity. The water master plan has this system being connected to the Kawkawa lake (138 zone) in the future.




## 3.4 Siver Creek (SC)

Silver Creek has about 500 users. There are three deep water wells which produce a total of 1050gpm and one 382,000L reservoir that provides drinking water/ fire protection. Plans to connect this system the Town of Hope system are planned for the future.


Silver Creek Water Map
Tom Berry Rd
Tom Berry Rd
Canadian National
Elder Rd
Beach Ave
Beacon Rd
Yale Rd
Cypress St
Silverview Rd
Flood Hope Rd
School Rd
Beacon Rd
Marie St
Peter St
Old Yale Rd
Silver Skagit Rd
Silverhope Rd
Old Yale Rd

## 3.5 Lake of the Woods (Schkam Lake)

With only 14 connections this is by far our smallest system. Water is pumped from Schkam lake into a building and treated via two media filters, two cartridge filters as well as two ultra violet (UV) treatment units before being pumped into two 1000g tanks. There is no fire protection only drinking water.

# 4.0 Water System Data

## 4.1 System Infrastructure

This section provides information on the District of Hope's five water distribution systems. All of the components listed are operated and maintained by the district's operations utilities department.

Critical Asset components of the water distribution system

Asset:

- Fire hydrants 236
- Pressure reducing valves 1
- Wells 8
- Reservoirs 5
- Water connections 2500 +
- Generators 6
- Water distribution pipe 60km

In addition to the critical components of the water distribution system, there are many other smaller components to the district's water distribution system, including:

- Water meters
- Backflow preventers
- Air valves
- End of line blow off valves
- Line valves
- 23 Water sampling stations

All of these components are utilized effectively to help the district deliver safe, reliable drinking water.

## 4.2 Public Response

In 2024 the District of Hope operations department responded to various concerns including: residential water service leaks, one water distribution main break, multiple pressure checks, water service locates, turn off/on requests, new service installations, a boil water advisory as well as a variety of other types of calls.

### 4.3 Staff Certification

The District of Hope's water distribution systems are classified by the *Environmental Operators Certification Program* (EOCP). The district's four water systems are monitored, operated, and maintained by six competent staff. Five staff are currently certified by the EOCP.

Staff Certification

| **Certification Level** | **# of Staff** |
|---|---|
| EOCP Water Distribution Level I | 2 |
| EOCP Water Distribution Level II | 1 |
| EOCP Water Distribution Level III | 2 |
| **Total Qualified Staff** | **5** |

## 5.0 2024 Event Summary

On October 4 2024 the district of Hope was informed by Fraser Health of the presence of E.coli in the drinking water during the routine weekly water sampling process. The contamination was in the Kawkawa Lake water system (138 zone) and was restricted to about 500 users. We quickly implemented our emergency response plan to notify the affected users. We then posted a boil water advisory. We also took immediate action to flush the system. Crews created a list of potential sources and quickly developed a plan to repair what we determined to be the source of the contamination as well as precautionary measures. We are confident that the source of the contamination was through a faulty air release valve at the top of Thacker Mountain. We strongly believe that this was the entry point for bacteria. The valve has since been replaced and better drainage via re-grading and new paving were completed to limit the possibility of this happening again.

Due to the presence of E-Coli, Fraser Health placed us under and immediate chlorination order. On October 5 2024 we started the practice of chlorinating the drinking water in the 138 zone. The order specifically states that we must maintain a disinfection residual of 0.20mg/l detectable throughout the system. We chose to operate with a target 0.40mg/l residual as a buffer.

We are in discussion with Fraser health on the steps that the district took to correct the contamination and we are asking to have the order to chlorinate lifted.

## 6.0 Planning for the Future

The District of Hope is a growing community at the eastern end of the Fraser Valley, with an estimated population of 6686 residents (2021 Census). We continue to implement the 2019 "Water Master Plan". The water supply and distribution systems are a key focus of Hope's strategic infrastructure priorities. Click here for the 2019 Water Master Plan. (See Studies and Master Plans)

## 7.0 "Flush" Message from the Fraser Health Authority

Fraser Health has revised its metals at the tap "Flush" message. They have asked that all water purveyors include the following message in their annual report:

> *Anytime the water in a particular faucet has not been used for six hours or longer, "flush" your cold-water pipes by running the water until you notice a change in temperature. (This could take as little as five to thirty seconds if there has been recent heavy water use such as showering or toilet flushing. Otherwise, it could take two minutes or longer.)*
> *The more time water has been sitting in your home's pipes, the more lead it may contain.*
>
> *Use only water from the cold-tap for drinking, cooking, and especially making baby formula. Hot water is likely to contain higher levels of lead.*
>
> *The two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply.*
>
> *Conserving water is still important. Rather than just running the water down the drain you could use the water for things such as watering your plants* (Zubel, 2014).

If residents have any questions, they are encouraged to contact the Fraser Health's Drinking Water Program at 604-870-7900

## 8.0 Water Main Flushing Program

The District of Hope conducts directional and dead-end flushing bi-annually in order to maintain a high level of water quality in the distribution system. Regularly flushing water mains removes stagnant water and deposits from pipes. Spot flushing is also conducted "as needed" to resolve complaints of poor water quality.

## 9.0 Water Quality Sampling and Testing

Sampling and analysis for numerous water quality parameters are conducted on the District of Hope's distribution system on a regular basis. Sample schedules for various constituents are broken into sections based on the number of samples recommended by the *GCDWQ* and/or mandated by the *BCDWPR*. Monitoring of drinking water in the district's water distribution system is conducted for bacterial, chemical, and physical characteristics.

### 9.1 Metals

Metals can enter the drinking water system from either the source or in the distribution system itself. The District of Hope monitors the water distribution system for metals. Sampling is conducted every second year as per the WQMRP. Sampling for metals in 2024 was performed on March 19 2024. (Metals sampling is scheduled to occur next in March 2026)

A summary of relevant health-based MAC and Aesthetic Objective (AO) standards for metals in drinking water can be found below. This table summarizes only those parameters listed in the *GCDWQ* that are captured by the current version of the *WQMRP*.

MAC and AO Metals Standards Modified from the Guidelines for Canadian Drinking Water Quality (Chemical Parameters)(2025)

| Parameter | MAC (mg/l) | AO (mg/l) | Year of Approval |
|---|---|---|---|
| Aluminum | 2.9 | OG: 0.1 | 2021 |
| Antimony | 0.006 | None | 2024 |
| Arsenic | 0.010 | None | 2006 |
| Barium | 2.0 | None | 2020 |
| Cadmium | 0.007 | None | 2020 |
| Chromium | 0.05 | None | 2018 |
| Copper | 2.0 | 1.0 | 2019 |
| Iron | None | ≤0.1 | 2024 |
| Lead | 0.005 | None | 2019 |
| Manganese | 0.12 | 0.02 | 2019 |
| Mercury | 0.001 | None | 1986 |
| Selenium | 0.05 | None | 2014 |
| Vinyl Chloride | 0.002 | None | 2013 |
| Zinc | | <5.0 | 1979 (2005) |

## 9.2 Bacteriological Quality

All bacterial samples collected from municipal distribution systems are analyzed for *total coliform* and *E.coli* bacteria. The district meets or exceeds the minimum required samples per month for each of our 5 water systems. Further samples are collected by district personnel on an as needed basis in response to water main breaks, operational adjustments, water quality complaints, or where cross-connections are suspected.

### Water Quality Standards for Potable Water (Sections 2 & 9)

| Parameter: | Standard: |
|---|---|
| Fecal coliform bacteria | No detectable fecal coliform bacteria per 100ml |
| Escherichia coli | No detectable Escherichia coli per 100 ml |
| Total coliform bacteria: | |
| (a) 1 sample in a 30-day period | No detectable total coliform bacteria per 100 ml |
| (b) more than 1 sample in a 30-day period | At least 90% of samples have no detectable total coliform bacteria per 100ml and no sample has more than 10 total coliform bacteria per 100ml |

(Province of British Columbia, 2011)

### Frequency of Monitoring Samples for Prescribed Water Supply Systems *(Section 8)*

| Population Served by the Prescribed Water Supply System: | Number of Samples Per Month: |
|---|---|
| less than 5,000 | 4 |
| 5,000 to 90,000 | 1 per 1,000 of population |
| more than 90,000 | 90 plus 1 per 10,000 of population in excess of 90,000 |

(Province of British Columbia, 2011)

# 10.0 Water Distribution System Projects

## 10.1 Future Planning

Projects for 2025 include:

1. Continued improvements to our SCADA network
2. A new booster station to supply the Thacker Mountain zone
3. New water sample collection stations at each water reservoir site

4. Continued efforts to work on the former 753 water system improvements
5. Continued efforts to implement the water master plan

## 11.0 Emergency Response Plan

In the event of an emergency, the district may enact its Water System Emergency Response Plan. The goals of this plan are as follows:

- Rapidly restore service after an emergency
- Ensure adequate water supply for fire protection
- Minimize loss of service to users
- Provide emergency information to public
- Re-establish critical operations

## 12.0 Conclusion

The 2024 year had Operations staff at the District of Hope continue improvements to the day-to-day operations of the water utility and continue to work closely with the Fraser Health Authority to ensure safe, clean potable water for the district's residents.

Every year the district budgets for the study, maintenance, and replacement of critical components of the water distribution system and 2024 was no exception. Continued resource focus on the operation and maintenance of the district's water system along with completing critical infrastructure upgrades, will be pivotal to maintaining a high level of drinking water quality in the years to come.

## 13.0 Works Cited

AWWA. ANSI/AWWA C651-99 - AWWA Standard for Disinfecting Water Mains. Denver: American Water Works Association.

Health Canada. (2025). *Guidelines for Canadian Drinking Water Quality.* Ottawa: Federal-Provincial- Territorial Committee on Drinking Water of the Federal-Provincial-Territorial Committee on Health and the Environment.

Health Canada. (2025) Guidelines for Canadian Drinking Water Quality - Summary Tables

Province of British Columbia. (2011). *British Columbia Drinking Water Protection Regulation.* Victoria.

Province of British Columbia. (2014). *Population Estimates*. Retrieved March 27, 2014, from BC Stats

USEPA. (2004). *Comprehensive Surface Water Treatment Rules Quick Reference Guide: Unfiltered Systems.* Washington DC: US Environmental Protection Agency.

USEPA. (2002). *Effects of Water Age on Distribution System Water Quality.* Washington DC: US Environmental Protection Agency.

Zubel, M. (2014, June). Metals in Drinking Water - "Flush" Message in Annual Reports. British Columbia, Canada: Fraser Health.

## Appendix #1

## Bacteriological Analysis

# Appendix #2

# Metals Analysis

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **VA24A5730** | Page | : 1 of 4 |
| **Amendment** | : **1** | | |
| Client | : **District of Hope** | Laboratory | : ALS Environmental - Vancouver |
| Contact | : Steve Glasson | Account Manager | : Sneha Sansare |
| Address | : 1225 Nelson Ave PO Box 609<br>Hope BC Canada V0X 1L0 | Address | : 8081 Lougheed Highway<br>Burnaby BC Canada V5A 1W9 |
| Telephone | : ---- | Telephone | : +1 604 253 4188 |
| Project | : 2024 metals testing | Date Samples Received | : 19-Mar-2024 11:20 |
| PO | : 3064 | Date Analysis Commenced | : 20-Mar-2024 |
| C-O-C number | : ---- | Issue Date | : 04-Apr-2024 12:58 |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : Q36001 - 2024 metals testing | | |
| No. of samples received | : 4 | | |
| No. of samples analysed | : 4 | | |

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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* |
|---|---|---|
| Kevin Duarte | Supervisor - Metals ICP Instrumentation | Metals, Burnaby, British Columbia |
| Sam Silveira | Analyst | Metals, Burnaby, British Columbia |
| 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* |
|---|---|
| CU | colour units (1 cu = 1 mg/l pt) |
| mg/L | milligrams per litre |
| NTU | nephelometric turbidity units |
| 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.

## Workorder Comments

Amendment (02/04/2024): This report has been amended to allow the distribution of an Electronic Data Deliverable (EDD) not previously provided. All analysis results are as per the previous report.
Change from monthly effluent monitoring to 2024 metals testing.

## Analytical Results

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

| Analyte | CAS Number | Method/Lab | LOR | Unit | Client sample ID | SILVER CREEK WATER SYSTEM | DISTRICT OF HOPE WATER SYSTEM 87 ZONE | DISTRICT OF HOPE WATER SYSTEM 138 ZONE | EAST KAWKAWA LAKE WATER SYSTEM | ---- |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Client sampling date / time | 19-Mar-2024 07:45 | 19-Mar-2024 08:00 | 19-Mar-2024 08:20 | 19-Mar-2024 08:35 | ---- |
| | | | | | | VA24A5730-001 | VA24A5730-002 | VA24A5730-003 | VA24A5730-004 | -------- |
| | | | | | | Result | Result | Result | Result | ---- |
| **Physical Tests** | | | | | | | | | | |
| **Colour, true** | ---- | E329/VA | 5.0 | CU | | <5.0 | <5.0 | <5.0 | <5.0 | ---- |
| **Hardness (as CaCO3), from total Ca/Mg** | ---- | EC100A/VA | 0.60 | mg/L | | 49.6 | 55.9 | 75.6 | 52.6 | ---- |
| **pH** | ---- | E108/VA | 0.10 | pH units | | 7.80 | 7.76 | 7.85 | 7.80 | ---- |
| **Turbidity** | ---- | E121/VA | 0.10 | NTU | | <0.10 | 0.16 | <0.10 | <0.10 | ---- |
| **Anions and Nutrients** | | | | | | | | | | |
| **Fluoride** | 16984-48-8 | E235.F/VA | 0.020 | mg/L | | 0.031 | 0.032 | 0.036 | 0.054 | ---- |
| **Nitrate (as N)** | 14797-55-8 | E235.NO3-L/VA | 0.0050 | mg/L | | 0.660 | 0.342 | 0.414 | 0.272 | ---- |
| **Nitrite (as N)** | 14797-65-0 | E235.NO2-L/VA | 0.0010 | mg/L | | 0.0010 | <0.0010 | <0.0010 | <0.0010 | ---- |
| **Total Metals** | | | | | | | | | | |
| **Aluminum, total** | 7429-90-5 | E420/VA | 0.0030 | mg/L | | <0.0030 | <0.0030 | <0.0030 | <0.0030 | ---- |
| **Antimony, total** | 7440-36-0 | E420/VA | 0.00010 | mg/L | | <0.00010 | <0.00010 | <0.00010 | <0.00010 | ---- |
| **Arsenic, total** | 7440-38-2 | E420/VA | 0.00010 | mg/L | | 0.00091 | 0.00016 | 0.00031 | <0.00010 | ---- |
| **Barium, total** | 7440-39-3 | E420/VA | 0.00010 | mg/L | | 0.0144 | 0.0100 | 0.00926 | 0.0297 | ---- |
| **Beryllium, total** | 7440-41-7 | E420/VA | 0.000100 | mg/L | | <0.000100 | <0.000100 | <0.000100 | <0.000100 | ---- |
| **Bismuth, total** | 7440-69-9 | E420/VA | 0.000050 | mg/L | | <0.000050 | <0.000050 | <0.000050 | <0.000050 | ---- |
| **Boron, total** | 7440-42-8 | E420/VA | 0.010 | mg/L | | <0.010 | <0.010 | <0.010 | <0.010 | ---- |
| **Cadmium, total** | 7440-43-9 | E420/VA | 0.0000050 | mg/L | | 0.0000059 | 0.0000094 | 0.0000062 | 0.0000052 | ---- |
| **Calcium, total** | 7440-70-2 | E420/VA | 0.050 | mg/L | | 14.0 | 14.6 | 18.6 | 15.0 | ---- |
| **Cesium, total** | 7440-46-2 | E420/VA | 0.000010 | mg/L | | <0.000010 | <0.000010 | <0.000010 | <0.000010 | ---- |
| **Chromium, total** | 7440-47-3 | E420/VA | 0.00050 | mg/L | | 0.00170 | 0.00134 | 0.00259 | 0.00118 | ---- |
| **Cobalt, total** | 7440-48-4 | E420/VA | 0.00010 | mg/L | | <0.00010 | <0.00010 | <0.00010 | <0.00010 | ---- |
| **Copper, total** | 7440-50-8 | E420/VA | 0.00050 | mg/L | | 0.00189 | 0.00092 | 0.00254 | 0.00509 | ---- |
| **Iron, total** | 7439-89-6 | E420/VA | 0.010 | mg/L | | <0.010 | 0.022 | <0.010 | <0.010 | ---- |
| **Lead, total** | 7439-92-1 | E420/VA | 0.000050 | mg/L | | 0.000184 | 0.000075 | 0.000264 | 0.000363 | ---- |
| **Lithium, total** | 7439-93-2 | E420/VA | 0.0010 | mg/L | | 0.0015 | <0.0010 | <0.0010 | <0.0010 | ---- |
| **Magnesium, total** | 7439-95-4 | E420/VA | 0.0050 | mg/L | | 3.55 | 4.72 | 7.09 | 3.68 | ---- |

## Analytical Results

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

| Analyte | CAS Number | Method/Lab | LOR | Unit | Client sample ID | SILVER CREEK WATER SYSTEM | DISTRICT OF HOPE WATER SYSTEM 87 ZONE | DISTRICT OF HOPE WATER SYSTEM 138 ZONE | EAST KAWKAWA LAKE WATER SYSTEM | ---- |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Client sampling date / time | 19-Mar-2024 07:45 | 19-Mar-2024 08:00 | 19-Mar-2024 08:20 | 19-Mar-2024 08:35 | ---- |
| | | | | | | VA24A5730-001 | VA24A5730-002 | VA24A5730-003 | VA24A5730-004 | -------- |
| | | | | | | Result | Result | Result | Result | ---- |
| **Total Metals** | | | | | | | | | | |
| **Manganese, total** | 7439-96-5 | E420/VA | 0.00010 | mg/L | | 0.00014 | 0.00269 | 0.00015 | <0.00010 | ---- |
| **Mercury, total** | 7439-97-6 | E508/VA | 0.0000050 | mg/L | | <0.0000050 | <0.0000050 | <0.0000050 | <0.0000050 | ---- |
| **Molybdenum, total** | 7439-98-7 | E420/VA | 0.000050 | mg/L | | 0.000725 | 0.000471 | 0.000533 | 0.000423 | ---- |
| **Nickel, total** | 7440-02-0 | E420/VA | 0.00050 | mg/L | | <0.00050 | 0.00114 | 0.00094 | 0.00062 | ---- |
| **Phosphorus, total** | 7723-14-0 | E420/VA | 0.050 | mg/L | | <0.050 | <0.050 | <0.050 | <0.050 | ---- |
| **Potassium, total** | 7440-09-7 | E420/VA | 0.050 | mg/L | | 1.21 | 0.716 | 0.888 | 1.44 | ---- |
| **Rubidium, total** | 7440-17-7 | E420/VA | 0.00020 | mg/L | | <0.00020 | 0.00022 | <0.00020 | <0.00020 | ---- |
| **Selenium, total** | 7782-49-2 | E420/VA | 0.000050 | mg/L | | 0.000193 | 0.000266 | 0.000357 | 0.000242 | ---- |
| **Silicon, total** | 7440-21-3 | E420/VA | 0.10 | mg/L | | 7.20 | 6.62 | 7.43 | 7.04 | ---- |
| **Silver, total** | 7440-22-4 | E420/VA | 0.000010 | mg/L | | <0.000010 | <0.000010 | <0.000010 | <0.000010 | ---- |
| **Sodium, total** | 7440-23-5 | E420/VA | 0.050 | mg/L | | 3.82 | 2.63 | 2.83 | 2.24 | ---- |
| **Strontium, total** | 7440-24-6 | E420/VA | 0.00020 | mg/L | | 0.0597 | 0.0655 | 0.0759 | 0.0704 | ---- |
| **Sulfur, total** | 7704-34-9 | E420/VA | 0.50 | mg/L | | 1.04 | 2.35 | 2.80 | 2.14 | ---- |
| **Tellurium, total** | 13494-80-9 | E420/VA | 0.00020 | mg/L | | <0.00020 | <0.00020 | <0.00020 | <0.00020 | ---- |
| **Thallium, total** | 7440-28-0 | E420/VA | 0.000010 | mg/L | | <0.000010 | <0.000010 | <0.000010 | <0.000010 | ---- |
| **Thorium, total** | 7440-29-1 | E420/VA | 0.00010 | mg/L | | <0.00010 | <0.00010 | <0.00010 | <0.00010 | ---- |
| **Tin, total** | 7440-31-5 | E420/VA | 0.00010 | mg/L | | <0.00010 | <0.00010 | <0.00010 | <0.00010 | ---- |
| **Titanium, total** | 7440-32-6 | E420/VA | 0.00030 | mg/L | | <0.00030 | <0.00030 | <0.00030 | <0.00030 | ---- |
| **Tungsten, total** | 7440-33-7 | E420/VA | 0.00010 | mg/L | | <0.00010 | <0.00010 | <0.00010 | <0.00010 | ---- |
| **Uranium, total** | 7440-61-1 | E420/VA | 0.000010 | mg/L | | 0.000071 | 0.000078 | 0.000213 | 0.000129 | ---- |
| **Vanadium, total** | 7440-62-2 | E420/VA | 0.00050 | mg/L | | 0.00064 | <0.00050 | 0.00062 | <0.00050 | ---- |
| **Zinc, total** | 7440-66-6 | E420/VA | 0.0030 | mg/L | | 0.0085 | 0.0159 | 0.0394 | 0.0040 | ---- |
| **Zirconium, total** | 7440-67-7 | E420/VA | 0.00020 | mg/L | | <0.00020 | <0.00020 | <0.00020 | <0.00020 | ---- |

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.

ALS Canada Ltd.

right solutions.
right partner.

# QUALITY CONTROL INTERPRETIVE REPORT

| | | | |
|---|---|---|---|
| **Work Order** | : **VA24A5730** | Page | : 1 of 8 |
| **Amendment** | : 1 | | |
| Client | : **District of Hope** | Laboratory | : ALS Environmental - Vancouver |
| Contact | : Steve Glasson | Account Manager | : Sneha Sansare |
| Address | : 1225 Nelson Ave PO Box 609<br>Hope BC Canada V0X 1L0 | Address | : 8081 Lougheed Highway<br>Burnaby, British Columbia Canada V5A 1W9 |
| Telephone | : ---- | Telephone | : +1 604 253 4188 |
| Project | : 2024 metals testing | Date Samples Received | : 19-Mar-2024 11:20 |
| PO | : 3064 | Issue Date | : 04-Apr-2024 12:58 |
| C-O-C number | : ---- | | |
| Sampler | : ---- | | |
| Site | : ---- | | |
| Quote number | : Q36001 - 2024 metals testing | | |
| No. of samples received | : 4 | | |
| No. of samples analysed | : 4 | | |

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

**Key**

**Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.**
**CAS Number: Chemical Abstracts 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 : Fluoride in Water by IC** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E235.F | 19-Mar-2024 | 22-Mar-2024 | 28 days | 3 days | ✓ | 22-Mar-2024 | 28 days | 3 days | ✓ |
| **Anions and Nutrients : Fluoride in Water by IC** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E235.F | 19-Mar-2024 | 22-Mar-2024 | 28 days | 3 days | ✓ | 22-Mar-2024 | 28 days | 3 days | ✓ |
| **Anions and Nutrients : Fluoride in Water by IC** | | | | | | | | | | |
| **HDPE** EAST KAWKAWA LAKE WATER SYSTEM | E235.F | 19-Mar-2024 | 22-Mar-2024 | 28 days | 3 days | ✓ | 22-Mar-2024 | 28 days | 3 days | ✓ |
| **Anions and Nutrients : Fluoride in Water by IC** | | | | | | | | | | |
| **HDPE** SILVER CREEK WATER SYSTEM | E235.F | 19-Mar-2024 | 22-Mar-2024 | 28 days | 3 days | ✓ | 22-Mar-2024 | 28 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrate in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E235.NO3-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrate in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E235.NO3-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrate in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** EAST KAWKAWA LAKE WATER SYSTEM | E235.NO3-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 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 |
| **Anions and Nutrients : Nitrate in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** SILVER CREEK WATER SYSTEM | E235.NO3-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrite in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E235.NO2-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrite in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E235.NO2-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrite in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** EAST KAWKAWA LAKE WATER SYSTEM | E235.NO2-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Anions and Nutrients : Nitrite in Water by IC (Low Level)** | | | | | | | | | | |
| **HDPE** SILVER CREEK WATER SYSTEM | E235.NO2-L | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Physical Tests : Colour (True) by Spectrometer (5 CU)** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E329 | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Physical Tests : Colour (True) by Spectrometer (5 CU)** | | | | | | | | | | |
| **HDPE** DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E329 | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Physical Tests : Colour (True) by Spectrometer (5 CU)** | | | | | | | | | | |
| **HDPE** EAST KAWKAWA LAKE WATER SYSTEM | E329 | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 days | 3 days | ✓ |
| **Physical Tests : Colour (True) by Spectrometer (5 CU)** | | | | | | | | | | |
| **HDPE** SILVER CREEK WATER SYSTEM | E329 | 19-Mar-2024 | 22-Mar-2024 | 3 days | 3 days | ✓ | 22-Mar-2024 | 3 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 |
| **Physical Tests : pH by Meter** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| EAST KAWKAWA LAKE WATER SYSTEM | E108 | 19-Mar-2024 | 22-Mar-2024 | 0.25 hrs | 74 hrs | × EHTR-FM | 22-Mar-2024 | 0.25 hrs | 77 hrs | × EHTR-FM |
| **Physical Tests : pH by Meter** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E108 | 19-Mar-2024 | 22-Mar-2024 | 0.25 hrs | 74 hrs | × EHTR-FM | 22-Mar-2024 | 0.25 hrs | 78 hrs | × EHTR-FM |
| **Physical Tests : pH by Meter** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E108 | 19-Mar-2024 | 22-Mar-2024 | 0.25 hrs | 74 hrs | × EHTR-FM | 22-Mar-2024 | 0.25 hrs | 78 hrs | × EHTR-FM |
| **Physical Tests : pH by Meter** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| SILVER CREEK WATER SYSTEM | E108 | 19-Mar-2024 | 22-Mar-2024 | 0.25 hrs | 74 hrs | × EHTR-FM | 22-Mar-2024 | 0.25 hrs | 78 hrs | × EHTR-FM |
| **Physical Tests : Turbidity by Nephelometry** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E121 | 19-Mar-2024 | ---- | ---- | ---- | | 21-Mar-2024 | 3 days | 2 days | ✓ |
| **Physical Tests : Turbidity by Nephelometry** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E121 | 19-Mar-2024 | ---- | ---- | ---- | | 21-Mar-2024 | 3 days | 2 days | ✓ |
| **Physical Tests : Turbidity by Nephelometry** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| EAST KAWKAWA LAKE WATER SYSTEM | E121 | 19-Mar-2024 | ---- | ---- | ---- | | 21-Mar-2024 | 3 days | 2 days | ✓ |
| **Physical Tests : Turbidity by Nephelometry** | | | | | | | | | | |
| **HDPE** | | | | | | | | | | |
| SILVER CREEK WATER SYSTEM | E121 | 19-Mar-2024 | ---- | ---- | ---- | | 21-Mar-2024 | 3 days | 2 days | ✓ |
| **Total Metals : Total Mercury in Water by CVAAS** | | | | | | | | | | |
| **Glass vial - total (lab preserved)** | | | | | | | | | | |
| DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E508 | 19-Mar-2024 | 21-Mar-2024 | 28 days | 2 days | ✓ | 21-Mar-2024 | 28 days | 2 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 Water by CVAAS** | | | | | | | | | | |
| **Glass vial - total (lab preserved)** DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E508 | 19-Mar-2024 | 21-Mar-2024 | 28 days | 2 days | ✓ | 21-Mar-2024 | 28 days | 2 days | ✓ |
| **Total Metals : Total Mercury in Water by CVAAS** | | | | | | | | | | |
| **Glass vial - total (lab preserved)** EAST KAWKAWA LAKE WATER SYSTEM | E508 | 19-Mar-2024 | 21-Mar-2024 | 28 days | 2 days | ✓ | 21-Mar-2024 | 28 days | 2 days | ✓ |
| **Total Metals : Total Mercury in Water by CVAAS** | | | | | | | | | | |
| **Glass vial - total (lab preserved)** SILVER CREEK WATER SYSTEM | E508 | 19-Mar-2024 | 21-Mar-2024 | 28 days | 2 days | ✓ | 21-Mar-2024 | 28 days | 2 days | ✓ |
| **Total Metals : Total Metals in Water by CRC ICPMS** | | | | | | | | | | |
| **HDPE - total (lab preserved)** DISTRICT OF HOPE WATER SYSTEM 138 ZONE | E420 | 19-Mar-2024 | 20-Mar-2024 | 180 days | 1 days | ✓ | 21-Mar-2024 | 180 days | 2 days | ✓ |
| **Total Metals : Total Metals in Water by CRC ICPMS** | | | | | | | | | | |
| **HDPE - total (lab preserved)** DISTRICT OF HOPE WATER SYSTEM 87 ZONE | E420 | 19-Mar-2024 | 20-Mar-2024 | 180 days | 1 days | ✓ | 21-Mar-2024 | 180 days | 2 days | ✓ |
| **Total Metals : Total Metals in Water by CRC ICPMS** | | | | | | | | | | |
| **HDPE - total (lab preserved)** EAST KAWKAWA LAKE WATER SYSTEM | E420 | 19-Mar-2024 | 20-Mar-2024 | 180 days | 1 days | ✓ | 21-Mar-2024 | 180 days | 2 days | ✓ |
| **Total Metals : Total Metals in Water by CRC ICPMS** | | | | | | | | | | |
| **HDPE - total (lab preserved)** SILVER CREEK WATER SYSTEM | E420 | 19-Mar-2024 | 20-Mar-2024 | 180 days | 2 days | ✓ | 21-Mar-2024 | 180 days | 2 days | ✓ |

**Legend & Qualifier Definitions**

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

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)** | | | | | | | |
| Colour (True) by Spectrometer (5 CU) | E329 | 1376521 | 1 | 5 | 20.0 | 5.0 | ✓ |
| Fluoride in Water by IC | E235.F | 1376509 | 1 | 11 | 9.0 | 5.0 | ✓ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 1376510 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 1376511 | 1 | 17 | 5.8 | 5.0 | ✓ |
| pH by Meter | E108 | 1376516 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Total Mercury in Water by CVAAS | E508 | 1375801 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 1373620 | 2 | 17 | 11.7 | 5.0 | ✓ |
| Turbidity by Nephelometry | E121 | 1375309 | 1 | 20 | 5.0 | 5.0 | ✓ |
| **Laboratory Control Samples (LCS)** | | | | | | | |
| Colour (True) by Spectrometer (5 CU) | E329 | 1376521 | 1 | 5 | 20.0 | 5.0 | ✓ |
| Fluoride in Water by IC | E235.F | 1376509 | 1 | 11 | 9.0 | 5.0 | ✓ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 1376510 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 1376511 | 1 | 17 | 5.8 | 5.0 | ✓ |
| pH by Meter | E108 | 1376516 | 1 | 16 | 6.2 | 5.0 | ✓ |
| Total Mercury in Water by CVAAS | E508 | 1375801 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 1373620 | 1 | 17 | 5.8 | 5.0 | ✓ |
| Turbidity by Nephelometry | E121 | 1375309 | 1 | 20 | 5.0 | 5.0 | ✓ |
| **Method Blanks (MB)** | | | | | | | |
| Colour (True) by Spectrometer (5 CU) | E329 | 1376521 | 1 | 5 | 20.0 | 5.0 | ✓ |
| Fluoride in Water by IC | E235.F | 1376509 | 1 | 11 | 9.0 | 5.0 | ✓ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 1376510 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 1376511 | 1 | 17 | 5.8 | 5.0 | ✓ |
| Total Mercury in Water by CVAAS | E508 | 1375801 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 1373620 | 1 | 17 | 5.8 | 5.0 | ✓ |
| Turbidity by Nephelometry | E121 | 1375309 | 1 | 20 | 5.0 | 5.0 | ✓ |
| **Matrix Spikes (MS)** | | | | | | | |
| Fluoride in Water by IC | E235.F | 1376509 | 1 | 11 | 9.0 | 5.0 | ✓ |
| Nitrate in Water by IC (Low Level) | E235.NO3-L | 1376510 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Nitrite in Water by IC (Low Level) | E235.NO2-L | 1376511 | 1 | 17 | 5.8 | 5.0 | ✓ |
| Total Mercury in Water by CVAAS | E508 | 1375801 | 1 | 18 | 5.5 | 5.0 | ✓ |
| Total Metals in Water by CRC ICPMS | E420 | 1373620 | 1 | 17 | 5.8 | 5.0 | ✓ |

## Methodology References and Summaries

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

| Analytical Methods | Method / Lab | Matrix | Method Reference | Method Descriptions |
|---|---|---|---|---|
| pH by Meter | E108<br>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. |
| Turbidity by Nephelometry | E121<br>ALS Environmental - Vancouver | Water | APHA 2130 B (mod) | Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions. |
| Fluoride in Water by IC | E235.F<br>ALS Environmental - Vancouver | Water | EPA 300.1 (mod) | Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection. |
| Nitrite in Water by IC (Low Level) | E235.NO2-L<br>ALS Environmental - Vancouver | Water | EPA 300.1 (mod) | Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection. |
| Nitrate in Water by IC (Low Level) | E235.NO3-L<br>ALS Environmental - Vancouver | Water | EPA 300.1 (mod) | Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection. |
| Colour (True) by Spectrometer (5 CU) | E329<br>ALS Environmental - Vancouver | Water | APHA 2120 C (mod) | Colour (True Colour) is determined by filtering a sample through a 0.45 micron membrane filter followed by analysis of the filtrate using the platinum-cobalt colourimetric method. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment. |
| Total Metals in Water by CRC ICPMS | E420<br>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.<br><br>Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method. |
| Total Mercury in Water by CVAAS | E508<br>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 |
| Hardness (Calculated) from Total Ca/Mg | EC100A<br>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. |

# QUALITY CONTROL REPORT

| | | | |
|---|---|---|---|
| **Work Order** | : **VA24A5730** | Page | : 1 of 10 |
| **Amendment** | : **1** | | |
| Client | : District of Hope | Laboratory | : ALS Environmental - Vancouver |
| Contact | : Steve Glasson | Account Manager | : Sneha Sansare |
| Address | : 1225 Nelson Ave PO Box 609<br>Hope BC Canada V0X 1L0 | Address | : 8081 Lougheed Highway<br>Burnaby, British Columbia Canada V5A 1W9 |
| Telephone | : | Telephone | : +1 604 253 4188 |
| Project | : 2024 metals testing | Date Samples Received | : 19-Mar-2024 11:20 |
| PO | : 3064 | Date Analysis Commenced | : 20-Mar-2024 |
| C-O-C number | : ---- | Issue Date | : 04-Apr-2024 12:58 |
| Sampler | : ---- ---- | | |
| Site | : ---- | | |
| Quote number | : Q36001 - 2024 metals testing | | |
| No. of samples received | : 4 | | |
| No. of samples analysed | : 4 | | |

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

This Quality Control Report contains the following information:

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

## *Signatories*

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

| *Signatories* | *Position* | *Laboratory Department* |
|---|---|---|
| Kevin Duarte | Supervisor - Metals ICP Instrumentation | Vancouver Metals, Burnaby, British Columbia |
| Sam Silveira | Analyst | Vancouver Metals, Burnaby, British Columbia |
| 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* |
| **Physical Tests (QC Lot: 1375309)** | | | | | | | | | | | |
| KS2400917-001 | Anonymous | Turbidity | ---- | E121 | 0.10 | NTU | <0.10 | <0.10 | 0 | Diff <2x LOR | ---- |
| **Physical Tests (QC Lot: 1376516)** | | | | | | | | | | | |
| VA24A5797-001 | Anonymous | pH | ---- | E108 | 0.10 | pH units | 7.61 | 7.61 | 0.00% | 4% | ---- |
| **Physical Tests (QC Lot: 1376521)** | | | | | | | | | | | |
| VA24A5797-001 | Anonymous | Colour, true | ---- | E329 | 5.0 | CU | 20.9 | 22.7 | 1.9 | Diff <2x LOR | ---- |
| **Anions and Nutrients (QC Lot: 1376509)** | | | | | | | | | | | |
| VA24A5763-001 | Anonymous | Fluoride | 16984-48-8 | E235.F | 0.020 | mg/L | 0.028 | 0.028 | 0.0002 | Diff <2x LOR | ---- |
| **Anions and Nutrients (QC Lot: 1376510)** | | | | | | | | | | | |
| VA24A5763-001 | Anonymous | Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.0050 | mg/L | 0.634 | 0.633 | 0.0237% | 20% | ---- |
| **Anions and Nutrients (QC Lot: 1376511)** | | | | | | | | | | | |
| VA24A5763-001 | Anonymous | Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.0010 | mg/L | 0.0057 | 0.0058 | 0.0001 | Diff <2x LOR | ---- |
| **Total Metals (QC Lot: 1373620)** | | | | | | | | | | | |
| VA24A5794-001 | Anonymous | Aluminum, total | 7429-90-5 | E420 | 0.0030 | mg/L | 0.0282 | 0.0309 | 0.0027 | Diff <2x LOR | ---- |
| VA24A5794-001 | Anonymous | Antimony, total | 7440-36-0 | E420 | 0.00010 | mg/L | 0.0111 | 0.0109 | 1.42% | 20% | ---- |
| | | Arsenic, total | 7440-38-2 | E420 | 0.00010 | mg/L | 0.00507 | 0.00507 | 0.0534% | 20% | ---- |
| | | Barium, total | 7440-39-3 | E420 | 0.00010 | mg/L | 0.0427 | 0.0427 | 0.178% | 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 | 0.114 | 0.115 | 0.504% | 20% | ---- |
| | | Cadmium, total | 7440-43-9 | E420 | 0.0000050 | mg/L | 0.0000221 | 0.0000260 | 0.0000039 | Diff <2x LOR | ---- |
| | | Calcium, total | 7440-70-2 | E420 | 0.050 | mg/L | 25.2 | 25.9 | 2.95% | 20% | ---- |
| | | Cesium, total | 7440-46-2 | E420 | 0.000010 | mg/L | 0.00254 | 0.00252 | 0.706% | 20% | ---- |
| | | Chromium, total | 7440-47-3 | E420 | 0.00050 | mg/L | <0.00050 | <0.00050 | 0 | Diff <2x LOR | ---- |
| | | Cobalt, total | 7440-48-4 | E420 | 0.00010 | mg/L | <0.00010 | <0.00010 | 0 | Diff <2x LOR | ---- |
| | | Copper, total | 7440-50-8 | E420 | 0.00050 | mg/L | <0.00050 | <0.00050 | 0 | Diff <2x LOR | ---- |
| | | Iron, total | 7439-89-6 | E420 | 0.010 | mg/L | <0.010 | <0.010 | 0 | Diff <2x LOR | ---- |
| | | Lead, total | 7439-92-1 | E420 | 0.000050 | mg/L | 0.000212 | 0.000215 | 0.000002 | Diff <2x LOR | ---- |
| | | Lithium, total | 7439-93-2 | E420 | 0.0010 | mg/L | 0.0599 | 0.0618 | 3.22% | 20% | ---- |
| | | Magnesium, total | 7439-95-4 | E420 | 0.0050 | mg/L | 1.95 | 1.96 | 0.370% | 20% | ---- |
| | | Manganese, total | 7439-96-5 | E420 | 0.00010 | mg/L | 0.0813 | 0.0815 | 0.182% | 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: 1373620) - continued** | | | | | | | | | | | |
| VA24A5794-001 | Anonymous | Molybdenum, total | 7439-98-7 | E420 | 0.000050 | mg/L | 0.0117 | 0.0115 | 1.52% | 20% | ---- |
| | | Nickel, total | 7440-02-0 | E420 | 0.00050 | mg/L | <0.00050 | <0.00050 | 0 | Diff <2x LOR | ---- |
| | | Phosphorus, total | 7723-14-0 | E420 | 0.050 | mg/L | <0.050 | <0.050 | 0 | Diff <2x LOR | ---- |
| | | Potassium, total | 7440-09-7 | E420 | 0.050 | mg/L | 15.1 | 15.0 | 1.08% | 20% | ---- |
| | | Rubidium, total | 7440-17-7 | E420 | 0.00020 | mg/L | 0.0188 | 0.0193 | 2.48% | 20% | ---- |
| | | Selenium, total | 7782-49-2 | E420 | 0.000050 | mg/L | 0.00104 | 0.00106 | 1.85% | 20% | ---- |
| | | Silicon, total | 7440-21-3 | E420 | 0.10 | mg/L | 1.74 | 1.74 | 0.264% | 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 | 35.8 | 35.0 | 2.09% | 20% | ---- |
| | | Strontium, total | 7440-24-6 | E420 | 0.00020 | mg/L | 0.524 | 0.517 | 1.50% | 20% | ---- |
| | | Sulfur, total | 7704-34-9 | E420 | 0.50 | mg/L | 26.2 | 26.2 | 0.0570% | 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 | 0.000053 | 0.000052 | 0.000001 | 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 | 0.00037 | 0.00040 | 0.00002 | Diff <2x LOR | ---- |
| | | Tungsten, total | 7440-33-7 | E420 | 0.00010 | mg/L | 0.00121 | 0.00121 | 0.189% | 20% | ---- |
| | | Uranium, total | 7440-61-1 | E420 | 0.000010 | mg/L | 0.000466 | 0.000472 | 1.28% | 20% | ---- |
| | | Vanadium, total | 7440-62-2 | E420 | 0.00050 | mg/L | <0.00050 | <0.00050 | 0 | Diff <2x LOR | ---- |
| | | Zinc, total | 7440-66-6 | E420 | 0.0030 | mg/L | <0.0030 | <0.0030 | 0 | Diff <2x LOR | ---- |
| | | Zirconium, total | 7440-67-7 | E420 | 0.00020 | mg/L | <0.00020 | <0.00020 | 0 | Diff <2x LOR | ---- |
| **Total Metals (QC Lot: 1375801)** | | | | | | | | | | | |
| FJ2400798-009 | Anonymous | Mercury, total | 7439-97-6 | E508 | 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: 1375309)** | | | | | | |
| Turbidity | ---- | E121 | 0.1 | NTU | <0.10 | ---- |
| **Physical Tests (QCLot: 1376521)** | | | | | | |
| Colour, true | ---- | E329 | 5 | CU | <5.0 | ---- |
| **Anions and Nutrients (QCLot: 1376509)** | | | | | | |
| Fluoride | 16984-48-8 | E235.F | 0.02 | mg/L | <0.020 | ---- |
| **Anions and Nutrients (QCLot: 1376510)** | | | | | | |
| Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.005 | mg/L | <0.0050 | ---- |
| **Anions and Nutrients (QCLot: 1376511)** | | | | | | |
| Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.001 | mg/L | <0.0010 | ---- |
| **Total Metals (QCLot: 1373620)** | | | | | | |
| Aluminum, total | 7429-90-5 | E420 | 0.003 | mg/L | <0.0030 | ---- |
| Antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| Arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| Barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| Beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | <0.000020 | ---- |
| Bismuth, total | 7440-69-9 | E420 | 0.00005 | mg/L | <0.000050 | ---- |
| Boron, total | 7440-42-8 | E420 | 0.01 | mg/L | <0.010 | ---- |
| Cadmium, total | 7440-43-9 | E420 | 0.000005 | mg/L | <0.0000050 | ---- |
| Calcium, total | 7440-70-2 | E420 | 0.05 | mg/L | <0.050 | ---- |
| Cesium, total | 7440-46-2 | E420 | 0.00001 | mg/L | <0.000010 | ---- |
| Chromium, total | 7440-47-3 | E420 | 0.0005 | mg/L | <0.00050 | ---- |
| Cobalt, total | 7440-48-4 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| Copper, total | 7440-50-8 | E420 | 0.0005 | mg/L | <0.00050 | ---- |
| Iron, total | 7439-89-6 | E420 | 0.01 | mg/L | <0.010 | ---- |
| Lead, total | 7439-92-1 | E420 | 0.00005 | mg/L | <0.000050 | ---- |
| Lithium, total | 7439-93-2 | E420 | 0.001 | mg/L | <0.0010 | ---- |
| Magnesium, total | 7439-95-4 | E420 | 0.005 | mg/L | <0.0050 | ---- |
| Manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | <0.00010 | ---- |
| Molybdenum, total | 7439-98-7 | E420 | 0.00005 | mg/L | <0.000050 | ---- |
| Nickel, total | 7440-02-0 | E420 | 0.0005 | mg/L | <0.00050 | ---- |
| Phosphorus, total | 7723-14-0 | E420 | 0.05 | mg/L | <0.050 | ---- |
| Potassium, total | 7440-09-7 | E420 | 0.05 | mg/L | <0.050 | ---- |

Sub-Matrix: **Water**

| Analyte | CAS Number | Method | LOR | Unit | Result | Qualifier |
|---|---|---|---|---|---|---|
| **Total Metals (QCLot: 1373620) - continued** | | | | | | |
| 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: 1375801)** | | | | | | |
| Mercury, total | 7439-97-6 | E508 | 0.000005 | mg/L | <0.0000050 | ---- |

## 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 | Concentration | LCS | Low | High | Qualifier |
| **Physical Tests (QCLot: 1375309)** | | | | | | | | | |
| Turbidity | ---- | E121 | 0.1 | NTU | 200 NTU | 101 | 85.0 | 115 | ---- |
| **Physical Tests (QCLot: 1376516)** | | | | | | | | | |
| pH | ---- | E108 | ---- | pH units | 7 pH units | 100 | 98.0 | 102 | ---- |
| **Physical Tests (QCLot: 1376521)** | | | | | | | | | |
| Colour, true | ---- | E329 | 5 | CU | 100 CU | 102 | 85.0 | 115 | ---- |
| **Anions and Nutrients (QCLot: 1376509)** | | | | | | | | | |
| Fluoride | 16984-48-8 | E235.F | 0.02 | mg/L | 1 mg/L | 96.0 | 90.0 | 110 | ---- |
| **Anions and Nutrients (QCLot: 1376510)** | | | | | | | | | |
| Nitrate (as N) | 14797-55-8 | E235.NO3-L | 0.005 | mg/L | 2.5 mg/L | 100 | 90.0 | 110 | ---- |
| **Anions and Nutrients (QCLot: 1376511)** | | | | | | | | | |
| Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.001 | mg/L | 0.5 mg/L | 93.6 | 90.0 | 110 | ---- |
| **Total Metals (QCLot: 1373620)** | | | | | | | | | |
| Aluminum, total | 7429-90-5 | E420 | 0.003 | mg/L | 2 mg/L | 102 | 80.0 | 120 | ---- |
| Antimony, total | 7440-36-0 | E420 | 0.0001 | mg/L | 1 mg/L | 107 | 80.0 | 120 | ---- |
| Arsenic, total | 7440-38-2 | E420 | 0.0001 | mg/L | 1 mg/L | 106 | 80.0 | 120 | ---- |
| Barium, total | 7440-39-3 | E420 | 0.0001 | mg/L | 0.25 mg/L | 102 | 80.0 | 120 | ---- |
| Beryllium, total | 7440-41-7 | E420 | 0.00002 | mg/L | 0.1 mg/L | 104 | 80.0 | 120 | ---- |
| Bismuth, total | 7440-69-9 | E420 | 0.00005 | mg/L | 1 mg/L | 99.9 | 80.0 | 120 | ---- |
| Boron, total | 7440-42-8 | E420 | 0.01 | mg/L | 1 mg/L | 104 | 80.0 | 120 | ---- |
| Cadmium, total | 7440-43-9 | E420 | 0.000005 | mg/L | 0.1 mg/L | 101 | 80.0 | 120 | ---- |
| Calcium, total | 7440-70-2 | E420 | 0.05 | mg/L | 50 mg/L | 102 | 80.0 | 120 | ---- |
| Cesium, total | 7440-46-2 | E420 | 0.00001 | mg/L | 0.05 mg/L | 106 | 80.0 | 120 | ---- |
| Chromium, total | 7440-47-3 | E420 | 0.0005 | mg/L | 0.25 mg/L | 101 | 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 | 100 | 80.0 | 120 | ---- |
| Iron, total | 7439-89-6 | E420 | 0.01 | mg/L | 1 mg/L | 98.9 | 80.0 | 120 | ---- |
| Lead, total | 7439-92-1 | E420 | 0.00005 | mg/L | 0.5 mg/L | 100 | 80.0 | 120 | ---- |
| Lithium, total | 7439-93-2 | E420 | 0.001 | mg/L | 0.25 mg/L | 93.6 | 80.0 | 120 | ---- |
| Magnesium, total | 7439-95-4 | E420 | 0.005 | mg/L | 50 mg/L | 109 | 80.0 | 120 | ---- |
| Manganese, total | 7439-96-5 | E420 | 0.0001 | mg/L | 0.25 mg/L | 101 | 80.0 | 120 | ---- |
| Molybdenum, total | 7439-98-7 | E420 | 0.00005 | mg/L | 0.25 mg/L | 104 | 80.0 | 120 | ---- |

Sub-Matrix: **Water**

| Analyte | CAS Number | Method | LOR | Unit | Laboratory Control Sample (LCS) Report | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Spike | Recovery (%) | Recovery Limits (%) | | |
| | | | | | Concentration | LCS | Low | High | Qualifier |
| **Total Metals (QCLot: 1373620) - continued** | | | | | | | | | |
| Nickel, total | 7440-02-0 | E420 | 0.0005 | mg/L | 0.5 mg/L | 101 | 80.0 | 120 | ---- |
| Phosphorus, total | 7723-14-0 | E420 | 0.05 | mg/L | 10 mg/L | 111 | 80.0 | 120 | ---- |
| Potassium, total | 7440-09-7 | E420 | 0.05 | mg/L | 50 mg/L | 98.4 | 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 | 105 | 80.0 | 120 | ---- |
| Silicon, total | 7440-21-3 | E420 | 0.1 | mg/L | 10 mg/L | 102 | 80.0 | 120 | ---- |
| Silver, total | 7440-22-4 | E420 | 0.00001 | mg/L | 0.1 mg/L | 98.8 | 80.0 | 120 | ---- |
| Sodium, total | 7440-23-5 | E420 | 0.05 | mg/L | 50 mg/L | 105 | 80.0 | 120 | ---- |
| Strontium, total | 7440-24-6 | E420 | 0.0002 | mg/L | 0.25 mg/L | 101 | 80.0 | 120 | ---- |
| Sulfur, total | 7704-34-9 | E420 | 0.5 | mg/L | 50 mg/L | 94.3 | 80.0 | 120 | ---- |
| Tellurium, total | 13494-80-9 | E420 | 0.0002 | mg/L | 0.1 mg/L | 107 | 80.0 | 120 | ---- |
| Thallium, total | 7440-28-0 | E420 | 0.00001 | mg/L | 1 mg/L | 99.6 | 80.0 | 120 | ---- |
| Thorium, total | 7440-29-1 | E420 | 0.0001 | mg/L | 0.1 mg/L | 102 | 80.0 | 120 | ---- |
| Tin, total | 7440-31-5 | E420 | 0.0001 | mg/L | 0.5 mg/L | 106 | 80.0 | 120 | ---- |
| Titanium, total | 7440-32-6 | E420 | 0.0003 | mg/L | 0.25 mg/L | 100 | 80.0 | 120 | ---- |
| Tungsten, total | 7440-33-7 | E420 | 0.0001 | mg/L | 0.1 mg/L | 101 | 80.0 | 120 | ---- |
| Uranium, total | 7440-61-1 | E420 | 0.00001 | mg/L | 0.005 mg/L | 105 | 80.0 | 120 | ---- |
| Vanadium, total | 7440-62-2 | E420 | 0.0005 | mg/L | 0.5 mg/L | 102 | 80.0 | 120 | ---- |
| Zinc, total | 7440-66-6 | E420 | 0.003 | mg/L | 0.5 mg/L | 98.8 | 80.0 | 120 | ---- |
| Zirconium, total | 7440-67-7 | E420 | 0.0002 | mg/L | 0.1 mg/L | 104 | 80.0 | 120 | ---- |
| **Total Metals (QCLot: 1375801)** | | | | | | | | | |
| Mercury, total | 7439-97-6 | E508 | 0.000005 | mg/L | 0.0001 mg/L | 102 | 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 |
| **Anions and Nutrients (QCLot: 1376509)** | | | | | | | | | | |
| VA24A5763-002 | Anonymous | Fluoride | 16984-48-8 | E235.F | 1.03 mg/L | 1 mg/L | 103 | 75.0 | 125 | ---- |
| **Anions and Nutrients (QCLot: 1376510)** | | | | | | | | | | |
| VA24A5763-002 | Anonymous | Nitrate (as N) | 14797-55-8 | E235.NO3-L | 2.56 mg/L | 2.5 mg/L | 102 | 75.0 | 125 | ---- |
| **Anions and Nutrients (QCLot: 1376511)** | | | | | | | | | | |
| VA24A5763-002 | Anonymous | Nitrite (as N) | 14797-65-0 | E235.NO2-L | 0.489 mg/L | 0.5 mg/L | 97.8 | 75.0 | 125 | ---- |
| **Total Metals (QCLot: 1373620)** | | | | | | | | | | |
| VA24A5794-002 | Anonymous | Aluminum, total | 7429-90-5 | E420 | 0.197 mg/L | 0.2 mg/L | 98.6 | 70.0 | 130 | ---- |
| | | Antimony, total | 7440-36-0 | E420 | 0.0196 mg/L | 0.02 mg/L | 97.9 | 70.0 | 130 | ---- |
| | | Arsenic, total | 7440-38-2 | E420 | 0.0199 mg/L | 0.02 mg/L | 99.3 | 70.0 | 130 | ---- |
| | | Barium, total | 7440-39-3 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Beryllium, total | 7440-41-7 | E420 | 0.0372 mg/L | 0.04 mg/L | 93.1 | 70.0 | 130 | ---- |
| | | Bismuth, total | 7440-69-9 | E420 | 0.00907 mg/L | 0.01 mg/L | 90.7 | 70.0 | 130 | ---- |
| | | Boron, total | 7440-42-8 | E420 | ND mg/L | 0.1 mg/L | ND | 70.0 | 130 | ---- |
| | | Cadmium, total | 7440-43-9 | E420 | 0.00384 mg/L | 0.004 mg/L | 96.1 | 70.0 | 130 | ---- |
| | | Calcium, total | 7440-70-2 | E420 | ND mg/L | 4 mg/L | ND | 70.0 | 130 | ---- |
| | | Cesium, total | 7440-46-2 | E420 | 0.00970 mg/L | 0.01 mg/L | 97.0 | 70.0 | 130 | ---- |
| | | Chromium, total | 7440-47-3 | E420 | 0.0381 mg/L | 0.04 mg/L | 95.3 | 70.0 | 130 | ---- |
| | | Cobalt, total | 7440-48-4 | E420 | 0.0190 mg/L | 0.02 mg/L | 95.2 | 70.0 | 130 | ---- |
| | | Copper, total | 7440-50-8 | E420 | 0.0189 mg/L | 0.02 mg/L | 94.6 | 70.0 | 130 | ---- |
| | | Iron, total | 7439-89-6 | E420 | 1.88 mg/L | 2 mg/L | 93.9 | 70.0 | 130 | ---- |
| | | Lead, total | 7439-92-1 | E420 | 0.0182 mg/L | 0.02 mg/L | 91.2 | 70.0 | 130 | ---- |
| | | Lithium, total | 7439-93-2 | E420 | 0.0812 mg/L | 0.1 mg/L | 81.2 | 70.0 | 130 | ---- |
| | | Magnesium, total | 7439-95-4 | E420 | ND mg/L | 1 mg/L | ND | 70.0 | 130 | ---- |
| | | Manganese, total | 7439-96-5 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Molybdenum, total | 7439-98-7 | E420 | 0.0196 mg/L | 0.02 mg/L | 98.3 | 70.0 | 130 | ---- |
| | | Nickel, total | 7440-02-0 | E420 | 0.0382 mg/L | 0.04 mg/L | 95.4 | 70.0 | 130 | ---- |
| | | Phosphorus, total | 7723-14-0 | E420 | 9.95 mg/L | 10 mg/L | 99.5 | 70.0 | 130 | ---- |
| | | Potassium, total | 7440-09-7 | E420 | ND mg/L | 4 mg/L | ND | 70.0 | 130 | ---- |
| | | Rubidium, total | 7440-17-7 | E420 | 0.0184 mg/L | 0.02 mg/L | 91.8 | 70.0 | 130 | ---- |
| | | Selenium, total | 7782-49-2 | E420 | 0.0396 mg/L | 0.04 mg/L | 99.0 | 70.0 | 130 | ---- |
| | | Silicon, total | 7440-21-3 | E420 | 9.38 mg/L | 10 mg/L | 93.8 | 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 |
| **Total Metals (QCLot: 1373620) - continued** | | | | | | | | | | |
| VA24A5794-002 | Anonymous | Silver, total | 7440-22-4 | E420 | 0.00384 mg/L | 0.004 mg/L | 96.0 | 70.0 | 130 | ---- |
| | | Sodium, total | 7440-23-5 | E420 | ND mg/L | 2 mg/L | ND | 70.0 | 130 | ---- |
| | | Strontium, total | 7440-24-6 | E420 | ND mg/L | 0.02 mg/L | ND | 70.0 | 130 | ---- |
| | | Sulfur, total | 7704-34-9 | E420 | ND mg/L | 20 mg/L | ND | 70.0 | 130 | ---- |
| | | Tellurium, total | 13494-80-9 | E420 | 0.0410 mg/L | 0.04 mg/L | 103 | 70.0 | 130 | ---- |
| | | Thallium, total | 7440-28-0 | E420 | 0.00350 mg/L | 0.004 mg/L | 87.6 | 70.0 | 130 | ---- |
| | | Thorium, total | 7440-29-1 | E420 | 0.0186 mg/L | 0.02 mg/L | 93.2 | 70.0 | 130 | ---- |
| | | Tin, total | 7440-31-5 | E420 | 0.0201 mg/L | 0.02 mg/L | 100 | 70.0 | 130 | ---- |
| | | Titanium, total | 7440-32-6 | E420 | 0.0394 mg/L | 0.04 mg/L | 98.5 | 70.0 | 130 | ---- |
| | | Tungsten, total | 7440-33-7 | E420 | 0.0185 mg/L | 0.02 mg/L | 92.7 | 70.0 | 130 | ---- |
| | | Uranium, total | 7440-61-1 | E420 | 0.00372 mg/L | 0.004 mg/L | 93.1 | 70.0 | 130 | ---- |
| | | Vanadium, total | 7440-62-2 | E420 | 0.0970 mg/L | 0.1 mg/L | 97.0 | 70.0 | 130 | ---- |
| | | Zinc, total | 7440-66-6 | E420 | 0.384 mg/L | 0.4 mg/L | 96.0 | 70.0 | 130 | ---- |
| | | Zirconium, total | 7440-67-7 | E420 | 0.0404 mg/L | 0.04 mg/L | 101 | 70.0 | 130 | ---- |
| **Total Metals (QCLot: 1375801)** | | | | | | | | | | |
| FJ2400798-012 | Anonymous | Mercury, total | 7439-97-6 | E508 | 0.000101 mg/L | 0.0001 mg/L | 101 | 70.0 | 130 | ---- |

# 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: | District of Hope |
| Contact: | Steve Glasson |
| Phone: | 604-860-9527 |
| | Company address below will appear on the final report |
| Street: | 1225 Nelson Ave |
| City/Province: | Hope BC |
| Postal Code: | V0X1L4 |
| 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: sglasson@hope.ca
Email 2: bclarke@hope.ca
Email 3: tfoster@hope.ca

**Invoice Distribution**

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: tfoster@hope.ca
Email 2: sglasson@hope.ca

**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 [E1 - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 - 200%] (Laboratory opening fees may apply) ] ☐

Date and Time Required for all E&P TATs:

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

| Project Information | | Oil and Gas Required Fields (client use) | |
|---|---|---|---|
| ALS Account # / Quote #: | | AFE/Cost Center: | PO# |
| Job #: | | Major/Minor Code: | Routing Code: |
| PO / AFE: | 3064 | Requisitioner: | |
| LSD: | | Location: | |
| ALS Lab Work Order # (lab use only): | | ALS Contact: | Sampler: |

**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 | TOTAL METALS | PH HARDNESS | TURBIDITY/COLOR | TOTAL MERCURY | NITRATE/NITRITE | FLOURIDE | SAMPLES ON HOLD | Sample is hazardous (please provide further detail) | NUMBER OF CONTAINERS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SILVER CREEK WATER SYSTEM | 24-Mar-19 | 7:45AM | Water | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | N | 6 |
| | DISTRICT OF HOPE WATER SYSTEM 87 ZONE | 24-Mar-19 | 8:00AM | Water | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | N | 6 |
| | DISTRICT OF HOPE WATER SYSTEM 138 ZONE | 24-Mar-19 | 8:20AM | Water | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | N | 6 |
| | EAST KAWKAWA LAKE WATER SYSTEM | 24-Mar-19 | 8:35AM | Water | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | N | 6 |

Environmental Division
Vancouver
Work Order Reference
VA24A5730

Telephone : +1 604 253 4188

| Drinking Water (DW) Samples[1] (client use) | Special Instructions |
|---|---|
| Are samples taken from a Regulated DW System? ☑ YES ☐ NO | |
| Are samples for human consumption/ use? ☑ YES ☐ NO | |

...e drop-down list below

**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 | | |

| SHIPMENT RELEASE (client use) | | | ...N (lab use only) | | FINAL SHIPMENT RECEPTION (lab use only) | | |
|---|---|---|---|---|---|---|---|
| DAN MCMILLAN | | Time: 11:25 | | Time: | Received by: JC | Date: 19-3-24 | Time: 1120 |

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SEPT 2017 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**.

# Sample Range Report

Fraser Health Authority

**Facility Name:** District of Hope Water System
**Date Range:** Jan 1 2024 to Dec 31 2024

**Operator** Steve Glasson
325 Wallace Street
PO Box 609
Hope, BC V0X 1L0

| Sampling Site | Date Collected | Total Coliform | E. Coli | Fecal Coliform |
|---|---|---|---|---|
| Fraser Canyon Hospital, 1275 7th Avenue | | | | |
| | 1-2-2024 9:40:00 AM | LT1 | LT1 | |
| | 1-9-2024 11:20:00 AM | LT1 | LT1 | |
| | 1-16-2024 9:55:00 AM | QRWRT | QRWRT | |
| | 1-23-2024 9:30:00 AM | LT1 | LT1 | |
| | 1-30-2024 9:45:00 AM | LT1 | LT1 | |
| | 2-6-2024 9:55:00 AM | LT1 | LT1 | |
| | 2-13-2024 9:45:00 AM | LT1 | LT1 | |
| | 2-20-2024 9:50:00 AM | LT1 | LT1 | |
| | 2-27-2024 10:15:00 AM | LT1 | LT1 | |
| | 3-5-2024 9:30:00 AM | LT1 | LT1 | |
| | 3-12-2024 9:25:00 AM | LT1 | LT1 | |
| | 3-19-2024 10:10:00 AM | LT1 | LT1 | |
| | 3-26-2024 9:25:00 AM | LT1 | LT1 | |
| | 4-2-2024 9:45:00 AM | LT1 | LT1 | |
| | 4-9-2024 9:30:00 AM | 1 | LT1 | |
| | 4-16-2024 7:45:00 AM | LT1 | LT1 | |
| | 4-23-2024 7:40:00 AM | LT1 | LT1 | |
| | 4-29-2024 9:30:00 AM | LT1 | LT1 | |
| | 5-7-2024 9:35:00 AM | LT1 | LT1 | |

| | | |
|---|---|---|
| 5-14-2024 9:30:00 AM | LT1 | LT1 |
| 5-21-2024 9:35:00 AM | LT1 | LT1 |
| 5-28-2024 9:55:00 AM | LT1 | LT1 |
| 6-4-2024 9:50:00 AM | LT1 | LT1 |
| 6-11-2024 10:00:00 AM | LT1 | LT1 |
| 6-18-2024 9:40:00 AM | LT1 | LT1 |
| 6-25-2024 10:05:00 AM | LT1 | LT1 |
| 7-2-2024 9:40:00 AM | LT1 | LT1 |
| 7-9-2024 9:30:00 AM | LT1 | LT1 |
| 7-16-2024 9:20:00 AM | LT1 | LT1 |
| 7-23-2024 9:40:00 AM | LT1 | LT1 |
| 7-30-2024 9:35:00 AM | LT1 | LT1 |
| 8-6-2024 10:15:00 AM | LT1 | LT1 |
| 8-13-2024 9:40:00 AM | LT1 | LT1 |
| 8-20-2024 9:15:00 AM | LT1 | LT1 |
| 8-27-2024 9:35:00 AM | LT1 | LT1 |
| 9-3-2024 9:14:00 AM | LT1 | LT1 |
| 9-10-2024 9:30:00 AM | LT1 | LT1 |
| 9-17-2024 9:50:00 AM | LT1 | LT1 |
| 9-24-2024 10:00:00 AM | LT1 | LT1 |
| 10-1-2024 10:00:00 AM | LT1 | LT1 |
| 10-7-2024 8:37:00 AM | LT1 | LT1 |
| 10-7-2024 9:55:00 AM | LT1 | LT1 |
| 10-15-2024 9:50:00 AM | LT1 | LT1 |
| 10-22-2024 10:15:00 AM | LT1 | LT1 |
| 10-29-2024 9:50:00 AM | LT1 | LT1 |
| 11-5-2024 9:45:00 AM | LT1 | LT1 |
| 11-12-2024 11:43:00 AM | LT1 | LT1 |

| | | | | |
|---|---|---|---|---|
| | 11-19-2024 9:35:00 AM | LT1 | LT1 | |
| | 11-26-2024 9:20:00 AM | LT1 | LT1 | |
| | 12-3-2024 9:45:00 AM | LT1 | LT1 | |
| | 12-10-2024 10:10:00 AM | LT1 | LT1 | |
| | 12-17-2024 9:35:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **1** | **0** | **0** |
| District Hall, 325 Wallace Street | | | | |
| | 1-2-2024 11:25:00 AM | LT1 | LT1 | |
| | 1-9-2024 8:30:00 AM | LT1 | LT1 | |
| | 1-16-2024 11:55:00 AM | QRWRT | QRWRT | |
| | 1-23-2024 11:10:00 AM | LT1 | LT1 | |
| | 1-30-2024 11:20:00 AM | LT1 | LT1 | |
| | 2-6-2024 11:35:00 AM | LT1 | LT1 | |
| | 2-13-2024 11:50:00 AM | LT1 | LT1 | |
| | 2-20-2024 11:25:00 AM | LT1 | LT1 | |
| | 2-27-2024 11:40:00 AM | LT1 | LT1 | |
| | 3-5-2024 11:10:00 AM | LT1 | LT1 | |
| | 3-12-2024 11:15:00 AM | LT1 | LT1 | |
| | 3-19-2024 11:40:00 AM | LT1 | LT1 | |
| | 3-26-2024 11:15:00 AM | LT1 | LT1 | |
| | 4-2-2024 11:50:00 AM | LT1 | LT1 | |
| | 4-9-2024 11:15:00 AM | LT1 | LT1 | |
| | 4-16-2024 10:10:00 AM | LT1 | LT1 | |
| | 4-23-2024 10:25:00 AM | LT1 | LT1 | |
| | 4-29-2024 11:30:00 AM | 24 | LT1 | |
| | 5-7-2024 11:30:00 AM | LT1 | LT1 | |
| | 5-14-2024 11:30:00 AM | LT1 | LT1 | |
| | 5-21-2024 11:35:00 | 7 | LT1 | |

| | | |
|---|---|---|
| AM | | |
| 5-28-2024 11:25:00 AM | LT1 | LT1 |
| 6-4-2024 11:45:00 AM | 1 | LT1 |
| 6-11-2024 11:30:00 AM | LT1 | LT1 |
| 6-18-2024 11:30:00 AM | LT1 | LT1 |
| 6-25-2024 12:00:00 PM | LT1 | LT1 |
| 7-2-2024 11:15:00 AM | LT1 | LT1 |
| 7-9-2024 11:45:00 AM | LT1 | LT1 |
| 7-16-2024 11:15:00 AM | LT1 | LT1 |
| 7-23-2024 8:40:00 AM | LT1 | LT1 |
| 7-30-2024 11:45:00 AM | LT1 | LT1 |
| 8-6-2024 8:35:00 AM | LT1 | LT1 |
| 8-13-2024 8:40:00 AM | LT1 | LT1 |
| 8-20-2024 11:00:00 AM | LT1 | LT1 |
| 8-27-2024 8:25:00 AM | LT1 | LT1 |
| 9-3-2024 10:26:00 AM | LT1 | LT1 |
| 9-10-2024 8:35:00 AM | LT1 | LT1 |
| 9-17-2024 8:35:00 AM | LT1 | LT1 |
| 9-24-2024 11:45:00 AM | LT1 | LT1 |
| 10-1-2024 8:45:00 AM | LT1 | LT1 |
| 10-7-2024 8:40:00 AM | LT1 | LT1 |
| 10-15-2024 8:40:00 AM | LT1 | LT1 |
| 10-22-2024 8:00:00 AM | LT1 | LT1 |
| 10-29-2024 8:45:00 AM | LT1 | LT1 |
| 11-5-2024 12:15:00 PM | LT1 | LT1 |
| 11-12-2024 9:22:00 AM | LT1 | LT1 |
| 11-19-2024 8:35:00 AM | LT1 | LT1 |
| 11-26-2024 11:45:00 AM | LT1 | LT1 |
| 12-3-2024 8:50:00 | LT1 | LT1 |

| | | | | |
|---|---|---|---|---|
| | AM | | | |
| | 12-10-2024 7:30:00 AM | LT1 | LT1 | |
| | 12-17-2024 8:35:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **3** | **0** | **0** |
| Well 1, Hope Fire Hall - Third Ave | | | | |
| | 2-20-2024 8:50:00 AM | LT1 | LT1 | |
| | 3-26-2024 8:45:00 AM | LT1 | LT1 | |
| | 4-9-2024 8:45:00 AM | LT1 | LT1 | |
| | 4-29-2024 7:30:00 AM | 38 | LT1 | |
| | 5-21-2024 8:35:00 AM | LT1 | LT1 | |
| | 6-11-2024 8:50:00 AM | LT1 | LT1 | |
| | 7-23-2024 8:35:00 AM | LT1 | LT1 | |
| | 8-6-2024 9:10:00 AM | LT1 | LT1 | |
| | 8-13-2024 8:35:00 AM | LT1 | LT1 | |
| | 9-3-2024 7:40:00 AM | LT1 | LT1 | |
| | 9-17-2024 8:29:00 AM | LT1 | LT1 | |
| | 10-29-2024 8:40:00 AM | LT1 | LT1 | |
| | 11-12-2024 8:43:00 AM | LT1 | LT1 | |
| | 11-26-2024 7:35:00 AM | LT1 | LT1 | |
| | 12-3-2024 8:40:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **1** | **0** | **0** |
| Well 2, 110 King Street | | | | |
| | 1-2-2024 8:50:00 AM | LT1 | LT1 | |
| | 1-23-2024 8:45:00 AM | LT1 | LT1 | |
| | 2-13-2024 8:10:00 AM | LT1 | LT1 | |
| | 3-12-2024 8:40:00 AM | LT1 | LT1 | |
| | 4-16-2024 9:20:00 AM | LT1 | LT1 | |
| | 5-14-2024 8:35:00 | LT1 | LT1 | |

| | | | | |
|---|---|---|---|---|
| | AM | | | |
| | 5-28-2024 8:50:00 AM | LT1 | LT1 | |
| | 6-11-2024 9:05:00 AM | LT1 | LT1 | |
| | 7-9-2024 8:10:00 AM | LT1 | LT1 | |
| | 8-6-2024 9:15:00 AM | LT1 | LT1 | |
| | 8-20-2024 7:30:00 AM | LT1 | LT1 | |
| | 8-27-2024 8:35:00 AM | LT1 | LT1 | |
| | 10-1-2024 9:25:00 AM | LT1 | LT1 | |
| | 10-7-2024 8:55:00 AM | LT1 | LT1 | |
| | 10-15-2024 8:50:00 AM | LT1 | LT1 | |
| | 10-22-2024 8:10:00 AM | LT1 | LT1 | |
| | 10-29-2024 8:55:00 AM | LT1 | LT1 | |
| | 11-5-2024 12:05:00 PM | LT1 | LT1 | |
| | 11-19-2024 8:45:00 AM | LT1 | LT1 | |
| | 12-17-2024 8:45:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| 7th Avenue Sampling Port, 225 7th Ave | | | | |
| | 1-2-2024 9:30:00 AM | LT1 | LT1 | |
| | 1-9-2024 9:30:00 AM | LT1 | LT1 | |
| | 1-16-2024 11:45:00 AM | QRWRT | QRWRT | |
| | 1-23-2024 9:20:00 AM | LT1 | LT1 | |
| | 1-30-2024 9:20:00 AM | LT1 | LT1 | |
| | 2-6-2024 9:25:00 AM | LT1 | LT1 | |
| | 2-13-2024 11:45:00 AM | LT1 | LT1 | |
| | 2-20-2024 9:30:00 AM | LT1 | LT1 | |
| | 2-27-2024 9:40:00 AM | LT1 | LT1 | |
| | 3-5-2024 9:05:00 AM | LT1 | LT1 | |
| | 3-12-2024 9:15:00 | LT1 | LT1 | |

| | | |
|---|---|---|
| AM | | |
| 3-19-2024 11:30:00 AM | LT1 | LT1 |
| 3-26-2024 9:15:00 AM | LT1 | LT1 |
| 4-2-2024 11:48:00 AM | LT1 | LT1 |
| 4-9-2024 9:15:00 AM | LT1 | LT1 |
| 4-16-2024 9:10:00 AM | LT1 | LT1 |
| 4-23-2024 9:15:00 AM | LT1 | LT1 |
| 4-29-2024 11:59:00 AM | LT1 | LT1 |
| 5-7-2024 9:15:00 AM | LT1 | LT1 |
| 5-14-2024 9:15:00 AM | LT1 | LT1 |
| 5-28-2024 9:30:00 AM | LT1 | LT1 |
| 6-4-2024 11:40:00 AM | LT1 | LT1 |
| 6-11-2024 9:45:00 AM | LT1 | LT1 |
| 6-18-2024 9:20:00 AM | LT1 | LT1 |
| 6-25-2024 10:00:00 AM | LT1 | LT1 |
| 7-2-2024 9:15:00 AM | LT1 | LT1 |
| 7-9-2024 9:45:00 AM | 124 | LT1 |
| **7-16-2024 9:10:00 AM** | **16** | **LT1** |
| **7-23-2024 11:10:00 AM** | **18** | **LT1** |
| **7-30-2024 11:35:00 AM** | **43** | **LT1** |
| 8-6-2024 9:55:00 AM | LT1 | LT1 |
| 8-13-2024 9:20:00 AM | 7 | LT1 |
| **8-20-2024 10:45:00 AM** | **11** | **LT1** |
| **8-27-2024 9:15:00 AM** | **ESTCT 200 ESTHCD** | **LT1** |
| 9-3-2024 10:35:00 AM | LT1 | LT1 |
| 9-10-2024 9:15:00 AM | LT1 | LT1 |
| 9-17-2024 9:30:00 AM | LT1 | LT1 |
| 9-24-2024 11:30:00 AM | LT1 | LT1 |
| 10-1-2024 9:40:00 | LT1 | LT1 |

| | | | |
|---|---|---|---|
| AM | | | |
| 10-7-2024 9:20:00 AM | LT1 | LT1 | |
| 10-15-2024 9:15:00 AM | LT1 | LT1 | |
| 10-22-2024 8:15:00 AM | LT1 | LT1 | |
| 10-29-2024 9:30:00 AM | LT1 | LT1 | |
| 11-5-2024 11:55:00 AM | LT1 | LT1 | |
| 11-12-2024 9:14:00 AM | LT1 | LT1 | |
| 11-19-2024 9:15:00 AM | LT1 | LT1 | |
| 11-26-2024 11:30:00 AM | LT1 | LT1 | |
| 12-3-2024 9:25:00 AM | LT1 | LT1 | |
| 12-10-2024 10:00:00 AM | LT1 | LT1 | |
| 12-17-2024 9:15:00 AM | **LT1** | **LT1** | |
| **Total Positive:** | **7** | **0** | **0** |

| | | | |
|---|---|---|---|
| District Works Yard, 1225 Nelson Ave | | | |
| 1-2-2024 8:40:00 AM | LT1 | LT1 | |
| 1-9-2024 8:30:00 AM | LT1 | LT1 | |
| 1-16-2024 9:30:00 AM | QRWRT | QRWRT | |
| 1-23-2024 8:35:00 AM | LT1 | LT1 | |
| 1-30-2024 8:45:00 AM | LT1 | LT1 | |
| 2-6-2024 8:45:00 AM | LT1 | LT1 | |
| 2-13-2024 9:15:00 AM | LT1 | LT1 | |
| 2-20-2024 8:45:00 AM | LT1 | LT1 | |
| 2-27-2024 9:05:00 AM | LT1 | LT1 | |
| 3-5-2024 8:35:00 AM | LT1 | LT1 | |
| 3-12-2024 8:25:00 AM | LT1 | LT1 | |
| 3-19-2024 9:45:00 AM | LT1 | LT1 | |
| 3-26-2024 8:30:00 AM | LT1 | LT1 | |
| 4-2-2024 9:25:00 AM | LT1 | LT1 | |

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|---|---|---|
| 4-9-2024 8:35:00 AM | LT1 | LT1 |
| 4-16-2024 7:15:00 AM | LT1 | LT1 |
| 4-23-2024 7:25:00 AM | LT1 | LT1 |
| 4-29-2024 9:10:00 AM | LT1 | LT1 |
| 5-7-2024 8:30:00 AM | LT1 | LT1 |
| 5-14-2024 8:25:00 AM | 9.9 | LT1 |
| 5-21-2024 8:25:00 AM | LT1 | LT1 |
| 5-28-2024 8:35:00 AM | 3 | LT1 |
| 6-4-2024 9:20:00 AM | LT1 | LT1 |
| 6-11-2024 8:40:00 AM | LT1 | LT1 |
| 6-18-2024 8:25:00 AM | LT1 | LT1 |
| 6-25-2024 9:46:00 AM | LT1 | LT1 |
| 7-2-2024 8:25:00 AM | LT1 | LT1 |
| 7-9-2024 9:00:00 AM | LT1 | LT1 |
| 7-23-2024 8:25:00 AM | LT1 | LT1 |
| 7-30-2024 9:10:00 AM | LT1 | LT1 |
| 8-6-2024 9:00:00 AM | LT1 | LT1 |
| 8-13-2024 8:25:00 AM | LT1 | LT1 |
| 8-20-2024 8:50:00 AM | LT1 | LT1 |
| 8-27-2024 8:15:00 AM | LT1 | LT1 |
| 9-3-2024 7:55:00 AM | LT1 | LT1 |
| 9-10-2024 8:31:00 AM | LT1 | LT1 |
| 9-17-2024 8:25:00 AM | LT1 | LT1 |
| 9-24-2024 9:30:00 AM | LT1 | LT1 |
| 10-1-2024 8:40:00 AM | LT1 | LT1 |
| 10-7-2024 8:35:00 AM | LT1 | LT1 |
| 10-15-2024 8:25:00 AM | LT1 | LT1 |
| 10-22-2024 7:50:00 AM | LT1 | LT1 |

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|---|---|---|---|---|
| | 10-29-2024 8:31:00 AM | LT1 | LT1 | |
| | 11-5-2024 9:25:00 AM | LT1 | LT1 | |
| | 11-12-2024 12:00:00 PM | LT1 | LT1 | |
| | 11-19-2024 8:30:00 AM | LT1 | LT1 | |
| | 11-26-2024 9:00:00 AM | LT1 | LT1 | |
| | 12-3-2024 8:35:00 AM | LT1 | LT1 | |
| | 12-10-2024 9:35:00 AM | LT1 | LT1 | |
| | 12-17-2024 8:25:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **2** | **0** | **0** |
| Well #10, Hope | | | | |
| | 8-27-2024 9:25:00 AM | LT1 | LT1 | |
| | 9-24-2024 11:15:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| Well 10, Kawkawa Lk Rd | | | | |
| | 1-9-2024 10:08:00 AM | LT1 | LT1 | |
| | 2-27-2024 10:05:00 AM | LT1 | LT1 | |
| | 3-5-2024 9:20:00 AM | LT1 | LT1 | |
| | 4-2-2024 11:35:00 AM | LT1 | LT1 | |
| | 5-7-2024 9:25:00 AM | LT1 | LT1 | |
| | 5-28-2024 9:45:00 AM | LT1 | LT1 | |
| | 6-18-2024 9:30:00 AM | LT1 | LT1 | |
| | 7-30-2024 11:15:00 AM | LT1 | LT1 | |
| | 8-13-2024 9:30:00 AM | LT1 | LT1 | |
| | 9-17-2024 9:40:00 AM | LT1 | LT1 | |
| | 10-1-2024 9:50:00 AM | LT1 | LT1 | |
| | 10-7-2024 7:38:00 AM | LT1 | LT1 | |
| | 10-7-2024 9:30:00 AM | LT1 | LT1 | |
| | 11-5-2024 10:00:00 | LT1 | LT1 | |

| | | | | |
|---|---|---|---|---|
| | AM | | | |
| | 11-19-2024 9:25:00 AM | LT1 | LT1 | |
| | 12-10-2024 12:05:00 PM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| Well 3, | | | | |
| | 1-30-2024 9:35:00 AM | LT1 | LT1 | |
| | 2-6-2024 9:45:00 AM | LT1 | LT1 | |
| | 3-19-2024 11:15:00 AM | LT1 | LT1 | |
| | 4-23-2024 7:10:00 AM | LT1 | LT1 | |
| | 4-29-2024 9:35:00 AM | LT1 | LT1 | |
| | 5-21-2024 9:25:00 AM | LT1 | LT1 | |
| | 6-25-2024 11:30:00 AM | LT1 | LT1 | |
| | 7-2-2024 9:30:00 AM | LT1 | LT1 | |
| | 8-6-2024 10:10:00 AM | LT1 | LT1 | |
| | 9-10-2024 9:25:00 AM | LT1 | LT1 | |
| | 9-17-2024 9:45:00 AM | LT1 | LT1 | |
| | 10-15-2024 9:35:00 AM | LT1 | LT1 | |
| | 10-22-2024 12:10:00 PM | LT1 | LT1 | |
| | 11-12-2024 9:53:00 AM | LT1 | LT1 | |
| | 11-26-2024 11:15:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| Lakeview Cres Sampling Port, Opposite 21256 Lakeview Cres | | | | |
| | 1-2-2024 10:40:00 AM | LT1 | LT1 | |
| | 1-9-2024 11:00:00 AM | LT1 | LT1 | |
| | 1-16-2024 11:30:00 AM | QRWRT | QRWRT | |
| | 1-23-2024 10:20:00 AM | LT1 | LT1 | |
| | 1-30-2024 10:40:00 AM | LT1 | LT1 | |

| | | |
|---|---|---|
| 2-6-2024 10:45:00 AM | LT1 | LT1 |
| 2-13-2024 11:10:00 AM | LT1 | LT1 |
| 2-20-2024 10:40:00 AM | LT1 | LT1 |
| 2-27-2024 10:45:00 AM | LT1 | LT1 |
| 3-5-2024 10:10:00 AM | LT1 | LT1 |
| 3-12-2024 10:25:00 AM | LT1 | LT1 |
| 3-19-2024 11:05:00 AM | LT1 | LT1 |
| 3-26-2024 10:20:00 AM | LT1 | LT1 |
| 4-2-2024 11:05:00 AM | LT1 | LT1 |
| 4-9-2024 10:05:00 AM | LT1 | LT1 |
| 4-16-2024 8:15:00 AM | LT1 | LT1 |
| 4-23-2024 6:20:00 AM | LT1 | LT1 |
| 4-29-2024 10:15:00 AM | LT1 | LT1 |
| 5-7-2024 10:40:00 AM | NRLABE | NRLABE |
| 5-14-2024 10:25:00 AM | LT1 | LT1 |
| 5-21-2024 10:40:00 AM | LT1 | LT1 |
| 5-28-2024 10:45:00 AM | LT1 | LT1 |
| 6-4-2024 11:00:00 AM | LT1 | LT1 |
| 6-11-2024 10:45:00 AM | LT1 | LT1 |
| 6-18-2024 10:40:00 AM | 1 | LT1 |
| 6-25-2024 11:10:00 AM | LT1 | LT1 |
| 7-9-2024 10:15:00 AM | LT1 | LT1 |
| 7-16-2024 10:10:00 AM | LT1 | LT1 |
| 7-23-2024 10:05:00 AM | LT1 | LT1 |
| 7-30-2024 10:25:00 AM | LT1 | LT1 |
| 8-6-2024 10:50:00 AM | LT1 | LT1 |
| 8-13-2024 10:35:00 AM | LT1 | LT1 |
| 8-20-2024 10:00:00 AM | LT1 | LT1 |

| | | | | |
|---|---|---|---|---|
| | 8-27-2024 10:20:00 AM | LT1 | LT1 | |
| | 9-3-2024 9:38:00 AM | LT1 | LT1 | |
| | 9-10-2024 10:15:00 AM | LT1 | LT1 | |
| | 9-17-2024 10:40:00 AM | LT1 | LT1 | |
| | 9-24-2024 10:40:00 AM | 2 | LT1 | |
| | 10-1-2024 10:55:00 AM | LT1 | LT1 | |
| | 10-7-2024 8:12:00 AM | LT1 | LT1 | |
| | 10-7-2024 11:10:00 AM | LT1 | LT1 | |
| | 10-15-2024 10:45:00 AM | LT1 | LT1 | |
| | 10-22-2024 11:40:00 AM | LT1 | LT1 | |
| | 10-29-2024 10:40:00 AM | LT1 | LT1 | |
| | 11-5-2024 11:05:00 AM | LT1 | LT1 | |
| | 11-12-2024 11:14:00 AM | LT1 | LT1 | |
| | 11-19-2024 10:50:00 AM | LT1 | LT1 | |
| | 11-26-2024 10:35:00 AM | LT1 | LT1 | |
| | 12-3-2024 11:05:00 AM | LT1 | LT1 | |
| | 12-10-2024 11:20:00 AM | LT1 | LT1 | |
| | 12-17-2024 11:00:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **2** | **0** | **0** |

| | | | | |
|---|---|---|---|---|
| 1300 7th ave, 1300 7th ave | | | | |
| | 1-2-2024 9:55:00 AM | LT1 | LT1 | |
| | 1-9-2024 11:30:00 AM | LT1 | LT1 | |
| | 1-16-2024 9:45:00 AM | QRWRT | QRWRT | |
| | 1-23-2024 9:40:00 AM | LT1 | LT1 | |
| | 1-30-2024 10:00:00 AM | LT1 | LT1 | |
| | 2-6-2024 10:10:00 AM | LT1 | LT1 | |
| | 2-13-2024 9:35:00 AM | LT1 | LT1 | |
| | 2-20-2024 10:05:00 | LT1 | LT1 | |

| | | |
|---|---|---|
| AM | | |
| 2-27-2024 10:20:00 AM | LT1 | LT1 |
| 3-5-2024 9:40:00 AM | LT1 | LT1 |
| 3-12-2024 9:40:00 AM | LT1 | LT1 |
| 3-19-2024 10:05:00 AM | LT1 | LT1 |
| 3-26-2024 9:40:00 AM | LT1 | LT1 |
| 4-2-2024 9:40:00 AM | LT1 | LT1 |
| 4-9-2024 9:40:00 AM | LT1 | LT1 |
| 4-16-2024 8:55:00 AM | LT1 | LT1 |
| 4-23-2024 9:30:00 AM | LT1 | LT1 |
| 4-29-2024 9:20:00 AM | LT1 | LT1 |
| 5-7-2024 9:45:00 AM | LT1 | LT1 |
| 5-14-2024 9:40:00 AM | LT1 | LT1 |
| 5-21-2024 9:40:00 AM | LT1 | LT1 |
| 5-28-2024 10:10:00 AM | 1 | LT1 |
| 6-4-2024 9:35:00 AM | LT1 | LT1 |
| 6-11-2024 10:15:00 AM | LT1 | LT1 |
| 6-18-2024 9:50:00 AM | LT1 | LT1 |
| 6-25-2024 11:45:00 AM | LT1 | LT1 |
| 7-2-2024 9:50:00 AM | LT1 | LT1 |
| 7-9-2024 9:16:00 AM | LT1 | LT1 |
| 7-16-2024 9:35:00 AM | LT1 | LT1 |
| 7-30-2024 9:30:00 AM | LT1 | LT1 |
| 8-13-2024 9:50:00 AM | LT1 | LT1 |
| 8-20-2024 9:00:00 AM | LT1 | LT1 |
| 8-27-2024 9:45:00 AM | LT1 | LT1 |
| 9-3-2024 9:05:00 AM | LT1 | LT1 |
| 9-10-2024 9:40:00 AM | LT1 | LT1 |
| 9-17-2024 10:05:00 | LT1 | LT1 |

| | | | |
|---|---|---|---|
| AM | | | |
| 9-24-2024 9:50:00 AM | 1 | LT1 | |
| 10-1-2024 10:15:00 AM | LT1 | LT1 | |
| 10-7-2024 10:15:00 AM | LT1 | LT1 | |
| 10-15-2024 10:05:00 AM | LT1 | LT1 | |
| 10-22-2024 10:05:00 AM | LT1 | LT1 | |
| 10-29-2024 10:05:00 AM | LT1 | LT1 | |
| 11-5-2024 9:35:00 AM | LT1 | LT1 | |
| 11-12-2024 11:50:00 AM | LT1 | LT1 | |
| 11-19-2024 9:50:00 AM | LT1 | LT1 | |
| 11-26-2024 9:05:00 AM | LT1 | LT1 | |
| 12-3-2024 9:55:00 AM | LT1 | LT1 | |
| 12-10-2024 12:20:00 PM | LT1 | LT1 | |
| 12-17-2024 9:50:00 AM | LT1 | LT1 | |
| **Total Positive:** | **2** | **0** | **0** |

65573 Dogwood Dr, 65573 Dogwood Dr

| | | |
|---|---|---|
| 1-16-2024 10:40:00 AM | QRWRT | QRWRT |
| 1-30-2024 10:25:00 AM | LT1 | LT1 |
| 2-13-2024 10:05:00 AM | LT1 | LT1 |
| 2-27-2024 10:35:00 AM | LT1 | LT1 |
| 3-5-2024 10:00:00 AM | LT1 | LT1 |
| 3-19-2024 10:30:00 AM | LT1 | LT1 |
| 4-2-2024 10:15:00 AM | LT1 | LT1 |
| 4-23-2024 6:30:00 AM | LT1 | LT1 |
| 4-29-2024 9:50:00 AM | LT1 | LT1 |
| 5-7-2024 10:30:00 AM | LT1 | LT1 |
| 5-21-2024 10:30:00 AM | LT1 | LT1 |
| 5-28-2024 10:35:00 AM | LT1 | LT1 |

| | | | | |
|---|---|---|---|---|
| | 6-4-2024 10:10:00 AM | 1 | LT1 | |
| | 6-25-2024 10:40:00 AM | LT1 | LT1 | |
| | 7-9-2024 10:00:00 AM | LT1 | LT1 | |
| | 7-16-2024 10:00:00 AM | LT1 | LT1 | |
| | 8-13-2024 10:20:00 AM | LT1 | LT1 | |
| | 8-27-2024 10:05:00 AM | LT1 | LT1 | |
| | 9-3-2024 9:30:00 AM | LT1 | LT1 | |
| | 9-17-2024 10:35:00 AM | LT1 | LT1 | |
| | 10-1-2024 10:40:00 AM | LT1 | LT1 | |
| | 10-7-2024 8:04:00 AM | LT1 | LT1 | |
| | 10-7-2024 10:55:00 AM | LT1 | LT1 | |
| | 11-5-2024 10:48:00 AM | LT1 | LT1 | |
| | 11-12-2024 10:35:00 AM | LT1 | LT1 | |
| | 11-19-2024 10:40:00 AM | LT1 | LT1 | |
| | 11-26-2024 10:15:00 AM | LT1 | LT1 | |
| | 12-3-2024 10:45:00 AM | LT1 | LT1 | |
| | 12-10-2024 10:35:00 AM | LT1 | LT1 | |
| | 12-17-2024 10:40:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **1** | **0** | **0** |

| | | | | |
|---|---|---|---|---|
| 21002 Swallow Pl, 21002 Swallow Pl Hope | | | | |
| | 1-2-2024 10:25:00 AM | LT1 | LT1 | |
| | 1-9-2024 10:33:00 AM | LT1 | LT1 | |
| | 1-16-2024 10:30:00 AM | QRWRT | QRWRT | |
| | 1-23-2024 10:10:00 AM | LT1 | LT1 | |
| | 1-30-2024 10:15:00 AM | LT1 | LT1 | |
| | 2-6-2024 10:40:00 AM | LT1 | LT1 | |
| | 2-13-2024 9:55:00 AM | LT1 | LT1 | |

| | | |
|---|---|---|
| 2-20-2024 10:25:00 AM | LT1 | LT1 |
| 2-27-2024 10:25:00 AM | LT1 | LT1 |
| 3-5-2024 9:50:00 AM | LT1 | LT1 |
| 3-12-2024 10:10:00 AM | LT1 | LT1 |
| 3-19-2024 10:20:00 AM | LT1 | LT1 |
| 3-26-2024 10:10:00 AM | LT1 | LT1 |
| 4-2-2024 10:00:00 AM | LT1 | LT1 |
| 4-9-2024 9:50:00 AM | LT1 | LT1 |
| 4-16-2024 7:55:00 AM | LT1 | LT1 |
| 4-23-2024 6:45:00 AM | LT1 | LT1 |
| 4-29-2024 9:35:00 AM | LT1 | LT1 |
| 5-7-2024 10:20:00 AM | 1 | LT1 |
| 5-14-2024 10:10:00 AM | LT1 | LT1 |
| 5-21-2024 10:20:00 AM | LT1 | LT1 |
| 5-28-2024 10:25:00 AM | LT1 | LT1 |
| 6-4-2024 10:00:00 AM | LT1 | LT1 |
| 6-11-2024 10:35:00 AM | LT1 | LT1 |
| 6-18-2024 10:25:00 AM | LT1 | LT1 |
| 6-25-2024 10:25:00 AM | LT1 | LT1 |
| 7-9-2024 9:40:00 AM | LT1 | LT1 |
| 7-16-2024 9:50:00 AM | LT1 | LT1 |
| 7-23-2024 9:50:00 AM | LT1 | LT1 |
| 7-30-2024 9:45:00 AM | LT1 | LT1 |
| 8-6-2024 10:40:00 AM | LT1 | LT1 |
| 8-13-2024 10:10:00 AM | LT1 | LT1 |
| 8-20-2024 9:40:00 AM | LT1 | LT1 |
| 8-27-2024 9:55:00 AM | LT1 | LT1 |
| 9-3-2024 9:23:00 AM | 3 | LT1 |

| | | | | |
|---|---|---|---|---|
| | 9-10-2024 10:05:00 AM | LT1 | LT1 | |
| | 9-17-2024 10:25:00 AM | LT1 | LT1 | |
| | 9-24-2024 10:10:00 AM | LT1 | LT1 | |
| | 10-1-2024 10:35:00 AM | LT1 | LT1 | |
| | 10-7-2024 7:49:00 AM | LT1 | LT1 | |
| | 10-7-2024 10:45:00 AM | LT1 | LT1 | |
| | 10-15-2024 10:20:00 AM | LT1 | LT1 | |
| | 10-22-2024 10:35:00 AM | LT1 | LT1 | |
| | 10-29-2024 10:30:00 AM | LT1 | LT1 | |
| | 11-5-2024 10:35:00 AM | LT1 | LT1 | |
| | 11-12-2024 10:43:00 AM | LT1 | LT1 | |
| | 11-19-2024 10:25:00 AM | LT1 | LT1 | |
| | 11-26-2024 10:00:00 AM | LT1 | LT1 | |
| | 12-3-2024 10:35:00 AM | LT1 | LT1 | |
| | 12-10-2024 10:20:00 AM | LT1 | LT1 | |
| | 12-17-2024 10:25:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **2** | **0** | **0** |

| | | | | |
|---|---|---|---|---|
| Thacker Mtn Sampling Port, 21407 Thacker Mtn Rd | | | | |
| | 1-2-2024 10:10:00 AM | LT1 | LT1 | |
| | 1-9-2024 10:20:00 AM | LT1 | LT1 | |
| | 1-23-2024 9:55:00 AM | LT1 | LT1 | |
| | 2-6-2024 10:25:00 AM | LT1 | LT1 | |
| | 2-20-2024 10:15:00 AM | LT1 | LT1 | |
| | 3-12-2024 9:55:00 AM | LT1 | LT1 | |
| | 3-26-2024 9:55:00 AM | LT1 | LT1 | |
| | 4-2-2024 11:20:00 AM | LT1 | LT1 | |
| | 4-23-2024 7:00:00 | LT1 | LT1 | |

| | | | |
|---|---|---|---|
| AM | | | |
| 4-29-2024 10:55:00 AM | LT1 | LT1 | |
| 5-7-2024 10:05:00 AM | 3 | LT1 | |
| 5-14-2024 9:55:00 AM | LT1 | LT1 | |
| 5-21-2024 10:10:00 AM | LT1 | LT1 | |
| 6-4-2024 11:25:00 AM | LT1 | LT1 | |
| 6-18-2024 10:10:00 AM | LT1 | LT1 | |
| 7-2-2024 10:00:00 AM | LT1 | LT1 | |
| 7-30-2024 10:45:00 AM | LT1 | LT1 | |
| 8-6-2024 10:30:00 AM | LT1 | LT1 | |
| 8-20-2024 9:30:00 AM | LT1 | LT1 | |
| 9-10-2024 9:50:00 AM | LT1 | LT1 | |
| 9-17-2024 10:15:00 AM | LT1 | LT1 | |
| 9-24-2024 11:00:00 AM | LT1 | LT1 | |
| 10-1-2024 10:25:00 AM | 1 | 1 | |
| 10-7-2024 8:25:00 AM | LT1 | LT1 | |
| 10-7-2024 10:25:00 AM | LT1 | LT1 | |
| 10-15-2024 10:10:00 AM | LT1 | LT1 | |
| 10-22-2024 7:55:00 AM | LT1 | LT1 | |
| 10-29-2024 10:20:00 AM | LT1 | LT1 | |
| 11-5-2024 10:30:00 AM | LT1 | LT1 | |
| 11-12-2024 11:27:00 AM | LT1 | LT1 | |
| 11-19-2024 10:10:00 AM | LT1 | LT1 | |
| 11-26-2024 9:40:00 AM | LT1 | LT1 | |
| 12-3-2024 10:15:00 AM | LT1 | LT1 | |
| 12-10-2024 11:45:00 AM | LT1 | LT1 | |
| 12-17-2024 10:10:00 AM | LT1 | LT1 | |
| **Total Positive:** | **2** | **1** | **0** |

| | | | | |
|---|---|---|---|---|
| TC investigation site 2, | | | | |
| | 8-6-2024 9:25:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| TC investigation site 1, | | | | |
| | 8-6-2024 9:15:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| TC investigation site 3, | | | | |
| | 8-6-2024 9:40:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |
| TC investigation site 4, | | | | |
| | 8-6-2024 9:50:00 AM | LT1 | LT1 | |
| | **Total Positive:** | **0** | **0** | **0** |

**Result Values:** **E - estimated** **L - less than** **G - greater than**

| | | |
|---|---|---|
| Samples that contain total coliform: | 23 | 4.68% of total |
| Samples that contain e. coli: | 1 | 0.20% of total |
| Samples that contain fecal coliform: | 0 | 0.00% of total |
| Number of consecutive samples that contain total coliform: | 5 | |
| Number of samples that contain total coliform in last 30 days: | 0/10 | |
| Total number of samples: | 491 | |

**Comments:**

_____
Environmental Health Officer
Jan 14 2025

FOR FURTHER INFORMATION PLEASE CALL: Jessica Hibbs (604) 870-7900