March 15th, 2025

Mr. Mason Mantla

Chair

Wek'èezhìi Land and Water Board

#1-4905 48th St.

Yellowknife, NT X1A 3S3

Re: 2024 Annual Water Licence Report

Dear Mr. Mantla:

Attached please find our 2024 Annual Report for the activities related to the Indin Lake Gold Property.

This submission is in fulfillment of the reporting requirements for two Water Licences held by Nighthawk Gold Corp, namely W2021L2-0004 and W2021L2-0005, both issued on January 13th, 2023.

Please note that Nighthawk Gold Corp. has recently merged with Moneta Gold Inc. to form STLLR Gold Inc., on whose letterhead this cover letter is prepared. Nighthawk Gold Corp. remains a subsidiary of STLLR Gold Inc.

Should you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

John McBride

John McBride

Vice President, Exploration

2024 Annual Water Licence Report

Indin Lake Gold Property, NWT

NTS Sheet: 086B/02,03,06,07,10,11

Northern Mining District, NWT

Latitude 64° 242 10.11” N, and Longitude -115° 062 23.04” W

UTM NAD 83, Zone 11, 7143262N, 0591274E

John Nicholson, B.Sc., NAPEG P.Geo.

Brian Game, B.Sc., NAPEG P.Geo.

Riley Ledoux, B.Sc., NAPEG P.Geo.

John McBride, M.Sc., NAPEG P.Geo.

March 15th, 2025

Table 1: Schedule 1 Annual Water Licence Report Conformity Table

Condition	Section of Report
a) A brief summary of Project activities	3
b) An updated Project schedule	3.4
c) The daily, monthly, and annual quantities in cubic metres of fresh Water obtained from all sources, as required in Part B, Condition 18 of this Licence	3.2.3, 4.1.1, Appendix B
d) A summary of the calibration and status of the meters and devices referred to in Part B, Condition 18 of this Licence	4.1.1
e) A summary of engagement activities conducted in accordance with the approved Engagement Plan, referred to in Part B, Condition 20 of this Licence	4.5
f) A summary of how Traditional Knowledge was incorporated into decision making	4.5
g) A summary of Construction activities conducted in accordance with Part E of this Licence	2.2.2
h) A summary of major maintenance activities conducted in accordance with this Licence	2.2.2
i) A summary of activities conducted in accordance with the approved Waste Management Plan, referred to in Part F, Condition 9 of this Licence, including:	4.2
i) i. A summary of approved updates or changes to the process or facilities required for the management of Waste	4.2
i) ii. Monthly and annual quantities, in cubic metres, of deposits of Waste deposited, by location	4.1.2, 4.2.1
i) iii. A map depicting the location of the Sumps	4.1.2
j) A summary of the results and any actions taken as a result of the inspections conducted to fulfill Part F of this Licence	5
k) A summary of activities conducted in accordance with the approved Spill Contingency Plan, referred to in Part G, Condition 2 of this Licence, including:	4.3
k) i. A list and description for all Unauthorized Discharges, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e. open or closed), in accordance with the reporting requirements in Part G, Condition 4 of this Licence	4.3
k) ii. An outline of any spill training carried out	4.3
l) A summary of activities conducted in accordance with the Closure and Reclamation Plan, referred to in Part H, Condition 1 of this Licence, including:	4.4
l) i. Details of any Progressive Reclamation undertaken	4.4.1
l) ii. A discussion on whether planning and implementation remains on schedule, and summary of any new scheduling setbacks	4.4.2
l) iii. A summary of Reclamation Research completed	4.4.1
l) iv. A summary of engagement conducted regarding Closure and Reclamation	4.4.3
l) v. A list of any factors that would increase or decrease the Closure Cost Estimate the next time the Estimate is updated	4.4.2

Condition	Section of Report
l) vi. Tabular summaries of all data and information generated under the SNP annexed to this Licence, in Excel format	Appendix C, Appendix D
m) A summary of activities conducted in accordance with the Water Management Plan, referred to in Part F, Condition 4 of this Licence, including	4.1
m) i. A summary of approved updates or changes to the process or facilities required for the management of water	4.1
m) ii. Monthly and annual volumes by location of water managed under the Plan	4.1.1
m) iii. A summary and interpretation of any monitoring results	4.1.3, Appendix C, Appendix D
m) iv. A list of any action level exceedances	4.1.3
m) v. A description of actions taken in response to any action level exceedances	4.1.3
n) A summary of activities conducted in accordance with the Explosives Management Plan, referred to in Part F, Condition 6 of this Licence, including:	4.6
n) i. A summary of approved updates or changes to the process required for management of explosives	4.6
n) ii. Monthly and annual quantities by location of explosives managed under the Plan	4.6
o) A summary and interpretation of any monitoring results and a description of any corrective actions implemented	4.1.3
p) A summary of activities conducted in accordance with the Wildlife Mitigation and Monitoring Plan	4.7
q) A list of any non-compliance(s) with the conditions of this Licence or any directive from the Board pursuant to the conditions of this Licence	1.3
r) A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector	5
s) Any other details requested by the Board by December 31 of the year being reported *N.B. Nighthawk was directed to track water usage by lake*	4.1.1

Table of Contents

List of Tables

List of Figures

1 PROPERTY DESCRIPTION, LOCATION, OBLIGATIONS & PERMITS

1.1 Location

Nighthawk Gold Corp. (“Nighthawk”), a wholly-owned subsidiary of STLLR Gold Inc. (“STLLR”), owns 100 percent of the mineral rights to the Indin Lake Gold Property, located approximately 220 kilometres north of the city of Yellowknife, NT. Nighthawk’s Indin Lake Gold Property is a land package comprised of owned federal and territorial mining leases within a contiguous, north-trending area approximately 60 kilometres in length by 6 to 24 kilometres in width, which covers 90 percent of the Indin Lake Volcanic-Sedimentary Belt.

The Colomac Gold Mine, which comprises mining leases covering a former open pit gold operation and contiguous lands, are located within the northern portion of the Indin Lake Gold Property. Colomac Camp is the current location for all drilling, logging, and related support, including field activities, on the Indin Lake Gold Property. Colomac Camp is located on the site of the former Colomac Gold Mine, at Latitude 64° 24’ 10.11” N, and Longitude -115° 06’ 23.04” W (UTM NAD 83, Zone 11, 7143262N, 0591274E), as shown in Figure 2.

1.2 Description

The Indin Lake Gold Property comprises mining leases covering approximately 229,791 acres or 931 square kilometres within the North Mining District, Northwest Territories, Canada. The land package forms a contiguous, northwardly-trending strip, measuring approximately 60 kilometres in length north to south, and 6 to 24 kilometres in an east-west width (see Figure 2).

In early 2011, Nighthawk optioned from Ursa Polaris Developments Corporation (“Ursa”), the Leta Arm mining leases and three other mining claims, Treasure Island, Laurie Lake, and Barker-Vidie. (Byron, 2011a) The Leta Arm mining leases were registered in the name of George Stephenson and are held by Nighthawk under an option agreement with Ursa.

Nighthawk also owns 100% of the mineral rights to the Colomac Property, a reclaimed open pit mine that historically produced 527,908 ounces of gold with an average head grade of 1.66 grams per tonne gold ("g/t Au"). Nighthawk acquired the mineral claims and leases of the former producing Colomac Gold Mine from Aboriginal Affairs and Northern Development Canada ("AANDC"). The Colomac Property includes the past producing Colomac Main Zone, four surrounding gold deposits, and several gold showings. (Byron, 2011b).

On December 18, 2013, Nighthawk announced an option/purchase agreement to acquire 4 mining leases (the Cass and Kim Properties) from Geomark Exploration Ltd., a wholly-owned subsidiary of Pine Cliff Energy Ltd. (Byron, 2013). On December 29, 2015, Nighthawk announced that it was going to allow its option to acquire the Kim and Cass Properties to expire in accordance with the terms of the option agreement with Geomark Exploration Ltd. dated Dec 18, 2013 (Byron, 2015). On February 18, 2021, Nighthawk announced that it had entered into a binding option agreement with Geomark Exploration Ltd. to acquire a 100% undivided leasehold interest in four contiguous mining leases (the Kim and Cass Properties), a total of 7,588 acres (31 km^2) that incorporate the historic Kim and Cass Zones, immediately adjacent to Nighthawk's Indin Lake Gold Property, increasing the total Indin Lake Gold Property holdings to the current 229,791 acres or 931 square kilometres.

On January 15, 2020, Nighthawk announced that it has entered into an agreement (the "Purchase Agreement") to purchase certain net smelter return ("NSR"), and net profit interest ("NPI"), royalties (collectively referred to as the "Royalties"), from the two parties. The Royalties relate to certain claims within the Leta Arm Gold Project (“Leta Arm”), including the Lexindin showing (“Lexindin”), the Treasure Island Gold Project (“Treasure Island”), the Laurie Lake Showing (“Laurie Lake”), and the Barker-Vidie Showing (“Barker-Vidie”). The completion of the transaction was announced by Nighthawk on April 3, 2020 (Byron, 2020).

On November 28, 2023, Nighthawk and Moneta Gold Inc. announced that they had entered into an agreement for an at-market merger whereby Moneta would acquire all issued and outstanding common shares of Nighthawk in exchange for common shares of Moneta Gold Inc (McBride & Dankowski, 2023). On February 6, 2024, STLLR Gold Inc. (formerly Moneta Gold Inc.) and Nighthawk announced the completion of their at-market merger. In connection with the transaction, Moneta Gold Inc. changed its name to STLLR Gold Inc (STLLR Gold Inc., 2024a).

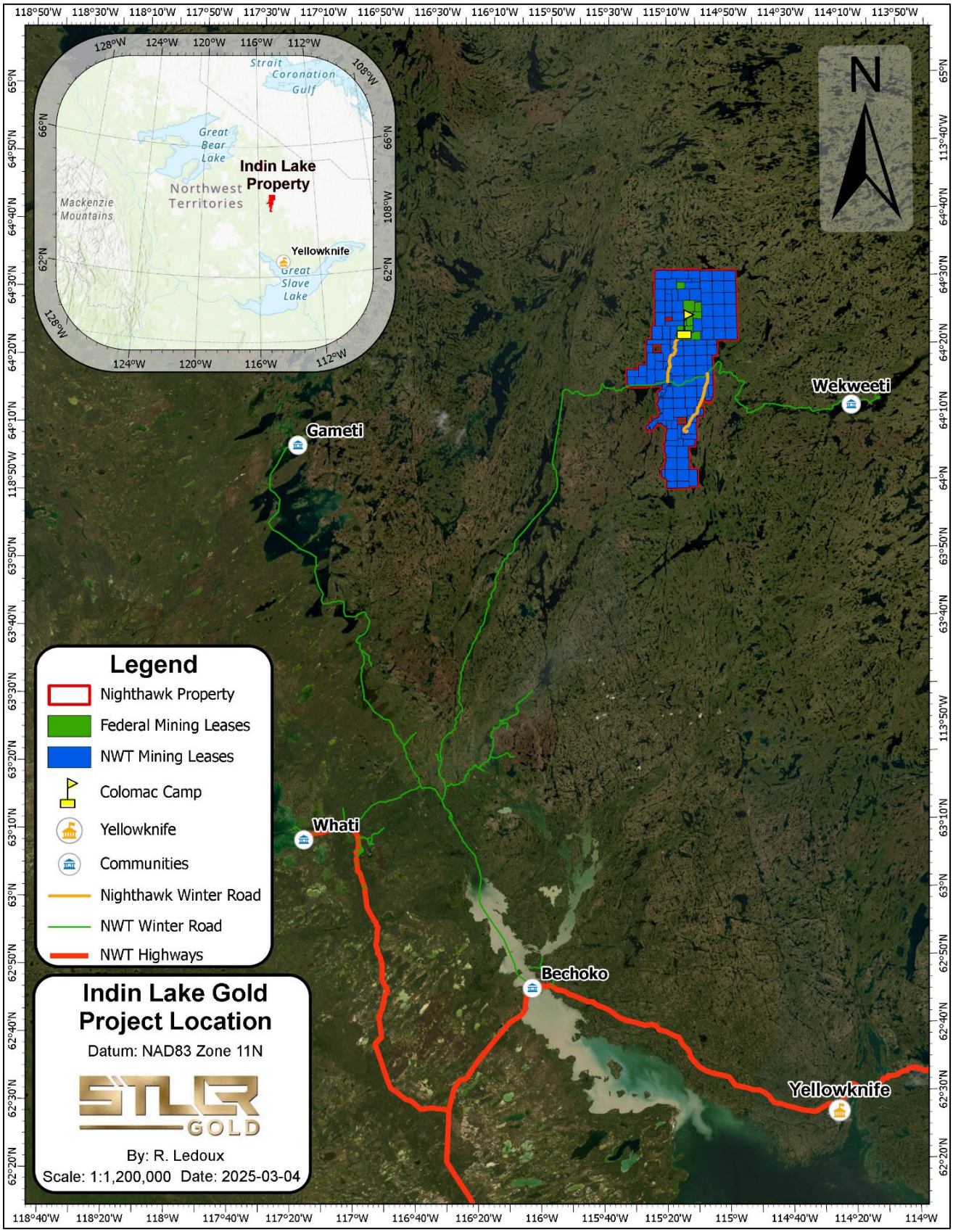


Figure 1: Map of Indin Lake Property Location and Yellowknife with inset Regional Map of the Northwest Territories.

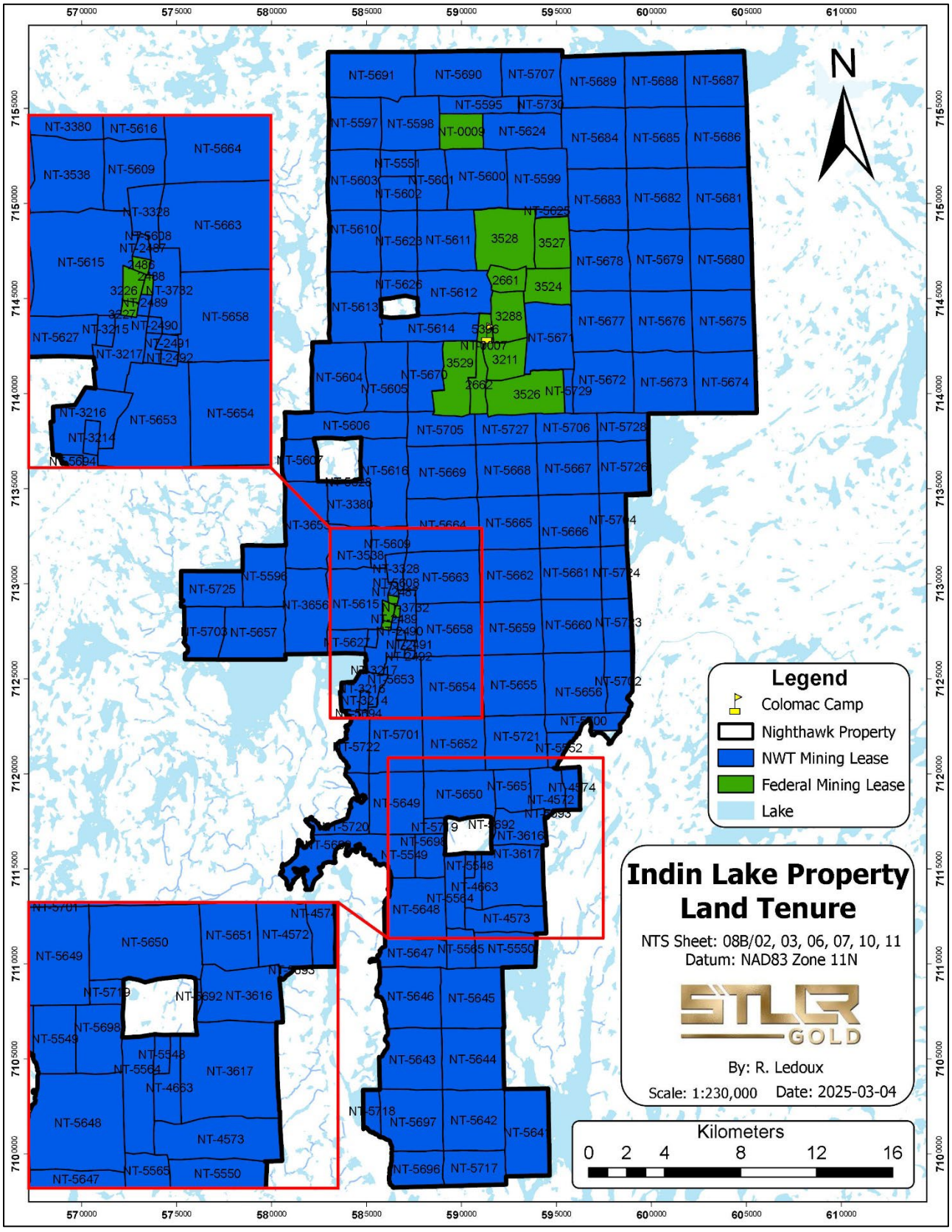


Figure 2: Map of Indin Lake Gold Property with NWT and Federal Land Tenure.

1.3 Obligations and Permits

Under Northwest Territories and Nunavut Mining Regulations, C.R.C., c. 1516, mining claims require representation work (i.e. assessment work) to the value of at least $10 per hectare or part thereof contained in the claim during the two-year period immediately following the date the claim is recorded and at least $5 per hectare during each subsequent one-year period. All of Nighthawk's claims were converted to leases in 2021 and 2022, therefore no further assessment work is required.

Nighthawk holds two valid Class A Land Use Permits ("LUP"):

- W2018X0006 effective February 15th, 2019, and expiring February 14th, 2026.
- W2021C0009 effective January 13th, 2023, and expiring January 12th, 2028.

These LUP were formerly covered in part by W2018C0007, W2012C0002, W2010C0008, and W2006C0001 Class A.

Nighthawk holds two valid Type A water licences:

- W2021L2-0004 Type A (non-federal lands) effective January 13th, 2023, and expiring January 12th, 2038.
- W2021L2-0005 Type A (federal lands) effective January 13th, 2023, and expiring January 12th, 2038.

These water licences were formerly covered in part by, W2018L2-0002, W2018L2-0003, W2012L1-0001, W2010L2-0002, and W2006L2-0001 Type B licences.

The LUP permits and water licences are issued under the authority of the Wek'èezhìi Land and Water Board ("WLWB"), for whom this report has been prepared. LUP W2021C0009 is issued for Mining Exploration at the Indin Lake Gold Project (the "Project"). LUP W2018X0006 permits remediation of the Damoti Lake, Diversified, Chalco Lake, and Spider Lake sites.

Type A water licences W2021L2-0004 (non-federal lands) and W2021L2-0005 (federal lands) came into effect on January 13th, 2023, permitting Nighthawk to withdraw up to 800 m^3 of water per day, combined, for the Project from all lakes listed in Annex B of the water licence.

Nighthawk has complied with the terms and conditions of its land use permits and water licences, and all directives from the Board pursuant to these permits and licences, including continuing restoration and cleanup of the land and water previously utilized under the Licences. Nighthawk also holds a valid GNWT Prospector's Licence #33742, and (NWT-AANDC) Federal Prospecting Licence NEF0012.

2 ACCESSIBILITY, LOCAL RESOURCES, & INFRASTRUCTURE

2.1 Accessibility & Local Resources

The Indin Lake Gold Property is located approximately 220 kilometres north-northwest of the city of Yellowknife, NT. Yellowknife has population of 20,340 (2021 census) and is both the capital of the Northwest Territories, and the main supply centre for personnel, goods, and services within the area. The community of Behchokǫ̀, formerly Rae-Edzo, populated primarily by people of the Tlicho Nation and the seat of the Tłı̨chǫ Government, is southwest of the Indin Lake Gold Property, and is accessible from Yellowknife via Highway 3.

During the winter season, access to Colomac is also possible by the annual Wekweètì Winter Road (see Figure 1) from Yellowknife and then by a 13-kilometre Winter Road to Colomac Camp (see Figure 6). This method of access was last employed during 2023 to conduct bulk fuel transfers to the work site. In total, 18 days were spent building the Winter Road and an additional ten days were spent on road maintenance.

Figure 3: Aerial view of Colomac Camp facing SSE with Steeves Lake to the SW, Truck Lake to the NE, and the Truck Lake Channel north of camp (Summer 2023).

For the 2024 Indin Lake drilling program, an Airbus AS350B3 “AStar” helicopter was used for all drill moves and supporting flights. The helicopter was provided by Tłı̨chǫ Helicopters, a partnership between Great Slave Helicopters (“GSH”) of Yellowknife, NT, and the Tłı̨chǫ Investment Corporation. The helicopter was based at Colomac Camp (see Figure 3). Colomac Camp also has an airstrip, which can accommodate large aircraft up to a de Haviland Canada DCH-7 “Dash 7” (see Figure 4), which are routinely provided by Tłı̨chǫ Air Inc., a partnership between Air Tindi of Yellowknife, NT, and the Tłı̨chǫ Investment Corporation.

Figure 4: Dash 7 at Colomac Airstrip (2021).

Four new fuel berms were built in 2022 around the apron at the Colomac airstrip to house the incoming fuel. This site is the official refueling area and ensures minimum transport of hydrocarbons during the field season. All fuel transported in new 45-gallon drums and sealed with plastic water seals on all bungs. All gasoline and P-50 (diesel) is palletized in berms and standing upright. Grade A & B jet fuel is laid down with outlets located at 3 and 9 o'clock positions and is supported by rough-cut 3x9-foot lumber to protect the berm from damage. Large drum spill kits and fire extinguishers are available at each fuel berm in case of an emergency.

The Colomac camp is also located less than 130 kilometres north-northeast of the Snare Lake Hydro Generation facility and approximately 120 kilometres northeast of the Nico gold-cobalt-bismuth-copper deposit.

Figure 5: Aerial view of the Colomac airstrip apron, showing the fuel berms (2022).

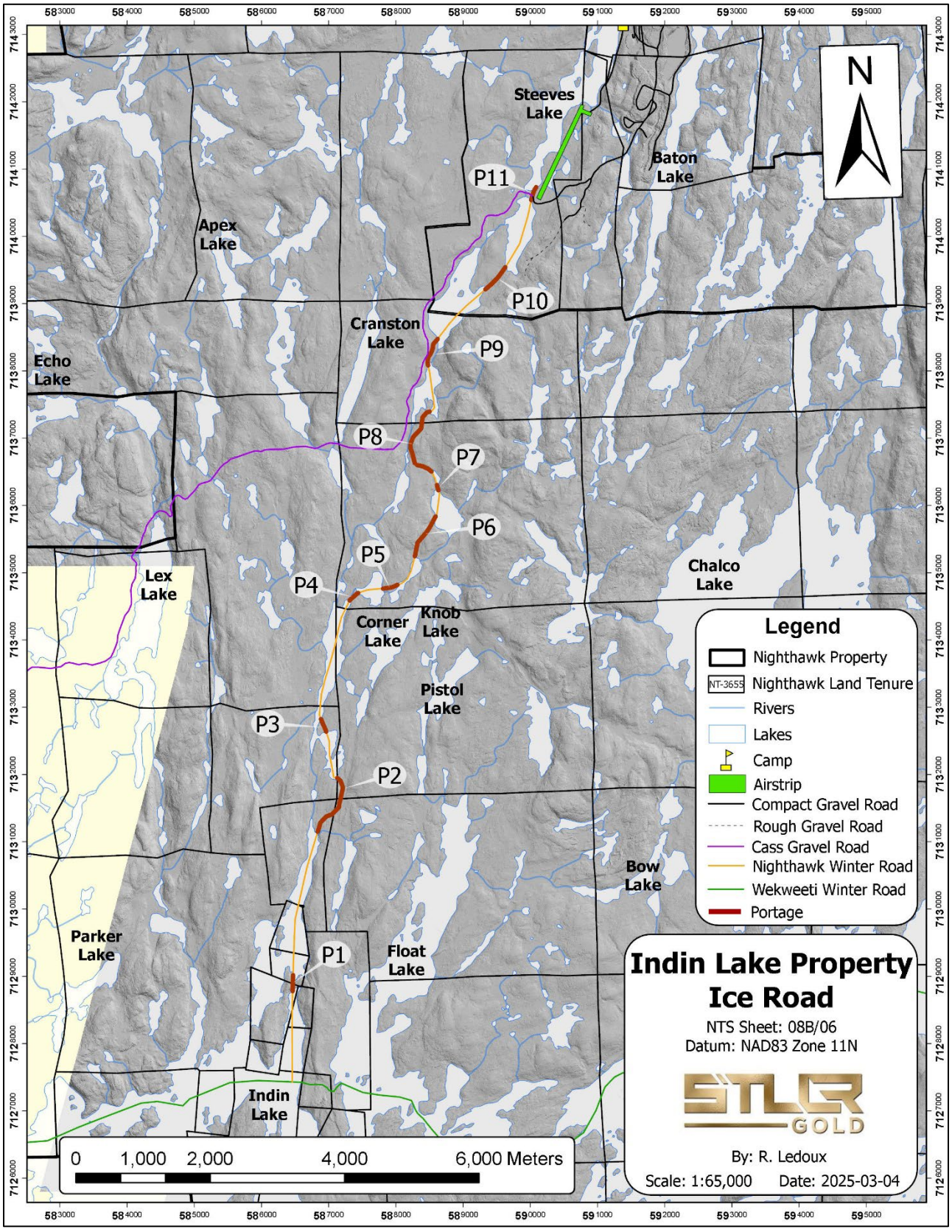


Figure 6: Map of Nighthawk's 2023 Winter Road with portage locations labelled.

2.2 Infrastructure of the Project Area

2.2.1 Colomac Camp

All drilling, logging, and related support, including field activities were serviced from Colomac Camp, which is located at 7143262N and 0591274E (UTM NAD 83, Zone 11N). Nighthawk began constructing Colomac Camp in March 2012 and occupied the camp in May 2012. The camp underwent upgrades and had additional structures added during early 2014 and has been updated annually from 2016 to 2024. The camp is built on a coarse rock and gravel pad 1-2 metres above grade and is enclosed by a gated electric bear fence (see Figure 3, Figure 7, & Figure 8). The camp is located east of Steeves Lake and approximately 2.2 kilometres north of the Colomac airstrip.

Figure 7: Aerial view of Colomac camp looking west (2024).

The authorization to construct the camp specified that it must be located 30 metres or greater away from the Truck Lake Channel. The channel is an attempt by Crown-Indigenous Relations and Northern Affairs Canada – Contaminants and Remediation Directorate to encourage fish to breed. Truck Lake Channel connects Truck Lake to Steeves Lake and has generally not contained water year-round for the past ten-plus years (see Figure 3), although water does flow along the channel for a short period during the freshet period, only to dry up and flow underground thereafter once the ground defrosts.

The blue structure shown near Steeves Lake (see Figure 3 & Figure 7), is a disassembled metal crane. This equipment was included with the sale of the Mining Leases to Nighthawk. It is non-functional and is only of scrap metal value.

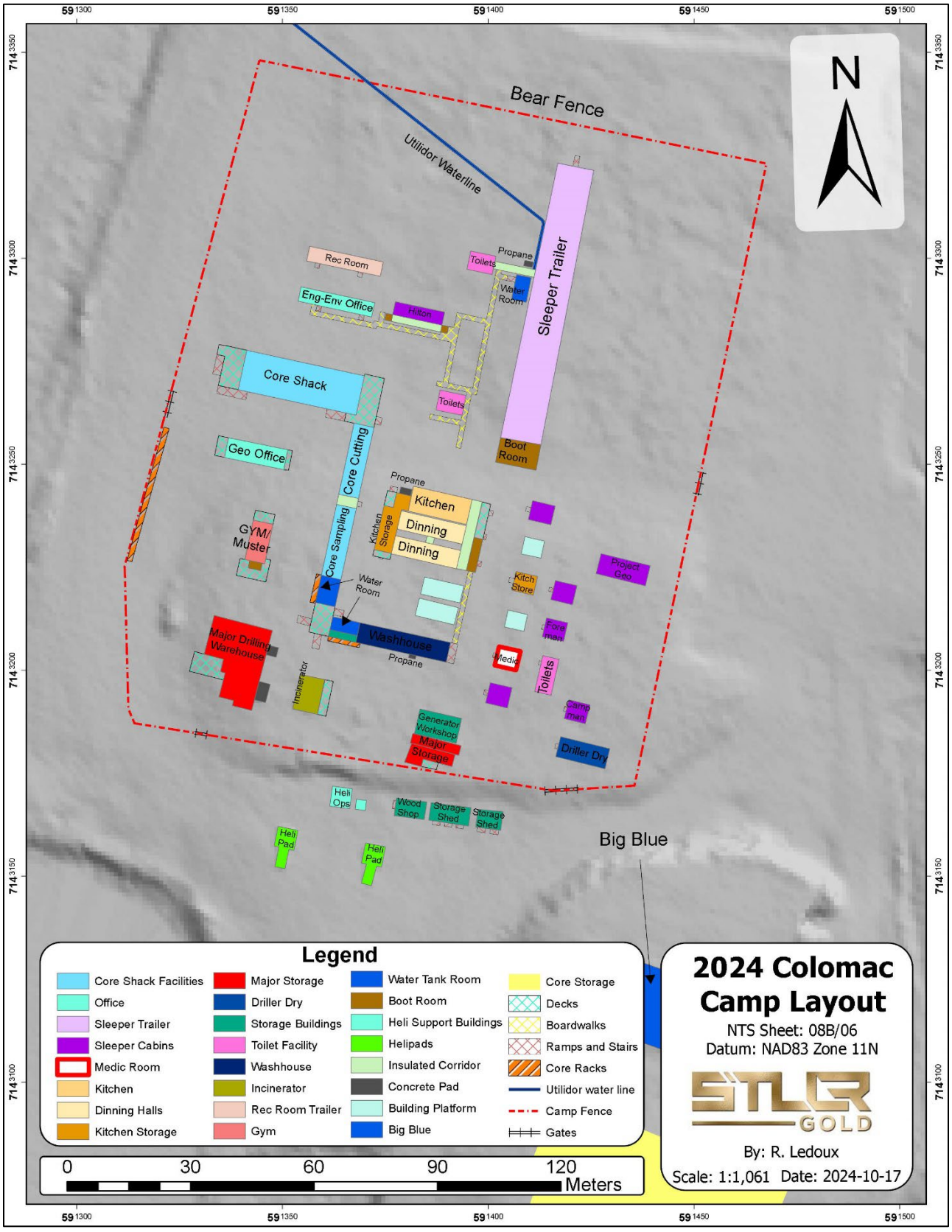


Figure 8: Surveyed schematic drawing of Colomac Camp with changes made during 2024 included.

Colomac Camp (see Figure 3, Figure 7, & Figure 8) is made up of wood framed buildings and trailers. It has a current maximum capacity of 60-70 people.

Colomac Camp Accommodations

The main form of accommodations at Colomac Camp is provided by a 49-person dormitory trailer complex (serial number 17745-1256-S(B)-06N08) that was built in June 2008 and brought into camp on the Winter Road in 2023. The dormitory trailers (located in the NE corner of camp) are made up of eight 12x58-foot trailers connected by a central hallway (see Figure 10A), each with independent 56,000 BTU furnaces and air conditioning. There are seven sleeper trailers with individual rooms (see Figure 10B), and one washroom/laundry room trailer (see Figure 10C/D). There are exits at the north and south entrances to the trailers as well as a side entrance that leads to the new toilet house through an insulated corridor. At the main southern entrance, a wood framed building was added for use as a boot room. There is a central propane heated hot water tank that supplies hot water for the washroom/laundry trailer. Within the washroom/laundry trailer are three washer-dryer combo machines (see Figure 10C), six individual bathrooms with a sink, shower stall, and a deactivated toilet (see Figure 10D) that has been covered with plywood to prevent usage, as well as a communal washroom with four sinks, two urinals, and two deactivated toilets (see Figure 10E). All water used in the showers, sinks, and urinals is emptied with the greywater on the west side of the trailers in a rocky area behind the new toilet facility.

Additional accommodations can be found in a five-person cabin with individual rooms, an internal corridor, and a boot room on both entrances, as well as six 14x16-foot wood cabins used for the Major Drilling Foreman, Project Geologist(s), Camp Manager(s), Medic, Mechanic, and one additional individual.

Toilet and Shower Facilities

There are three external toilet facilities at Colomac Camp with a total of fourteen Incinolet electric incinerating toilets and six Pacto toilets. The original toilet facility, located across from the old core shack (now the washhouse), is the largest, with eight Incinolets and two Pacto toilets. The other two toilet facilities each have three Incinolet toilets and two Pacto toilets; one is located across from the new core shack and the other, which is the newest, is connected by an insulated corridor to the dormitory trailer complex. Additionally, there are two outdoor urinals located at the back of the original toilet facilities and the toilets across from the new core shack. The outdoor urinals are open air troughs covered on three sides for privacy that drain on top of piles of rocks.

Figure 9: Main washhouse with washers on the right, dryers on the left and showers in the back (2023).

In addition to the showers and laundry room in the dormitory trailers (see Figure 10D & Figure 10E) described above, there is a main wash house at the southern end of camp. The old core shack building was converted into a wash house to make up for the decommissioning of two-Weatherhaven drys formerly in use. The building has four showers, five dryers, five washing machines, four-bathroom sinks, an industrial sink, a

cubby area for hanging towels and other bathroom supplies (see Figure 9). Additionally, in the back of the bathhouse a cleaning supplies storage area was established, as well as a small storage room for gear.

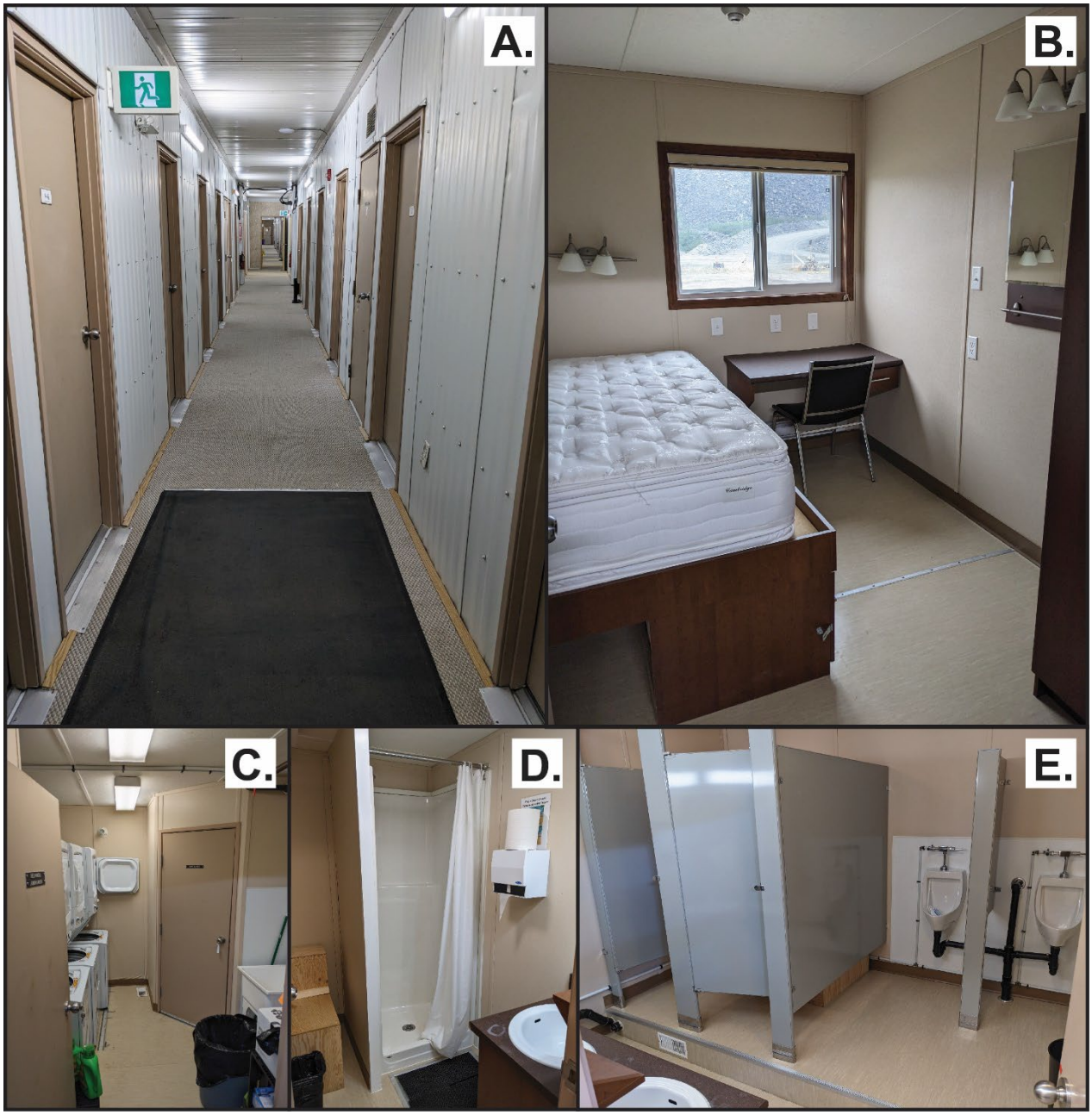


Figure 10: Dormitory trailers (2023); A. Corridor, B. Sleeper Room, C. Laundry, D. Single Washroom, E. Communal Washroom.

Water and Electricity

Colomac Camp has capacity to store a total of 10,800 gallons or 40.9 m^3 of water which is used for the kitchen, washhouse, and trailer washrooms. There are also fire hoses and portable Honda generators available to be hooked up to the water tanks in the event of a fire. All water is sourced from nearby Steeves Lake and then passes through a filtration system with two separate filters and a UV water treatment system.

Additionally, newly installed in 2023, the water systems have been equipped with a fill trigger that is activated at low water level and turns off when the tanks are close to full. Water usage is tracked daily with a gauge (see Figure 11) as water is emptied from the water tanks.

Figure 11: Main washhouse and kitchen water tanks and hot water tank (2023).

There are two water room locations. The original and largest water room is located behind the kitchen in the old cut shack and has been recently expanded into the back of the new washhouse. There, four 750-gallon water tanks (see Figure 11) are linked with eight 450-gallon tanks that are all fed by a buried heat traced water line from Steeves Lake. This water room supplies water to the washhouse and kitchen, with hot water heated by an oil burner hot water tank (see Figure 11) and an electric hot water tank respectively. The second, and newest, water room is located on the western side of the dormitory trailers. The trailer water room contains six 450-gallon water tanks and is supplied by a heat-traced waterline inside of a utilidor built in 2023 for use in the 2024 season.

Colomac Camp is powered by a 75 Kw John Deere diesel generator and a backup 100 Kw John Deere diesel generator (see Figure 12). The generators are located inside a room of a 20x32-foot uninsulated wooden building at the far south end of camp. The other half of the building is used as a workshop and storage area for tools.

Figure 12: 75Kw and 100 Kw John Deere diesel generators (2023).

Kitchen and Dining Area

The kitchen and dining rooms are located near the centre of camp. The dining rooms (see Figure 13) are comprised of two 14X48-foot insulated wood-frame buildings with a connecting insulated walkway between them, and a black-top insulated wood-frame foyer connecting both the dining rooms and the 14x48-foot kitchen on the eastern side (see Figure 7 & Figure 8). There is a large storage area with a walk-in fridge and freezer connecting them all together on the western side as well as a small storage shed across the main road in camp beside some of the sleeper cabins. The updated kitchen was completed at the end of the 2021 season and the new dining rooms were progressively added during 2022.

Figure 13: Colomac camp kitchen (left side) and one of the two dinning rooms (right side); (2023).

Recreation Buildings

In addition to the dining rooms, which can be used as a hangout or meeting spot to watch TV or play cards, there is a gym and a rec room trailer. The gym is a 16x32-foot insulated wooden building with an attached boot room; inside are various workout equipment and outside there is a golf putting area and short bouldering wall (see Figure 14). The gym also doubles as an emergency muster point for the camp. The rec room trailer is a 12x59.6-foot office trailer on skids that was brought into the camp in winter 2023 and has been set up with a projector and seating.

Figure 14: Colomac Gym with putting area in the front and bouldering wall partially visible on the back, with the geology office and core shack in the background to the right, and the One Web (white bulbs) internet receivers to the left (2023).

Helicopter Operations

The helicopter operations area is located immediately outside of camp to the south, beside the main gate. There are two helicopter pads constructed of pallets and plywood. The helicopter pilots and engineers have a small (7x7-foot) blue wooden building for supplies, as well as a 16x16-foot wooden building for the helicopter engineers to work on repairs for the helicopter(s) (see Figure 15). Additionally, there is a refueling station set up at the airstrip apron close to the jet fuel berm.

Figure 15: Helicopter operations workshops (2023).

Driller Facilities

Major Drilling has three storage buildings, a 40-foot sea can, a dry, and a laydown area. The Major Drilling main warehouse/workshop is in the southwest corner of camp (see Figure 7, Figure 8, & Figure 16). The building is roughly 50x64-foot with a 16x24-foot deck for receiving sling loads (see Figure 16). Also used for storage are several connected sheds close to the main camp entrance making up a 16x36-foot storage area and a 40-foot sea can for secure storage. At the airstrip apron, Major Drilling has a 16x50-foot storage building where snowmobiles, frost fighters, and other miscellaneous equipment are stored (see Figure 20). The drillers' dry, an insulated 16x32-foot wood-framed building, is located next to the main camp entrance (see Figure 24). Additionally, the drillers have a laydown just outside of camp up the hill towards the Colomac pits (see Figure 17). The area is approximately 75x200-metres and is used for storing large drilling equipment.

Figure 16: Major Drilling Warehouse and shop to the right and geology office in the back left (2023).

Figure 17: Major Drilling laydown aerial view (2024).

General Storage and Other Buildings

There are several additional storage buildings, as well as a woodshop and incinerator building (see Figure 40). "Big Blue", a 65x196-foot uninsulated cold storage blue metal building, owned by the Tłı̨chǫ Government, is located nearby and to the southeast of the Colomac camp. In 2023, the Tłı̨chǫ Government granted access to "Big Blue". Inside, Nighthawk has built a storage area with shelving, a woodworking area on a level platform, a 24x60-foot wood framed mechanic's shop, and a 16x60-foot two story storage building (see Figure 19). Immediately outside of camp, beside the helicopter operations area, is a 14x24-foot woodshop, as well as a 14x32-foot and 14x20-foot storage shed used for storing

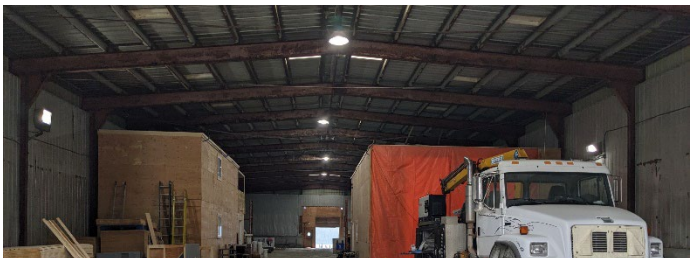


Figure 19: Inside of "Big Blue" with carpentry area (front left), two-story storage building (back left), mechanic shop (back right), and FL60 Freightliner Hiab (front right); (2023).

Figure 18: Government storage shed, and 20-foot sea can with government truck on the left (2023).

small equipment like quads and snowmobiles. One of the storage areas can also be used as a staging area for field work.

At the airstrip apron, there is a 16x50-foot wooden storage building for miscellaneous camp storage (see Figure 20). The building at the airstrip also has a room inside with a small diesel GeoStove that can be used as a waiting room for fixed wing flights, or in an emergency where camp is evacuated. Also at the airstrip apron is a 14x16-foot storage shed built by Nighthawk for government use, and a 20-foot sea can owned by the government (see Figure 18).

Figure 20: Colomac apron storage buildings, with Major Drilling's storage building on the left and general storage and waiting room on the right side with a windsock. Further to the right the airstrip entrance to the apron is visible (2023).

Geological Facilities and Offices

The camp geology/head office is in an insulated 16x48-foot wood framed building on the western edge of camp, south of the core shack. The office has six desks/workstations and a weather station, and is the hub for the camp's internet. Internet is provided by Cascom Ltd. and is accessed through three networks to ensure quality internet access. The primary internet is provided by One Web (see Figure 14), with Starlink and a large VSAT satellite dish providing backup. Additionally, a 12x59.6-foot office trailer on skids was brought to camp in 2023 for use as an environmental and engineering office.

Figure 22: Inside view of core shack (2023).

All 2024 core logging, cutting, and sampling of core was conducted at the Colomac facilities. The core shack, where all core logging is conducted, is a long building (96+ feet length) and can hold just over 800 metres of core on all the benches at a time (see Figure 22). All core was cut with one of four Vancom electric core saws (see Figure 21) and then sampled in a separate building from the core shack connected by an insulated wooden corridor. All water used for cutting core was recirculated in settling tanks located next to each of the four core saws.

Figure 21: Inside view of cutting room (2023).

All drill core from the 2012 through 2024 drill programs is stored on the Colomac property. Most core is flat stacked outdoors within an area immediately south of Big Blue; a second core storage area along the side of the road on the first left after going up the hill towards the Colomac pits was started during 2022 after the area near Big Blue reached capacity (see Figure 23).

Figure 23: Aerial view of Big Blue Boneyard (top 2024), Mine Road Boneyard (middle 2024), and close-up of the Mine Road core stacks (bottom 2023).

Mobile Equipment

There are several mobile vehicles and pieces of equipment onsite that are owned by Nighthawk and several of the contractors; they are listed below.

- Nighthawk: CAT 289C2 skid steer, CAT 950E loader, 480 John Deere Loader, Kubota KX1613 excavator, 1968 MAC dump truck, two Honda quads, four Kubota Sidekick side by sides, wobbly-wheel packer, and a 750-litre fuel trailer.
- Geominex Consultants: Two Chevrolet 3500 HD pickup trucks, GMC Suburban truck, and a Ford E350 passenger van.
- Major Drilling: Tucker 4000 Snowcat, CAT D3KGP bulldozer, four Can-Am side by sides, two Bombardier 650 snowmobiles, and two Bombardier wide track scandic snowmobiles.
- Aurora Telecom Services: two PistenBully 200 series Snowcats, two water trucks, Ford support truck, and an Arco plough truck.
- F & A Mechanic: Freightliner FL60 Hiab.

2.2.2 2024 Colomac Camp Improvements

In 2024, Nighthawk made improvements to Colomac Camp with the aim to upgrade the camp's fire preparedness and increase the camp's capacity. Camp improvements consisted of the following new buildings constructed or upgraded:

1. The drillers' dry, which was started at the end of 2023, was finished during 2024. The new drillers' dry is an insulated 16x32-foot wood-framed building where the drillers change outerwear, store and dry outerwear, and hold meetings (see Figure 24).

2. A new insulated 14x42-foot wood-framed sleeper cabin was constructed at the eastern side of the camp (see Figure 25). It has two rooms connected by an internal corridor with a central washroom with an Incinolet toilet, sink and shower that has not yet been finished.

3. Fire suppression sprinklers were installed on the peaks of several of the buildings with tar roofing (see Figure 26 & Figure 27). A total of 16 sprinklers were installed with four on the washhouse, six along the connected water tank, core sampling, and core cutting rooms, four on the coreshack, and two on the Major Drilling workshop. The sprinkler system is powered by two electric deep well pressure pumps producing 28-GPM and can draw water from the camp water tanks and from a newly installed 16x32-foot Coleman rectangular frame swimming pool that holds 7,092 US gallons (see Figure 26).

Figure 24: Completed drillers' dry at the entrance to camp, with fire station visible alongside (2024).

Figure 25: Aerial view of nearly completed sleeper cabin (2024).

Figure 26: Aerial view of camp centre with fire sprinklers circled in red, and pool visible on its platform (2024).

Figure 27: Aerial view of Drilling Warehouse with fire sprinklers circled in red, and incinerator shack in top left (2024).

2.3 Damoti Infrastructure

2.3.1 Damoti Horseshoe Camp

The Damoti Horseshoe Camp, which is located at 7114527N and 0591288E (UTM NAD 83 Zone 11N) was mothballed during 2012 after Colomac camp was constructed. Damoti Camp remains as the site for flat-stack storage of historical (legacy) Damoti drill core, as well as core drilled by Nighthawk from the Damoti drilling during 2009 and 2010. Nighthawk's core from the 2011 drilling of Treasure Island and the Leta Arm areas, and the early 2012 drilling of Colomac, are also stored at Damoti Camp (see Figure 28 & Figure 29). In addition, a large amount of older Damoti historic drill core, generally of pre-1996, is stored in racks on Esker Island, immediately north of the Damoti camp (see Figure 30).

Figure 28: Aerial view of Damoti Camp after remediation in 2017.

Figure 29: Core drilled by Nighthawk during 2009 to early 2012 stored near the Damoti core shack.

An insulated, wood-framed core shack was constructed at Damoti Camp in 2009, with a separate cutting room added in 2011. Both structures remain valuable assets, and with nominal effort can be returned to operational status if required. The rest of the camp currently comprises a few small insulated, wood-framed buildings and several tent floors and standing tent frames.

In 2022 some repairs were made to the roof of the core shack, as well as ensuring that the electrical wiring and lights were available for use. A survival bag with food, sleeping bags, and other survival gear was left in case of an emergency in the area, and a diesel furnace with accompanying fuel has also been reinstalled.

2.3.2 Damoti Ramp Area

Three double-walled Environmental Protection Tanks, having a capacity of 75,000 litres each, are located near the Horseshoe ramp area, a short distance east of the Damoti Horseshoe camp (see Figure 31). The

Underwriter's Laboratories of Canada brass plates affixed to each of the three tanks indicate that they were constructed in 1996 by Northern Steel Industries Limited, Tisdale, Saskatchewan (tel: 306-873-4531). The tanks are registered in the Environment Canada database with the following identification numbers, which are also indicated on aluminum tags affixed to the tanks (see Figure 31): EC-00021356, EC-00021357, and EC-00021359. As of late 2018, two of these tanks are empty while the third (the western tank) contains a minor amount of legacy diesel (dated c. 1996) estimated at less than five barrels.

Figure 30: Core racks at the old camp on the island north of the Damoti camp.

Two seacan containers are also located along an ATV trail connecting Damoti Camp to the ramp area and provide secured storage for equipment if required.

Figure 31: Aerial view of three double, 75,000 litre, bulk tanks at ramp area near Damoti camp. Inset shows metal tag with Environment Canada ID number EC-00021357.

During March 1996, a decision was made to drive a ramp at Damoti to provide underground exploration access on the high-grade portion of the Horseshoe Zone, conduct an underground drill program, and obtain a mini-bulk sample. The high-grade gold encountered over long intervals in surface drilling warranted going underground (van Hees, 1996). Both underground programs were conducted by Quest International Management Services under the supervision of Dr. Edmond H. van Hees. Approximately 430 metres of decline/crosscut were driven between June 15 and October 15. Two levels were opened, 120 metres driven on the 25-meter Level, and 30 metres driven on the 40-metre Level. Thirty-five underground drill holes were completed, totalling 792.1 metres. Surface access was closed and barred with a grate of steel bars/rods, and the ramp has since filled with water.

The underground exploration program resulted in the production of approximately 20,000 tonnes of waste rock and mineralized rock (3,810 tonnes) stored on surface near the portal.

The resulting report of the underground development, prepared by P & E Mining Consultants Inc, indicated a non 43-101-compliant mineral inventory "within easy reach of the McPherson Project ramp" to contain 25,972 troy ounces (in proven, probable, and possible categories) with gold grades ranging from 15.43 g/t Au (0.45 oz/t) for the surface stockpile to between 34.28 and 39.08 g/t Au (1.0 oz/t and 1.14 oz/t) for "in place" zones. This total inventory included the stockpile stored on surface near the portal, as estimated by

van Hees, to be 3,810 tonnes of mineralized rock averaging 15.43 g/t Au (i.e. 4,200 short tons grading 0.45 oz/t) for a total of 1,890 contained troy ounces on surface (i.e. 58.78 kg gold) (van Hees, 1996).

No surface water flow was noted at that time at the ramp area where the waste and mineralized rock is stored. It should also be noted that since 2009, both Nighthawk personnel, and staff from Golder & Associates (now WSP Canada Inc.), have not noted any surface water flow at the ramp area where the waste and mineralized rock is stored. The pathway for flow from the waste and ore stockpiles is constrained by bedrock highs to the north, east and west and therefore, all runoff from this site is expected to drain towards Lardass Lake. The water quality at the Surveillance Network Program ("SNP") stations, as well as downstream towards Lardass Lake, suggest there has been minimal effect to the environment from seepage to date. Seepage from the stockpiles is considered limited, consistent with observations at site during the field investigations (i.e., no surface water flow) (Golder Associates Inc., 2015).

2.3.3 Importance of Damoti Infrastructure

The Damoti Camp infrastructure, and both the historical and Nighthawk-drilled core stored on site, are extremely important assets to the future advancement of mineral exploration within the Indin Lake Belt. The core shack and cutting facilities can be returned to operational status, if required, with very nominal effort. They are extremely important to advancing any future drill program at either Damoti or within the southern portion of the Indin Lake Gold Property.

During 2012, historical legacy core was located and identified by Nighthawk near the new Colomac Camp. It appears that during 1997, Royal Oak Mines Inc. drilled these holes in the Colomac sill, testing Zone 3.5 mineralization to depth and laterally. These holes had not been included in any previous resource estimate. The Royal Oak logs were lost, but the core with Tyvek sample tags and the associated assay values without locations are still available. Nighthawk re-logged 20 of these historic holes (7,470 metres), and re-assayed 10% of the known mineralization to meet QA/QC requirements. Geological logs were produced and merged with the Royal Oak assays. This work added considerable positive information to the new resource estimate at Colomac. The fact that these historical holes were available also saved Nighthawk more than 4.0 million dollars of drilling/exploration expenditures. It is possible that the historic core at Damoti Camp may be of similar potential value.

Damoti is important both for its mineral potential and its infrastructure. It is a high-grade, near-surface gold target that offers significant lateral expansion possibilities as well as room for new discoveries. The fact that in 2018 Nighthawk completed 17 diamond drill holes for a total of 5,140 metres reflects this belief. These 17 holes were directed at exploring outside of the main deposit to test several new geological targets within the host Horseshoe and Red Mountain synclines. The holes returned 31 unique samples containing visible gold, in addition to gold defined by assay. These holes also confirmed and extended gold zones and outlined at least one new discovery at Red Mountain that remains open in all dimensions.

3 WORK CONDUCTED DURING 2024

3.1 Drill Staff and Other Personnel / Contractors

Nighthawk's 2024 drilling and field activities for the Indin Lake Gold Project were supervised by Brian Game, P.Geo., John Nicholson, P.Geo., and Riley Ledoux, P.Geo. of Geominex Consultants ("Geominex"), of 1411-409 Granville Street, Vancouver, BC. Riley Ledoux acted as the Qualified Person for this Project in the

preparation and supervision of the logs and related scientific or technical information related to the drilling activities.

The diamond drilling program was conducted with personnel, supplies, and ancillary equipment provided under contract by Major Drilling Group International Inc. of 270 Industrial Blvd, Rouyn-Noranda, QC. Donald Lafrance served as drill foreman for both rigs, and the 10 to 11-man crew responsible for drilling. The Major Drilling personnel were on site at Colomac Camp from May 6th to June 13th, and June 28th to August 1st, 2024, with a scheduled break between. Major Drilling provided two drillers and two helpers for each drill to cover night and day shifts, as well a fifth man to help with drill maintenance and moves.

Geominex provided geologists and geotechnical support for the 2024 core logging and field activities from May 3rd to June 15th, and June 28th to July 30th, 2024, with a scheduled break between. In general, there were seven to eight Geominex geology staff on site for the two drills, with one camp manager, one core shack manager, two logging geologists, three geotechs/samplers, one core cutter, and a master's student. Additionally, Geominex provided two to five staff for camp management, maintenance, construction, and heavy equipment operation from April 7th to August 6th and August 29th to September 13th, 2024. Crew shifts varied but were roughly three to five weeks on with two weeks off.

Brian Game, P.Geo., and John Nicholson, P.Geo., oversaw camp operations. Geologists Riley Ledoux, P. Geo., and Christopher Fozard were responsible for supervision of the logging geologists and technicians within the core shack. The Geominex geologists responsible for the 2024 logging were Jack Armstrong, Ben Ruston, and Louise Igoe. Geotechnical support was provided by Carter Hokanson, Brendan Muscalu, and Ethan Milkowski; Paul Bingham cut core using a Vancom electric core saw. Additionally, Turner Green was employed by Geominex to help in the core shack and to complete data collection for his master's thesis on the Indin Lake Greenstone belt at Lakehead University. Ryan Pownall and Friedrich Kaiser alternately oversaw camp maintenance. Chad Pyette was the main heavy equipment operator and assisted with camp maintenance. Simon Cornellier worked on camp construction and assisted with other jobs as needed.

All 2024 drill moves, support, and environmental work was completed with an Airbus AS350B3 "AStar" helicopter provided by Great Slave Helicopters of Yellowknife, NT ("GSH"). One pilot was based at Colomac camp from April 14th to June 13th, July 3rd to August 6th, who was assisted by visits from an engineer as required for maintenance. A Bell 206L "Long Ranger" helicopter was used from August 29th to September 7th, 2024, for camp support. GSH helicopter pilots included: Tanner Pelletier, Pierre Otish, Marie Josée Lacroix, Steven Beck, and Caitlin Munro. GSH engineers on site included: Erwan Chalet, Denise Ranque, Carlos Arrieta, and Khalid Abu-Shaar.

Camp catering and expediting services was performed by personnel provided by Discovery Mining Services Ltd. ("DMS"), of Yellowknife, NT. DMS had one to five personnel onsite from April 7th to June 15th, June 27th to August 6th, and August 29th to September 13th, 2024. With one head cook, one 2nd cook, two assistants, and one camp maintenance assistant.

Dehk'e Enterprise Ltd. ("Dehk'e"), of 122 Donda Tilli Block 15 Lot 3 Behchokǫ̀, NT, supplied two additional camp labourers, three remediation labourers, and a custodian. There were two to six Dehk'e personnel on site from May 3rd to June 13th, and June 29th to August 6th, 2024.

Sub-Arctic Geomatics Ltd., of 226 Utsingi Drive, Yellowknife, NT, provided land surveyors with Global Navigation Satellite System Real-Time Kinetic surveying equipment, to survey the planned 2024 drill collar

locations and azimuths as well as the final 2024 collar locations. Surveys were conducted on May 6th to 7th by Sam Bartlett, and July 2nd to 4th by Dylan Foote.

62 Degrees North Inc., of 100 Borden Dr Bay 25, Yellowknife, NT, provided paramedic services for the Project. One paramedic was on site from April 15th to June 13th and June 27th to August 6th. Paramedic services were provided by McKenzie Duncan, Hayden Gernat, Sebastian Rapitt, and Brian Groves.

WSP Canada Inc. ("WSP"), of 4905 48th Street, Yellowknife, NT, served as Nighthawk's Environmental Consultant. In this capacity, they provided technical planning and oversight of the Spider Lake Remediation Program (see 4.4.1) with Kristine Novakowski, P.Geo., on site from May 30th to June 4th, 2024, and Bruno Klopf, EIT, was on site from July 9th to 16th, and again on August 22nd, 2024. WSP also provided environmental monitoring and reporting services for the Damoti Lake Surveillance Network Program (see 4.1.3), with Emily Finstad on site on June 3rd, and Sarah Beattie on site on September 10th, 2024.

Air Tindi, of 107 Berry Street, Yellowknife, NT, provided fixed-wing air support to transport personnel and supplies to the Colomac camp from April 7th to September 13th, 2024. De Haviland Canada DCH-7 "Dash 7" and de Haviland Canada DCH-6 "Twin Otter" were the main fixed-wing aircraft used.

Cascom Ltd., of 11 Coronation Drive, Yellowknife, NT, provided satellite telecommunications equipment and services.

3.2 2024 Drill Program

3.2.1 2024 Drill Program Summary

Colomac Camp was opened April 7th, 2024, by a small group from Geominex to prepare the camp for operations and to finish construction on the drillers' dry. The 2024 drill program was a summer program, with a short, scheduled break for most personnel. Geology and drilling staff were on site from May 4th to June 15th and from June 29th to August 1st, 2024.

The summer program had a staggered start with the first drill (SDD 129) starting on May 10th and the second drill (SDD 131) starting on May 13th, followed by a break for both drills from June 13th to June 29th. The end of the summer program was also staggered, with SDD 129 finishing on July 18th and SDD 131 finishing on July 27th, 2024.

Once drilling was completed, a small crew of drillers remained until August 1st to winterize and store the drills for next season. The logging, cutting, and sampling of drill core was completed a few days after the last drill was shut down. A small crew from Geominex remained until July 30th to put away core, clean, and organize items to ensure everything was ready for the start of the next season.

During 2024, Nighthawk drilled 15 NQ-sized diamond drill holes into the Colomac deposit, for a total of 6,331 metres drilled, of which 2,448 core samples were submitted for gold assay. A total of 6,000 m^3 of water was used while drilling throughout the 2024 season (see Table 2, Table 3, & Table 5). Drill hole details including hole ID, start date, stop date, days spent drilling, water usage, local zone, UTM collar locations, hole attitude, final hole depth, number of samples submitted for assay, number of samples with visible gold, the water source, and land tenure, is shown on Table 3. Nighthawk's 2024 drill collar locations, as well as mineral tenure, can be seen in Figure 32 & Figure 33.

Table 2: Summary of 2024 Drilling

Area	Drill Holes	Start Date	Stop Date	Drill Days	Water Usage (m^3)	Final EOH (m)	# Of Samples	VG # Of Samples
Colomac	15	2024-05-10	2024-07-28	107.5	6000.0	6331.00	2448	114

All holes were logged in detail with downhole surveys, lithology, alteration, structures, mineralization, veining, and sampling data recorded in MX Deposit. All holes had basic geotechnical data recorded for every three-metre run including recovery, rock quality designation, and number of joints. Core from both drills was oriented using REFLEX ACT-III structural orientation tools, and all oriented holes had relevant structural data recorded with a REFLEX LOGRx tool and REFLEX IQ-LOGGER software to record the alpha and beta angles (as well as gamma angles where applicable) of structures. For sections of core where a Bottom of Hole line could not be drawn, alpha angles were measured manually. For core from all drill holes, a specific gravity measurement was taken every 10 metres or on every interval that was selected for sampling: in total, 6,617 specific gravity measurements were recorded. Downhole surveys were completed every 30 metres using a REFLEX GYRO SPRINT-IQ while drilling, and additionally, holes C24-06 to 15 were surveyed after hole completion using a REFLEX OMNI-IQ for a continuous survey.

All work described in this subsection was performed on the Indin Lake Gold Property.

3.2.2 Assaying and Quality Assurance and Quality Control

Core samples were assayed for gold by fire assay with an atomic absorption spectroscopy finish ("FA-AA") method in which the entire sample is crushed, of which 1 kg is pulverized, then a 30-gram aliquot of which is assayed. Samples for which FA-AA results exceeded 7 parts per million Au were re-assayed by fire assay with a gravimetric finish. For sample intervals in which visible gold was observed and samples adjacent them, a metallic screening method was used instead, in order to account for the erratic or "nuggety" nature of the gold. The metallic screening method used involves crushing, pulverizing, and screening the entire sample at 100 µm; the undersize portion was assayed in duplicate by FA-AA (as described above) and the oversize portion was assayed by fire assay with a gravimetric finish to exhaustion (until no oversize portion was left). All sample analyses were conducted by ALS Laboratories: FA-AA samples were prepared at their facility in Yellowknife, NT, with assaying performed at their facility in North Vancouver, BC, while all work for metallics screening samples was performed in North Vancouver, BC.

Approximately 5% of samples submitted were Certified Reference Materials prepared by Ore Research & Exploration Pty Ltd. of 37A Hosie Street, Bayswater North, VIC, Australia. Another approximate 5% were blank samples, sourced from barren diabase obtained during previous drill programs on the Colomac Main deposit. A further approximate 5% of samples were quarter-core field duplicates intended to assess the presence of the "nugget effect".

At Nighthawk's request, ALS collected a pre-selected portion of pulp from samples and shipped them to Nighthawk for submittal to a second independent laboratory for comparison purposes by method of FA-AA as described above. For samples originally submitted for metallic screening, the pulp was taken from the undersize portion of the sample, due to the oversize portion being assayed to exhaustion. These pulp samples were accompanied by Certified Reference Material as described above, and with blank samples composed of pre-assayed, pulverized, barren marble stone. Sample preparation for the check pulp program

took place at STLLR's Garrison core facility, and check assaying was performed by Bureau Veritas North America of Houston, Texas, at their Vancouver facility.

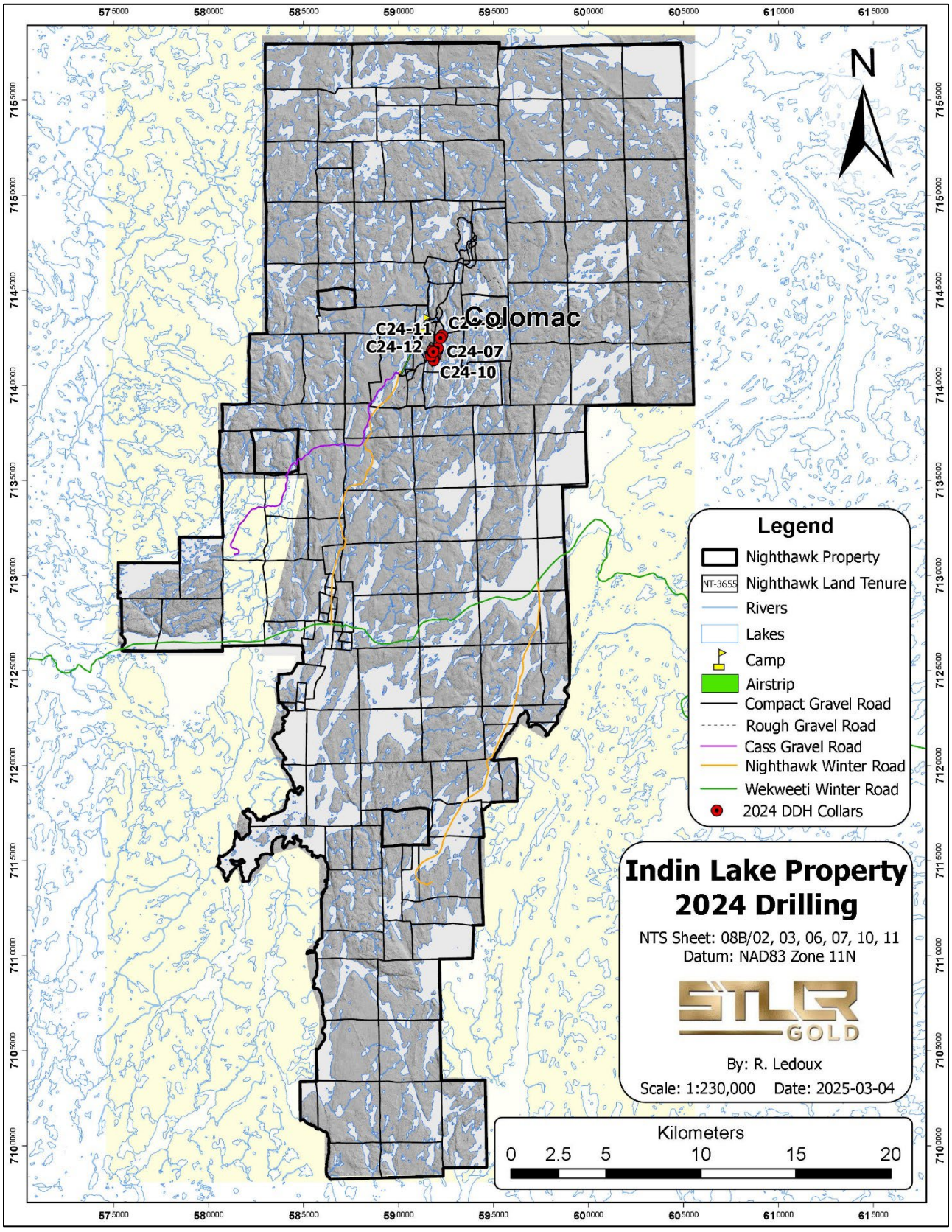


Figure 32: Map of 2024 drilling area locations on the Indin Lake Gold Property.

3.2.3 Colomac Drilling

Colomac Major Objectives and Drilling Completed

The major objectives for the 2024 Colomac drill program were to extend the depth of mineralization below the 2023 PEA resource (McBride, 2023a) in the 2.0, 2.5, and 3.0 Zones.

During 2024, a total of 15 drill holes were completed at the Colomac Deposit on Federal mining lease 3211 (see Figure 33) totalling 6,331 metres, with 2,448 samples submitted for assay. A total of 107.5 drill days were spent by two diamond drills using 6000 m^3 of water from May 10th to June 13th, and from June 29th to July 27th, as detailed in Table 3. Of the 15 drill holes, 12 reached target depth: drill holes C24-02, 03, and 04 were abandoned due to drilling complications and were restarted with new hole ID's.

Table 3: Colomac 2024 Drill Collar Info

Description (Hole ID)	Start Date	Stop Date	Drill Days	Water Usage (m^3)	Zone	UTM Easting Actual (NAD 83 Zone 11N)	UTM Northing Actual (NAD 83 Zone 11N)	Elevation (m) Actual	Collar Azim.	Collar Dip	Final EOH (m)	Total # of Samples	VG # of Samples	Water Source	Land Tenure
C24-01	2024-05-10	2024-05-15	4.5	230	2.5 Zone	592031	7141821	366	270	-76	369	96	15	Baton	3211
C24-02	2024-05-13	2024-05-13	0.5	15	3.0 Zone	591927	7141518	369	298	-77	9	0	-	Baton	3211
C24-03	2024-05-13	2024-05-18	5	206	3.0 Zone	591925	7141519	369	298	-77	186	0	-	Baton	3211
C24-04	2024-05-15	2024-05-17	1.5	109	2.5 Zone	592051	7141873	366	280	-78	19	0	-	Baton	3211
C24-05	2024-05-17	2024-05-23	6	419	2.5 Zone	592052	7141873	367	280	-78	462	168	16	Baton	3211
C24-06	2024-05-19	2024-05-28	9	349	3.0 Zone	591927	7141514	370	298	-77	402	170	16	Baton	3211
C24-07	2024-05-23	2024-05-28	5	184	2.5 Zone	592059	7141951	368	270	-78	415	167	22	Baton	3211
C24-08	2024-05-28	2024-06-04	6.5	227	3.0 Zone	591860	7141391	366	271	-81	488	111	-	Baton	3211
C24-09	2024-05-29	2024-06-08	10.5	687	2.0 Zone	592296	7142624	346	290	-80	561	178	3	Baton	3211
C24-10	2024-06-04	2024-06-10	6.5	242	3.0 Zone	591844	7141314	363	279	-80	441	171	4	Baton	3211
C24-11	2024-06-09	2024-07-04	9	503	2.0 Zone	592203	7142487	343	265	-78	477	93	-	Baton	3211
C24-12	2024-06-10	2024-07-03	7	386	3.0 Zone	591692	7141552	363	115	-64	399	154	5	13033	3211
C24-13	2024-07-04	2024-07-11	7	516	2.5 Zone	591751	7141789	357	85	-68	543	117	2	13033	3211
C24-14	2024-07-05	2024-07-18	12.5	861	2.5 Zone	591759	7141833	358	83	-71	720	406	21	13033	3211
C24-15	2024-07-11	2024-07-28	17	1066	2.5 Zone	591828	7141762	369	44	-71	840	617	10	13033	3211
All	2024-05-10	2024-07-28	107.5	6000					15 DDH		6331	2448	114		

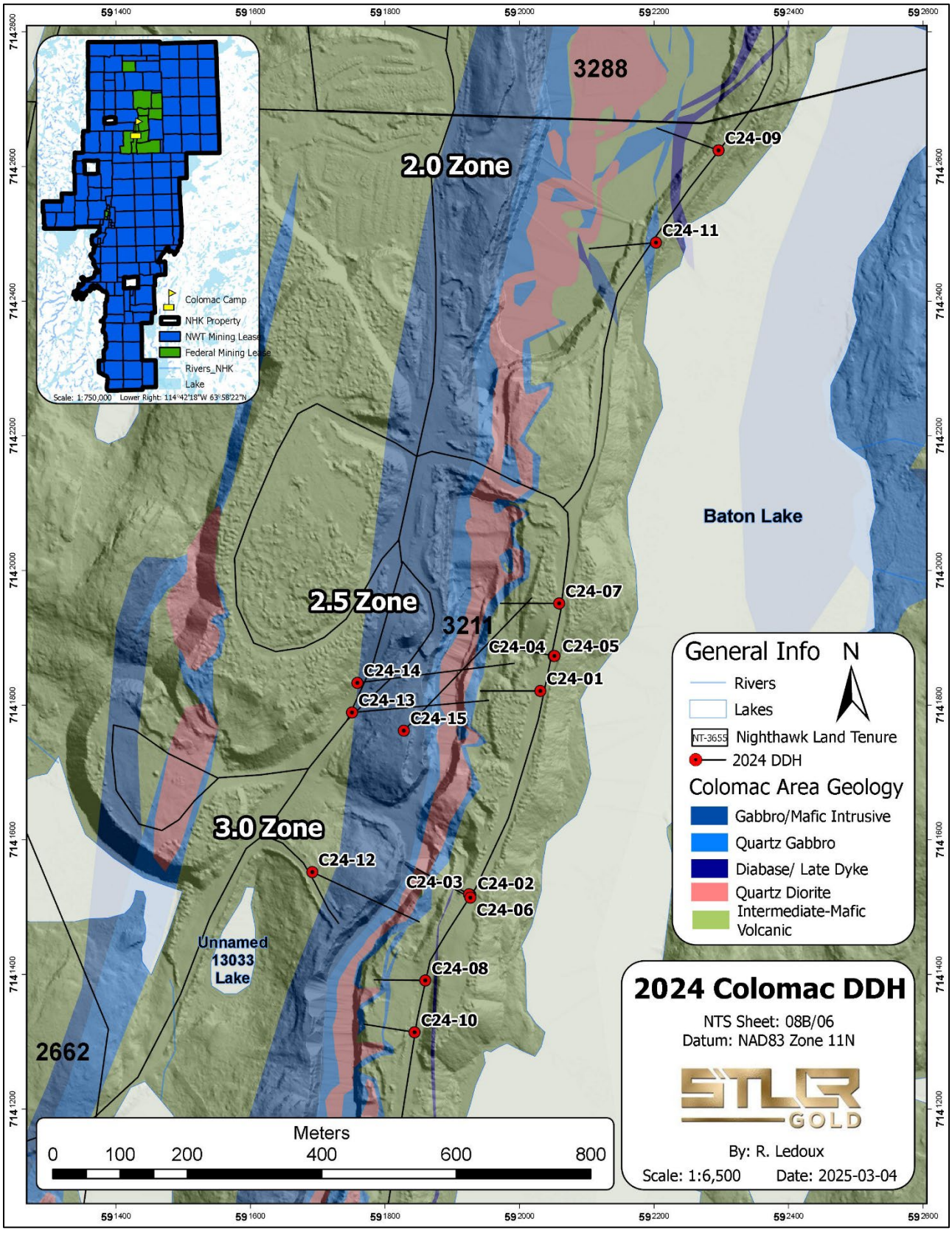


Figure 33: Geological map of Colomac Deposit with 2024 drill collar locations.

Colomac Drill Results

The results of Nighthawk's 2024 drill program are summarized and presented in tables, plans, and drill hole cross sections, along with commentary and context presented in press releases on STLLR's website at https://stllrgold.com. The following summary highlights a few select drill cross sections and related comments to illustrate discoveries, and the objectives met.

Colomac 2.0 Zone Drilling Highlights

- Hole C24-09 intersected 1.85 g/t Au over 41.50 m and 0.61 g/t Au over 4.00 m (see Figure 34)

Two drill holes (C24-09 & 11) were drilled in the southern portion of the Colomac 2.0 Zone. Both intersected thinner mineralization than directly above. It is likely that the holes intersected the quartz diorite outside of one of the main ore shoots that is potentially plunging more towards the north, where better deep intercepts have been intersected in the 2.0 Zone.

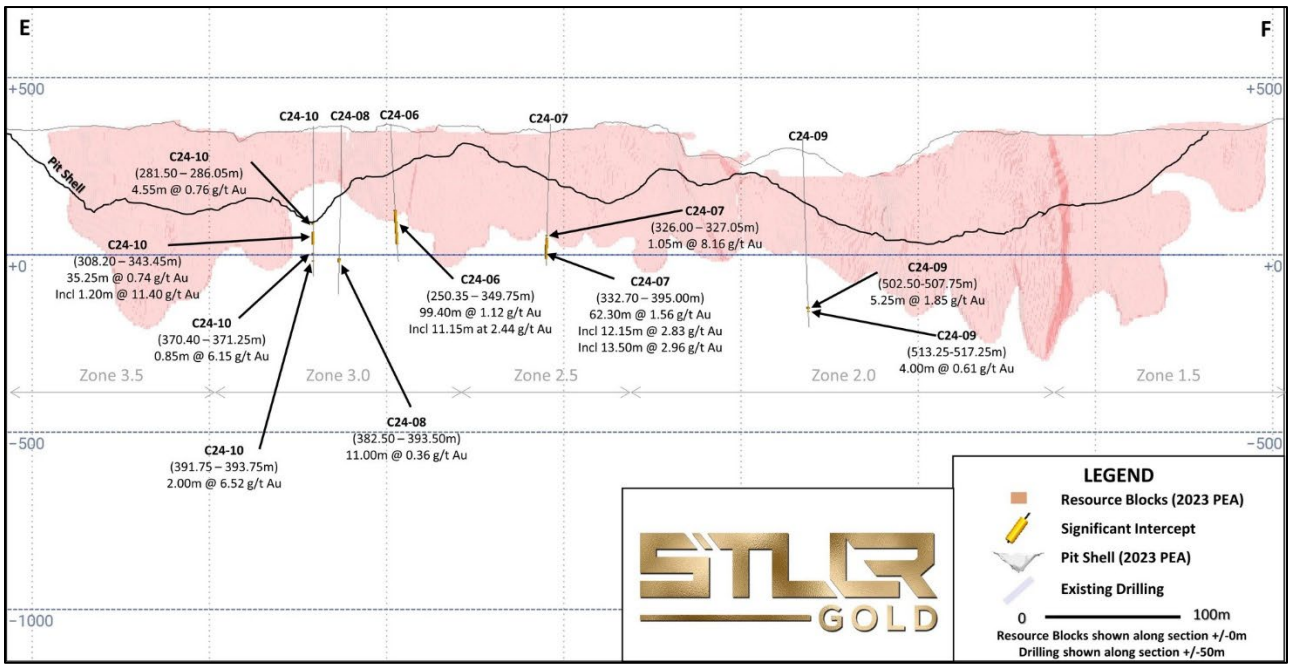


Figure 34: Long section of the Colomac Deposit 1.5 to 3.5 Zone looking west with the 2023 PEA resource and pit shell with significant intercepts from C24-06, 07, 08, 09, & 10.

Colomac 2.5 Zone Drilling Highlights

- Hole C24-01 intersected 1.97 g/t Au over 41.50 m incl. 2.96 g/t Au over 21.25 m and 7.40 g/t Au over 2.55 m (see Figure 35) (McBride, 2024b).
- Hole C24-05 intersected 1.23 g/t Au over 59.00 m incl. 3.23 g/t Au over 6.90 m (see Figure 35) (McBride, 2024c).
- Hole C24-07 intersected 1.56 g/t Au over 62.30 m (incl.2.83 g/t Au over 12.15 m & 2.96 g/t Au over 13.50 m) (see Figure 34) (McBride, 2024d).

- Hole C24-14 intersected 2.81 g/t Au over 18.50 m (incl. 71.80 g/t Au over 0.50 m) and 1.33 g/t Au over 34.00 m (incl. 4.46 g/t Au over 3.55 m) (see Figure 36) (McBride, 2024e).

Six drill holes were drilled in the Colomac 2.5 Zone of which one (C24-04) was lost and was restarted with the new hole ID C24-05. The drilling in the 2.5 Zone was the most successful of the 2024 program with consistent intersections of strong mineralization well outside of the current resource model (McBride, 2023a) as shown in Figure 35 and Figure 36.

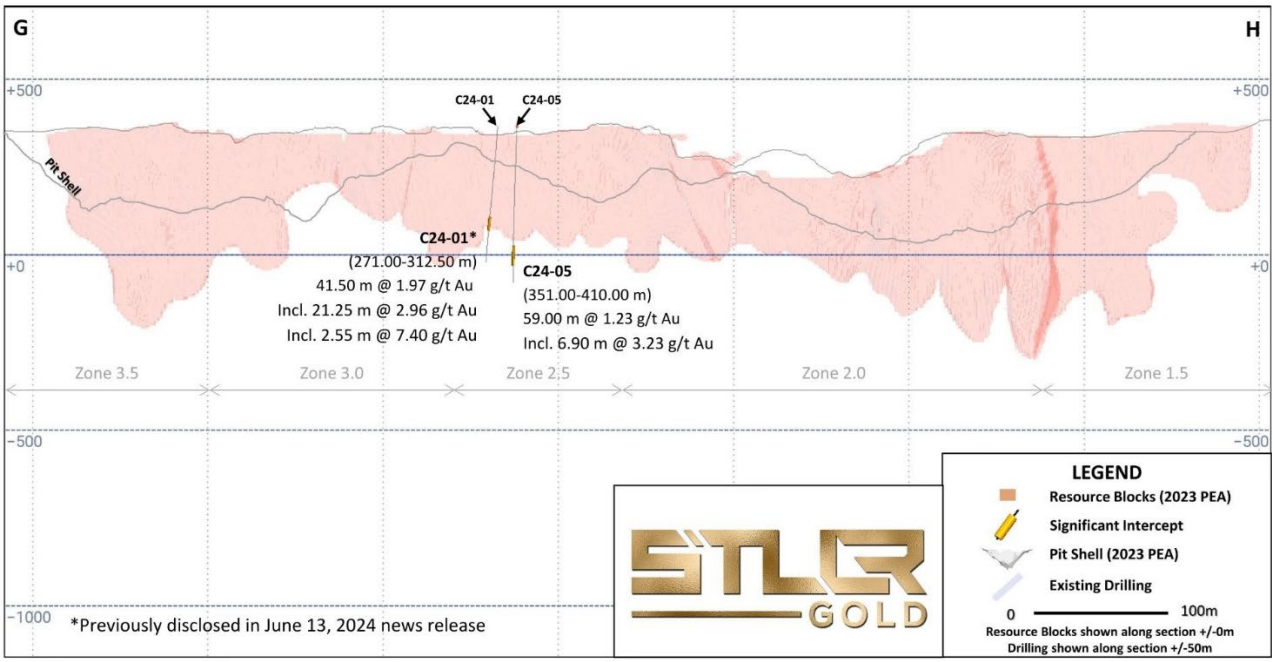


Figure 35: Long section of the Colomac Deposit 1.5 to 3.5 Zone looking west with the 2023 PEA resource and pit shell with significant intercepts from C24-01 & 05.

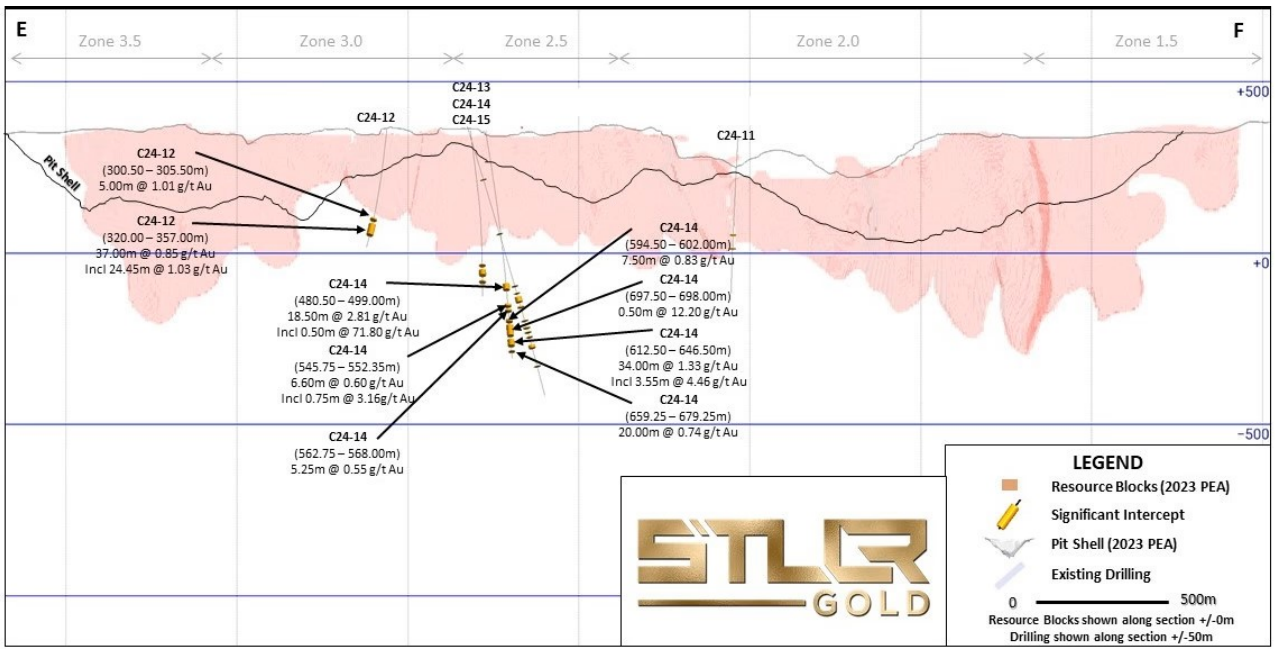


Figure 36: Long section of the Colomac Deposit 1.5 to 3.5 Zone looking west with the 2023 PEA resource and pit shell with significant intercepts from C24-11 ,12, 13, 14, & 15.

Colomac 3.0 Zone Drilling Highlights

- Hole C24-06 intersected 1.12 g/t Au over 99.40 m (incl. 2.44 g/t Au over 11.15 m & 11.40 g/t Au over 1.20 m) (see Figure 34 & Figure 37).

- Hole C24-12 intersected 0.85 g/t Au over 37.00 m (incl. 1.03 g/t Au over 24.45 m) (see Figure 36).

Six drill holes were drilled in the Colomac 3.0 Zone of which two (C24-02 & 03) were lost on the same set up and were restarted with the new hole ID C24-06. Three of the four holes that were drilled to depth successfully intersected good mineralization outside of the 2023 resource (McBride, 2023a) with the exception of C24-08 (see Figure 34). C24-08 intersected the Colomac sill at a location where it is much thinner and where there is a kink. Drill hole C24-06 is one of the most northerly 3.0 Zone holes near the edge of the 2.5 Zone. C24-06 intersected a wider interval of mineralization than directly above and is likely intersecting a shoot of stronger mineralization plunging towards the north.

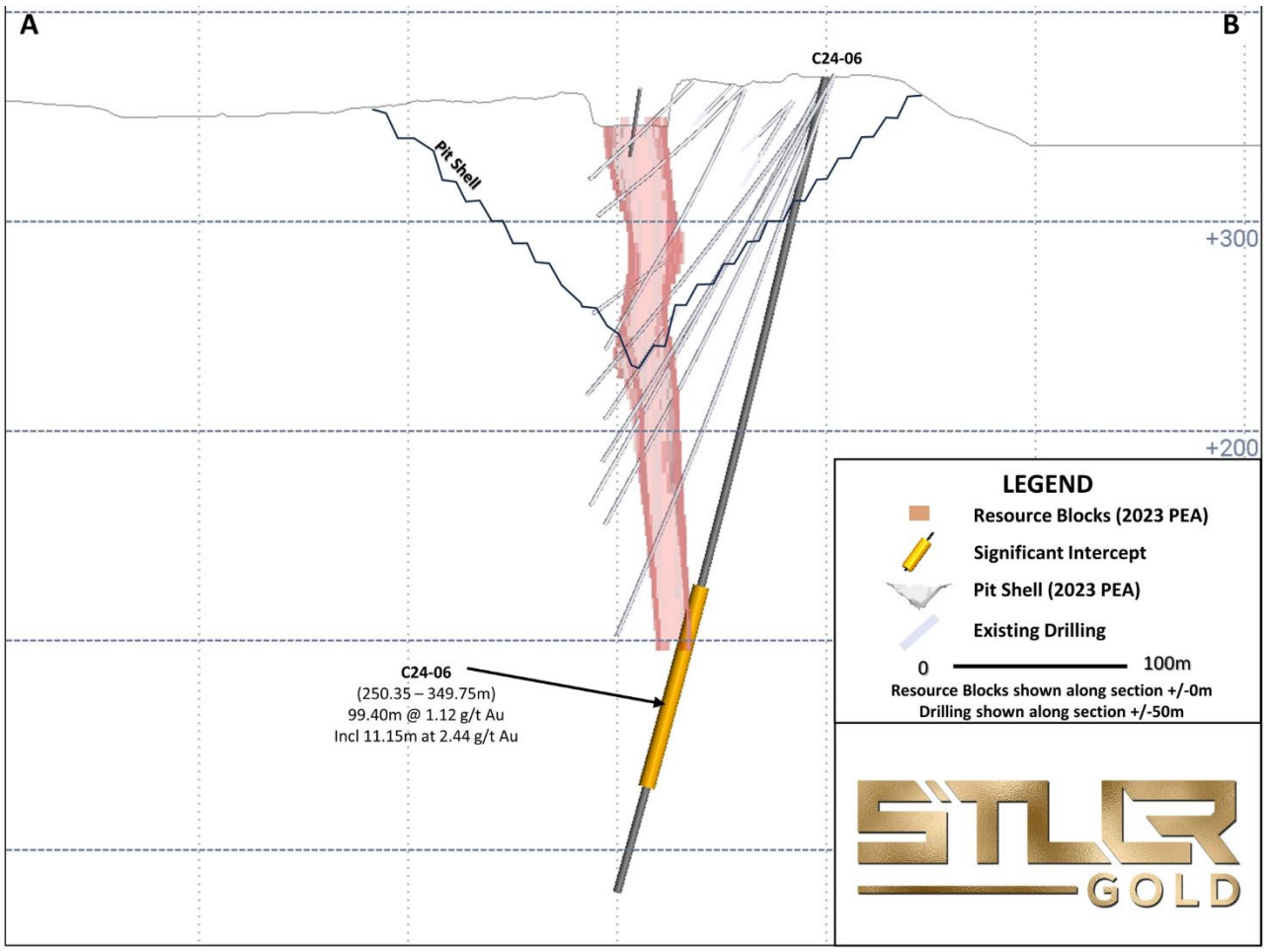


Figure 37: Cross section of C24-06 in the Colomac Deposit 3.0 Zone looking north with the 2023 PEA resource.

3.3 2024 Other Exploration Work

3.3.1 Lakehead Master's Program

There are two MSc studies in progress on the Indin Lake Gold Property that were started in 2023 by Turner Green and Tshepiso Sekhula of Lakehead University. Their overall goals are to integrate petrography, whole rock geochemistry, geochronology, and radiogenic isotopes into the overall understanding of the Indin Lake Gold Project. Turner Green was on site from July 6th to 20th, 2024, collecting additional samples from drill core for his and Tshepiso's theses.

A total of eighteen samples were collected from four drill holes (G19-04, C22-45, C22-25, & C19-41) for Turner Green's thesis (see Figure 38). The samples were collected to gather additional geochemical, geochronology, isotope dating, and structural mineralization data. Geochemical samples were sent to ALS for whole rock lithogeochemistry, while the samples for geochronology, isotope dating, and structural mineralization were sent to Lakehead University for processing and analysis.

A total of thirteen samples were collected from four drill holes (GB21-16, GB21-26, NL21-15, & NL21-08) for Tshepiso Sekhula's thesis (see Figure 38). One sample was taken from felsic rocks for zircon geochronology in each drill hole, and seven samples were taken for lithogeochemistry to complement the lithogeochemisty grab samples taken in 2023.

3.3.2 Detailed Relogging of High-Grade Mineralization in Colomac 3.5 Zone Gabbro

A detailed relogging of quartz veins with high gold grades within the gabbro portion of the Colomac Sill was conducted from July 15th to 19th, 2024, by Riley Ledoux, Jack Armstrong, and Turner Green. Sections of 18 drill holes in the Colomac 3.5 Zone (see Figure 39) were selected for the relogging to better understand the nature and continuity of high-grade gold found within the gabbro portion of the sill which is currently not well understood.

Within the selected intervals, all vein widths, alpha angles, and type (extensional or shear) were measured and recorded, and a summary write-up was completed about the overall section. In addition, the intervals were re-photographed with some additional close-up photos taken.

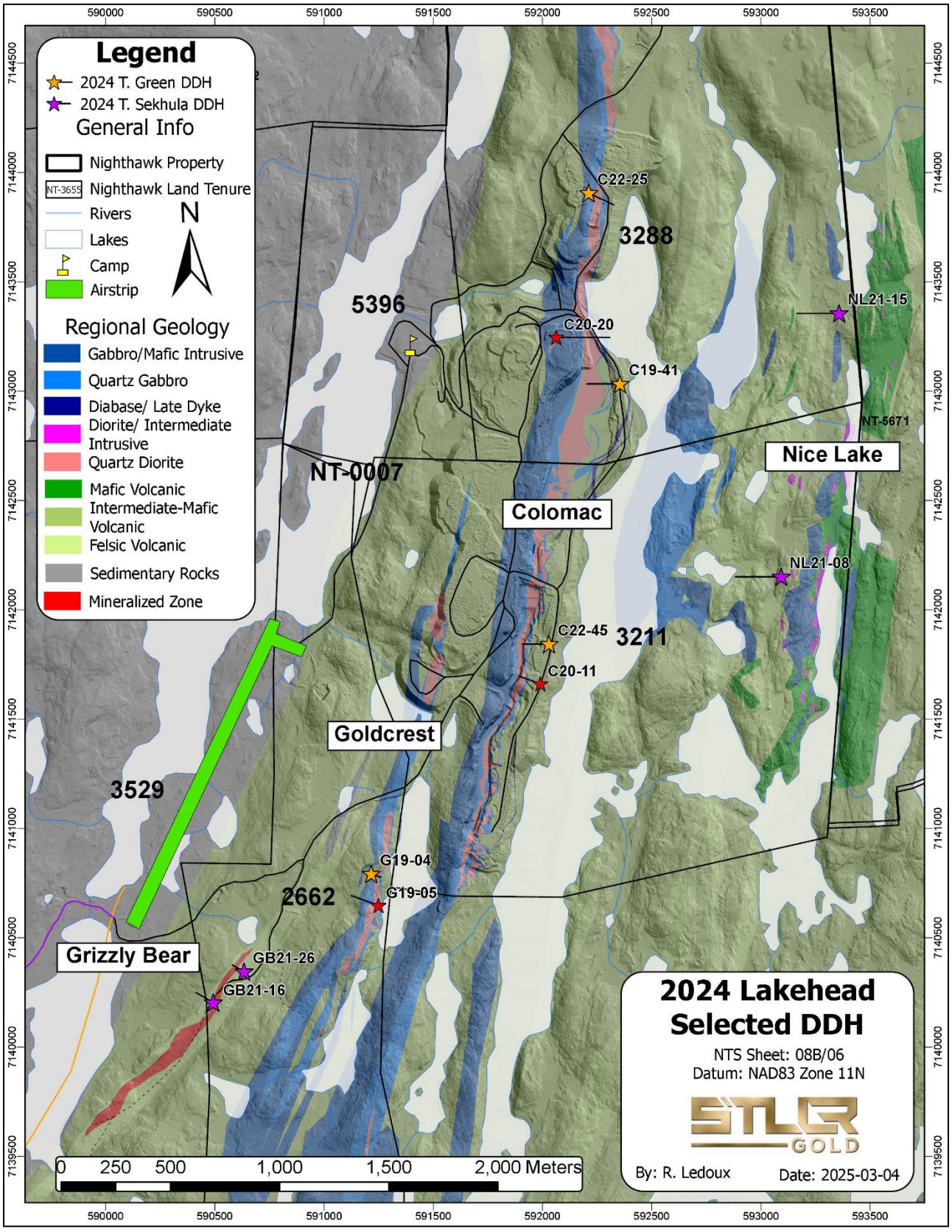


Figure 38: Geological map showing drill holes selected in 2024 for the Lakehead Masters' theses.

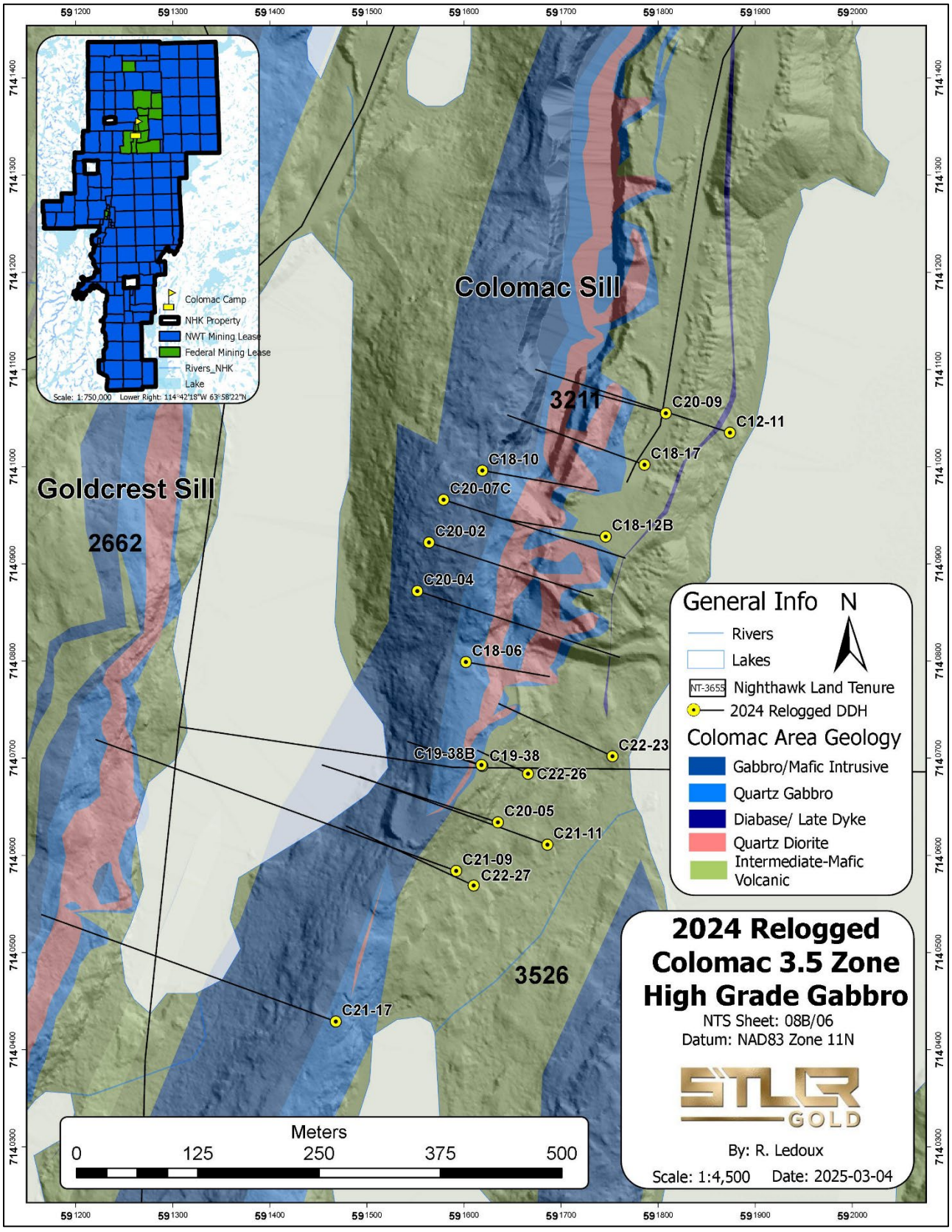


Figure 39: Geological map showing drill holes selected in Colomac 3.5 Zone for detailed relogging.

3.4 Project Schedule

3.4.1 2025 Project Schedule

In 2025, Nighthawk intends to construct a Winter Road (see Figure 1) to resupply its camp and transport materials for the installation of a solar farm (STLLR Gold Inc., 2024c), as well as to backhaul materials from its 2024 Spider Lake Reclamation Program (see 4.4.1). The solar farm will be installed during the summer months.

3.4.2 Waste Incineration

The incinerator facility at Colomac Camp (see Figure 40) is equipped with an Inciner8 Model A600 Incinerator (see Figure 41). The incinerator is diesel-fired, with a secondary chamber for additional gas burn, and operates at a thermostatically controlled temperature with a minimum 900° C to maximum of 1350° C. The furnace has a capacity of 300 kg and burns at an average burn rate of 75 kg per hour.

The incinerator is contained within a wood-framed framed building that is isolated from other structures. The incinerator facility also contains digital weigh scales for waste tracking, and separate bins for partitioning different types of waste, which burn at different rates (see Figure 41).

All ash from incineration is collected in reused diesel drums, weighed, and recorded (see 4.2.3) before the drums are sealed and labelled. The drums are then shipped to KBL Environmental in Yellowknife for proper disposal (GNWT, 2017).

Only the camp person, a Geominex employee, is authorized to operate the incinerator at Colomac, in order to maintain control over operating procedures and record keeping.

Figure 40: Outside of incinerator shack, with mega bags in front ready to be weighed before being flown out of camp (2023).

3.4.3 Long-Term Project Schedule

Since the original acquisition of the Indin Lake Gold Project by Nighthawk, the Project has been in the discovery and exploration phase, focusing on defining the global mineral resource (McBride, 2023a). The exploration and discovery phase has no set timeline and can range from years to decades. Predevelopment, or advanced exploration, is the next phase of the Project and includes technical engineering studies, baseline

environmental studies, metallurgical studies, and economic feasibility studies. Timelines for advanced exploration vary based on the location, size, and complexity of the project. Transitioning from exploration to predevelopment requires significant capital investment, and positive preliminary economic studies. In tandem with the technical studies, major development projects require an environmental assessment. Upon successful studies and approval from the environmental assessment, the permitting phase would follow. All this must occur prior to the construction and production phases of a mine.

4 ACTIVITIES GOVERNED BY MANAGEMENT PLANS

4.1 Water Management Plan

No changes or updates were undertaken to the process or facilities required for the management of water during 2024.

4.1.1 Water Drawn

Camp water usage, sourced from Steeves Lake, is tracked daily by recording the readings on water meters at the outflow of all three water tank houses. In total, 346.42 m^3 of water was used from April 13th to September 13th, 2024, by the camp: 93.79 m^3 was used by the kitchen, 111.98 m^3 by the main washhouse, and 140.65 m^3 was used by the dormitory trailer complex. A summary is available in Table 4 below with details by month; the detailed daily water usage is located in Appendix B. Water meters are inspected at the beginning of each year during camp opening and are calibrated based on initial filling of a tank with a known volume. Regular calibration records will be kept going forward.

Drilling water was sourced from Baton Lake and Unnamed Lake 13033. Usage was tracked by a water meter on the drill and recorded at the end of day and night shift. In total, 6,000 m^3 of water was used by both drills. Water consumption is detailed by drill hole in Table 3 and summarized by source and month in Table 5.

Table 4: Colomac Camp Water Usage Summary

Usage		Kitchen			Washhouse			Trailers			Combined		
Metric		Total (m^3)	Days	Daily Average (m^3/day)	Total (m^3)	Days	Daily Average (m^3/day)	Total (m^3)	Days	Daily Average (m^3/day)	Total (m^3)	Days	Daily Average (m^3/day)
Period	April	5.54	17	0.33	7.90	17	0.46	3.45	11	0.31	16.89	17	0.99
	May	24.44	31	0.79	27.98	31	0.90	40.79	31	1.32	93.21	31	3.01
	June	26.01	30	0.87	17.96	30	0.60	35.64	30	1.19	79.61	30	2.65
	July	28.65	31	0.92	43.54	31	1.40	57.77	31	1.86	129.96	31	4.19
	August	4.80	8	0.60	7.86	8	0.98	3.00	5	0.60	15.66	8	1.96
	September	4.35	13	0.33	6.74	13	0.52	0.00	0	0.00	11.09	13	0.85
	Annum	**93.79**	**130**	**0.72**	**111.98**	**130**	**0.86**	**140.65**	**108**	**1.30**	**346.42**	**130**	**2.66**

Table 5: Drill Water Usage Summary

Source		Baton Lake			Unnamed Lake 13033			Combined		
Metric		Total (m^3)	Days	Daily Average (m^3 / day)	Total (m^3)	Days	Daily Average (m^3 / day)	Total (m^3)	Days	Daily Average (m^3 / day)
Period	May	1781	22	81.0	0	0	0.0	1781	22	81.0
	June	1101	12	91.8	232	4	58.0	1333	16	83.3
	July	289	4	72.3	2597	27	96.2	2886	31	93.1
	Annum	**3171**	**38**	**83.4**	**2829**	**31**	**91.25**	**6000**	**69**	**87.0**

N.B.: Up to two drills drew on each water source at a time.

4.1.2 Greywater

Grey water from the camp is generated from the kitchen, the washhouse, and the trailers at Colomac. To minimize the effects of the greywater, biodegradable and eco-friendly cleaning products are employed at all locations wherever possible. The greywater from the kitchen area is also processed through a grease trap located within the pump house building before it is released into the environment. Greywater from the kitchen, along with that from the washhouse, is then released in an area west of and behind the kitchen/dining structures and washhouse. The greywater from the trailers is released on the west side behind the new toilet facility. No sumps are employed in the release; rather, the water enters a 1-2 metre-plus thick groundcover of broken rock. This system works well and allows for natural filtration. There was no residual accumulation of water, or other extraneous debris on surface during either the winter or summer periods during 2012-2024. The government inspectors have regularly reviewed the release site during their visits and found no issues with this process. Volumes of greywater generated in camp are assumed to be equal to volumes drawn from the lake for use.

Greywater from drilling is discharged into topographic depressions away from bodies of water. Often, return drill water is lost underground, but otherwise volumes discharged are assumed to equal those drawn.

There were no unauthorized discharges during 2024.

4.1.3 Damoti Lake Surveillance Network Program

STLLR and WSP staff were on site on June 3rd and September 10th, measuring and recording water quality parameters and collecting water samples for laboratory testing, including the collection of a bulk sample at SNP station 5-6 for toxicity on June 3rd.

For both events, results for SNP stations 5-4, 5-5, and 5-6 were found to be within applicable guideline exceedance thresholds and water licence limits (WSP Canada Inc., 2024a) (WSP Canada Inc., 2024b); as such, no remedial actions were taken in response to monitoring in 2024.

See Appendices C and D for further details of the June and September monitoring events, respectively, including tabular summaries of data including the QA/QC program.

4.2 Waste Management Plan

4.2.1 Solid Waste Management

Waste stream management was implemented to ensure that only non-hazardous, combustible waste was incinerated. Other types of waste that are not suitable for incineration (based on the applicable guidelines and standards) was transported to Yellowknife for disposal at an approved facility following the procedures outlined in the *Waste Management Plan*.

One component of waste stream management is the "Three R's": reducing, reusing, and recycling. The first consideration for waste materials (or potential waste) generated is to reduce the amount of overall waste. This can include using products that have less packaging or come in bulk containers. Reusing items (if safe to do so) can also reduce the input into the waste stream as well as result in cost savings. Recycling appropriate wastes will also divert wastes from incinerators, landfills, and other disposal methods. Recyclables, including but not limited to pop cans and glass, are sent to approved recycling facilities in Yellowknife. To increase recycling, a protocol change occurred in late 2017 with most of the clean cardboard brought to Colomac as part of the grocery delivery being strapped together and returned to Yellowknife for recycling.

Waste streams that are not incinerated at Colomac include (but are not limited to) the following:

- Hydrocarbons and hydrocarbon containing products, including waste and sludge oils, and hydrocarbon impacted drill waste,
- Spray cans,
- Plastics and rubber,
- Metal and glass,
- Batteries of all types,
- Treated wood products,
- All scrap poly-foam insulation, and
- Chemicals and their containers.

Such materials are packed into sealed and marked drums and shipped to Yellowknife for proper disposal by KBL Environmental.

Waste from the lavatories is processed within the toilet facilities (see 2.2.1). The Incinolet toilets produce minor residual ash, and the Pactos keep the waste sealed inside industrial plastic bags; both of which are shipped within marked, sealed drums to KBL Environmental in Yellowknife for proper disposal.

No solid waste is deposited on the property. Masses of all outgoing waste are summarized alongside the incineration records in Table 6.

No updates or changes to the process or facilities required for the management of waste took place during 2024.

4.2.2 Incinerator Training

In addition to reading the *Waste Management Plan*, the incinerator operator is trained in the following areas:

- Incinerator start-up and operating procedures,
- Incinerator waste streams and load limitations,
- Clean-out procedures and safe packaging of ashes,
- Troubleshooting procedures,
- Maintenance schedule, and
- Record keeping and reporting.

Training of any additional personnel as needed is handled by those already trained and familiar with operations.

Attestations of training from the incinerator operators are presented as Appendix A.

Figure 41: Incinerator building (interior) at Colomac camp. Inciner8, Model A600(sec) Incinerator on the left and bins on the right are for partitioning different types of waste based on burn rate (2014).

4.2.3 Incinerator Records

As part of the daily routine, waste at the Colomac camp is sorted, weighed, and recorded prior to incineration. Paper records are kept onsite and are digitized regularly and prior to camp closure. Materials incinerated are sorted as “kitchen waste” or “other sources”.

The incinerator records are summarized in Table 6 alongside outgoing waste flows. Detailed incinerator records are tabulated in Appendix B alongside outgoing waste and camp water usage.

Table 6: Summary of Colomac Incinerator Feed and Shipped Waste for 2024 and Prior Years

Year	Incinerated		Shipped Out					
	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Construction Material & Pallets (lb)	Refundable Bottles (lb)	Driller Garbage (lb)	Other Non-Burnable (lb)
2017	20,925.00	6,533.50	2,416.00	2,709.00	413.00	N/A	N/A	N/A
2018	23,396.90	5,124.00	2,286.00	343.00	5,532.00	N/A	N/A	N/A
2019	22,448.00	2,339.00	884.00	196.00	2,024.00	N/A	N/A	N/A
2020	13,015.50	1,944.00	360.00	2,555.00	903.90	N/A	N/A	N/A
2021	36,345.10	5,122.70	2,717.00	7,617.00	14,907.00	1,814.00	26,465.00	22,152.00
2022	36,276.00	8,049.00	2,286.00	7,273.00	28,310.00	1,838.00	17,311.00	9,261.00
2023	21,936.00	4,662.00	2,058.00	3,544.00	7,201.00	1,253.00	9,561.00	25,993.00
2024	10,568.00	5,365.00	692.00	2,627.00	1,341.00	735.00	5,830.00	13,691.00

4.3 Spill Contingency Plan

The *Spill Contingency Plan* and its location in camp were discussed with all personal onsite during spill response training on May 11th and 30th, June 1st and 5th, and July 9th, 2024. During training, the proper steps for responding to various spills, the location, contents, and use of spill kits, as well as the spill reporting requirements were discussed.

Numerous 55 and 95-gallon drum spill kits produced by Uline are located on site near all fuel storage and transfer sites and are regarded as the primary response tool in a spill scenario. Smaller soft case spill kits are located in all vehicles, as well as absorbent blue matting at the drills, driller workshop, generator shack, incinerator shack, and mechanic shop; the presence of these spill response supplies are part of regular inspection protocols.

No unauthorized discharges or reportable spills occurred during the 2024 program.

4.4 Closure and Reclamation Plan

4.4.1 2024 Spider Lake Reclamation Program

Reclamation of the Spider Lake Site was undertaken in 2024 under LUP W2018X0006 and in accordance with Nighthawk's *Conveyance and Reclamation Agreement* with AANDC, and the *Nighthawk Gold: Final Spider Lake Site Closure and Reclamation Plan* ("CRP"). This work was performed to address legacy environmental impacts at the former Mahogany Camp and Spinet Camp, as well as the Main Showing and East Zone on Treasure Island.

Nighthawk was responsible for planning the logistics and for oversight of physical reclamation activities during the program, with labour support provided by TEES and Dehk'e. WSP was Nighthawk's Environmental Consultant and provided technical input and oversight. All laboratory analytical services were provided by ALS.

The 2024 phase of the Spider Lake Reclamation Program took place between May 31st and August 22nd.

Due to the impacts of the 2023 wildfires which burned across Treasure Island and through the site, work began with a Soil Characterization Program and updating the site inventory to reflect the impacts of the wildfires. Soil characterization included collecting samples from the upper 0.50m of soil from the centres and perimeters of ten-by-ten metre grids (where terrain allowed), centred on nine Areas of Environmental Concern ("AECs") identified by a Phase II Environmental Site Assessment, resulting in up to 10 soil samples per AEC. These soil samples were field-screened for volatile petroleum hydrocarbons, and submitted for laboratory analysis of select volatile organic compounds, polycyclic aromatic hydrocarbons, and metals. The updated site inventory included a smaller volume of untreated wood waste, as most was found to have been combusted by the wildfires.

Upon review of the analytical results of the Soil Characterization Program and their comparison with applicable environmental screening guidelines, as well as other considerations as described in the CRP, WSP advised Nighthawk to proceed with soil remediation at four of the nine AECs in order to satisfy the closure objectives set out in the CRP (WSP Canada Inc., 2024c).

Reclamation efforts included:

- Remediation (excavation) of approximately 10 m^3 of hydrocarbon-impacted soil and approximately 40 m^3 of hydrocarbon and metals-impacted soil. All excavated soils were placed in lined megabags, which were marked with their respective AEC numbers and contents.
- Consolidation and removal of remnant untreated wood structures after the wildfires.
- Consolidation and removal of metal waste.
- Cross-pumping of drums containing remnant fuels into newer drums to prevent leakage during transportation, and removal of both older and newer drums.
- Removal of hazardous materials, which were double-bagged in labelled, lined megabags or placed in labelled, sealed plastic containers. All removal of hazardous materials was performed by a person in full hazardous materials personal protective equipment (i.e., full face mask with P100 cartridges, Tyvek suits and booties, and rubberized gloves, with all gaps duct-taped closed).
- Containment and removal of two lead-acid batteries, also while wearing the personal protective equipment described above.
- Transfer of all broken core from Mahogany Camp and Spinet Camp to Trench 06 at the Main Showing, as the core boxes had combusted by the wildfires, resulting in the core no longer being of research or educational value.
- Backfilling of Trench 04 at the Main Showing and Trench 18 at the East Zone with adjacent waste rock material.

All the above materials (with the exception of the broken core and waste rock) were transported (slung) by helicopter operated by GSH from Treasure Island to Colomac Camp, where they have been staged for removal from the Indin Lake Gold Property via Winter Road in 2025. Megabags of contaminated soils were placed on platforms and tarped-over to mitigate any possibility of acid rock drainage and/or leaching of contaminants.

Confirmatory soil samples were collected from the base and sidewalls of each AEC post-excavation to ensure that the remaining soil is within the guidelines set out in the CRP. Excavated soils were also sampled to assess acceptance screening criteria for permitted receiving facility(ies).

WSP has recommended closure of the site pending final disposal of contaminated soils and waste materials, and required site inspections (WSP Canada Inc., 2024c).

4.4.2 Future Closure and Remediation Programs

Nighthawk intends to remove all materials from the 2024 Spider Lake Remediation Program staged at Colomac Camp from the Indin Lake Gold Property via Winter Road, to be constructed in winter 2025, for disposal at permitted receiving facility(ies). In spring 2025, the site is to be visited by a CIRNAC inspector and a third-party engineer to evaluate whether the Spider Lake Remediation Program was conducted in accordance with the CRP and the *Conveyance and Reclamation Agreement*.

After closure of the Spider Lake Site, Nighthawk intends to resume reclamation of the Diversified Mine Site. This will begin with the staging of heavy equipment at the former Diversified Mine via Winter Road.

There are no additional activities planned that are expected to change the closure cost estimates in 2025.

4.4.3 Closure and Remediation Engagement

Information on the Spider Lake Remediation Program was provided to each group in the *Engagement Plan*, prior to and during the remediation activities. Early engagement was conducting in 2023 during the

planning stage. Activity updates at the start of program, throughout and at completion of field activities occurred periodically throughout the year. Information was provided by email, bulletin and in-person meetings. See Table 7 for engagement records.

4.5 Engagement Plan

The *Engagement Plan* version 4.1 for the Indin Lake Gold Project was developed following the Mackenzie Valley Land and Water Board's *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits* (MVLWB, 2014), *Engagement and Consultation Policy* (MVLWB, 2018) and the Weghàà Eleyatits'eedi: *Tłı̨chǫ Government Guidelines for Proponents of Development* (Tłı̨chǫ Government, 2022). Nighthawk's *Engagement Plan* version 4.1 was last revised as of February 2023. The intent of the *Engagement Plan* is to respectfully and effectively collaborate and inform affected parties. Engagement was carried out by email, virtual meetings, presentations, in person meetings, and weekly activity reporting. Table 7 is a summary of engagement activities carried out in 2024 for Water Licences W2021L2-0004, W2021L2-0005 and Land Use Permit W2021C0009.

Table 7: Summary of Engagement Activities in 2024

Date	Party	Issue/Topic	Type of Engagement
01/22/2024	Tlicho Government	Project Update and 2024 Plans	In-Person
05/4/2024	Tlicho Government, NSMA and WRRB	Notice of Camp Opening	Email
05/19/2024	Tlicho Government, NSMA and WRRB	STLLR Weekly Activity Report	Email
05/28/2024	NSMA	Project Update and Activity Report	In-Person
05/31/2024	Tlicho Government	Project Update and Activity Report	In-Person
05/31/2024	Tlicho Government, NSMA and WRRB	STLLR Weekly Activity Report	Email
07/05/2024	NSMA	Project Update and Activity Report	In-Person
07/05/2024	Tlicho Government, NSMA and WRRB	STLLR Weekly Activity Report	Email
07/07/2024	Tlicho Government, NSMA and WRRB	Notice of News Release	Email
08/02/2024	Tlicho Government, NSMA and WRRB	STLLR Weekly Activity Report	Email
08/02/2024	Tlicho Government, NSMA and WRRB	Notice of News Release	Email
11/07/2024	Tlicho Government, NSMA and WRRB	Notice of News Release	Email
11/26/2024	Public Presentation Yellowknife Geoscience Forum	Project Update and Activity Report	In-Person

Date	Party	Issue/Topic	Type of Engagement
11/27/2024	Tlicho Government	Project Update and Activity Report	In-Person
12/20/2024	Tlicho Government and NSMA	STLLR Gold Job Posting	Email
12/31/2024	Tlicho Government, NSMA and WRRB	Bi-annual Community News Letter	Email

Through the engagement process, an open dialogue and feedback on program design, timing and activity has been received by Nighthawk. This includes priorities on closure criteria, archaeological sites, caribou and other wildlife, and transparent project updating.

A GIS template for early archaeological mapping has been designed and set up to spatially record traditional knowledge provided for archeological sites and local areas of interest. This GIS system will also provide spatial reference for baseline data collection, such as wildlife data which can be shared with interested groups.

Bi-weekly project activity reports have been provided to increase transparency and more timely communication of activities, focusing on site specific activities, health and safety, and employment numbers. Increased frequency of communication during active programming allows for traditional knowledge and feedback received to be integrated more promptly into the programing.

Information provided to STLLR related to Traditional Knowledge supported program design to avoid sensitive areas or areas of concern, timing of programs and potential caribou migration paths.

4.6 Explosives Management Plan

An *Explosives Management Plan* has not been developed as no explosives were brought to, stored at, or used on the property, and there are no plans to do so at this time.

4.7 Wildlife Mitigation and Management Plan

The *Wildlife Mitigation and Management Plan* ("WMMP") describes the steps necessary to protect personnel, wildlife and wildlife habitat within the project area footprint as well as identifying potential species of concern on the Indin Lake Gold Property and monitoring and incident requirements.

4.7.1 Monitoring

Wildlife species of concern for Colomac camp are communicated to all staff and contractors at weekly Safety Meetings. Staff and contractors are required to document all relevant wildlife sightings at the Colomac camp.

A total of 13 wildlife species were recorded as observed at the site in 2024. Swallows (tree and mud) were the most commonly recorded species, being observed around and near camp day in flights of dozens between the beginning of May and the end of operations on July 30th. Ravens were the next most observed species, with near-daily observations of murders of up to four. Rabbits were a common sight between late may and mid-July, with up to four daily observations. Bears (adult or adolescent, no cubs) were observed alone on 29 occasions between the end of April and mid-July. Loons were spotted, usually solo, on twenty-five occasions between mid-May and late-July. Whiskey jacks, usually solo, were spotted

on eight occasions in the months of June and July. Snow geese, in gaggles of up to two dozen, were observed on six occasions in May. Solitary moose were observed on six occasions (2 bull, 4 cow, no calves) in June and July. Grouse, in coveys of up to a half-dozen, were observed on three occasions in April. Snow buntings, in drifts of up to a half-dozen, were observed on three in April. Solitary martens were observed twice in June and July. Solitary wolverines were observed on 2 occasions in April.

The only species of concern known to potentially live within the Project area as identified within the WMMP to be observed in 2024 were wolverines.

4.7.2 Wildlife Incidents and Harm to Wildlife

In order to mitigate the probability of incidents involving wildlife, hunting, trapping, harvesting and fishing was prohibited on the property, as well as the feeding or harassment of wildlife. A speed limit of 40km/h was enforced on roads, and wildlife was given the right-of-way if encountered on the road. When large mammals such as moose and bears were observed, all workers were notified via radio. No land clearing took place in 2024. No upland breeding birds and raptors nested on Project infrastructure. No physical hazards were present, and any chemical hazards were isolated per the *Waste Management Plan* and the *Spill Contingency Plan*. No bears had to be deterred within the Project area. Food waste and residuals were handled according to the *Waste Management Plan*.

As a result of the implementation of the above mitigation measures, no wildlife incidents occurred in 2024.

4.7.3 Mitigation of Habitat Loss

To reduce the Project's impact to habitat loss, all mitigation efforts as outlined in the WMMP were implemented. All exploration activities were restricted to the authorized areas, and all drill sites were remediated progressively subsequently by supervising geologists. There was no expansion of the camp in 2024. No beaver lodges, muskrat push-up or hibernacula, or bear dens were observed. Recreation vehicle use was prohibited. A minimum flying altitude of 300m was observes except during takeoff and landing for cargo and passenger aircraft outside of exploration camp areas.

There were no instances of impacts to wildlife habitat in 2024 that were not predicted.

4.7.4 Training

Annual training was completed for all camp staff on the WMMP. Bear awareness training was completed by all Geominex staff on site with the intention of expanding this to all staff who work outdoors in 2025. In addition, practical bear deterrent training was provided to field staff on May 30th, June 5th, and July 9th, 2024, in which the safe use of bear spray, horns, and bangers were discussed and demonstrated before participants practiced the application of these deterrents themselves.

4.7.5 Plan Review

Nighthawk believes that the non-occurrence of wildlife incidents and habitat loss in 2024 suggests the implementation of mitigation measures in the WMMP has been effective.

As there was no wildlife incidents or habitat loss, and the Project has not changed substantially in the time since the WMMP was prepared and approved, there are no updates or recommended changes to the WMMP at this time.

5 INSPECTIONS

5.1 Land Use Permit W2021C0009

5.1.1 June 24th, 2024

Resource Management Officer (Inspector) Erika Nissen and Environmental Specialist Megan Larose, both of CIRNAC, conducted an inspection on June 24th of 2024 to ensure compliance with the terms and conditions of land use permit W2021C0009 and approved management plans. Areas inspected included Colomac Camp, fuel and waste storage areas, the airstrip, and drill locations that had been completed to that date.

The inspectors found the site to be "overall very well managed, clean, and organized", with "[c]oncerns raised regarding management of small leaks noted from machinery… addressed… [with] submitted photos to the inspectors to demonstrate compliance" (Nissen, 2024).

5.1.2 September 19th, 2024

On September 19th of 2024, all 2023 drill locations were inspected by Resource Management Manager (Inspector) Clint Ambrose of the Department of Environment and Climate Change, Government of the Northwest Territories to ensure compliance with the conditions annexed to land use permit W2021C0009.

The Inspector noted "no major concerns", however "a minor amount of cleanup [is] required" regarding "impacted soils at the collar of [two] drill sites" (Ambrose, 2024). Nighthawk is to complete a thorough cleanup of these sites and provide documentation of the cleanup efforts to the Inspector; as no personnel have been on site since the date of the inspection, cleanup efforts will take place during the summer of 2025.

5.2 Water Licence (Non-Federal Lands) W2021L2-0004

5.2.1 June 6th, 2024

Meaghan McIntyre-Newell and Nahum Lee, Water Resource Officers (Inspectors) for the Department of Environment and Climate Change, Government of the Northwest Territories, inspected the Damoti Lake area on June 6th, 2024, for water licence compliance.

The Inspectors reported the following: "Nighthawk has efficiently addressed all issues raised in the previous Inspection. No concerns were noted." (MacIntyre-Newell, 2024).

The Inspectors sampled the water at SNP Station 5-6 and noted the Total Suspended Solids ("TSS") result of 59 mg/L exceeded the maximum concentration of any grab sample of 30 mg/L indicated in Part F, Condition 12(a) of the water licence, however in relation to this, the Inspector noted that "SNP Station 5-6 [being] within a vegetation dense area with limited ability to obtain a sample without disturbing the sediment and vegetation" (MacIntyre-Newell, 2024). Additionally, sampling conducted three days prior (June 3rd, 2024) at the same station by WSP yielded TSS results of only 5.9 mg/L (WSP Canada Inc., 2024a) (see Appendix C). In comparing TSS and Total Metals data available for both sampling events (elements analysed for June 6th were a subset of those analysed for June 3rd), it can be observed that while the TSS of the successive sampling events are a full order of magnitude apart, those of Total Metals analysed (which tend to be higher when associated with higher TSS) are generally comparable and within the same order of magnitude (see Table 8). The TSS at SNP Station 5-6 during the following monitoring event, on

September 10th, was found to be 3.9 mg/L (WSP Canada Inc., 2024b) (see Appendix D). For the above reasons, Nighthawk believes that the TSS results at SNP Station 5-6 from June 6th were erroneous.

Table 8: Comparison of Select June 3rd and June 6th Analytical Results at SNP Station 5-6

Test Parameter	June 3rd (WSP)		June 6th (GNWT-ECC)		Percentage Difference (%)
	Concentration	Units	Concentration	Units	
Total Suspended Solids	5.9	mg/L	59	mg/L	900
Total Arsenic	0.00081	mg/L	1	µg/L	23
Total Cadmium	0.000015	mg/L	< 0.04	µg/L	*
Total Copper	0.0035	mg/L	3	µg/L	-14
Total Lead	0.00037	mg/L	0.2	µg/L	-46
Total Nickel	0.024	mg/L	24.9	µg/L	4
Total Zinc	0.0071	mg/L	6.7	µg/L	-6

* Percentage difference for Total Cadmium has not been calculated, as the June 6th results were below the detection limit of 0.04 µg/L.

6 REFERENCES

Ambrose, C. (2024, September 23). *Environmental Inspection Report.* Retrieved from Wek'èezhii Land and Water Board Public Registry: https://mvlwb.ca/Documents/W2021C0009/Nighthawk%20-%20Inspection%20Report%20-%20September%2019%202024%20-%20Sep%2023_24.pdf

Byron, M. (2011a, January 10). *Merc Enters into Binging Option Agreement to Acquire Gold Property in Northwest Territories.* Retrieved from SEDAR+: https://www.sedarplus.ca/csfsprod/data113/filings/01684827/00000001/C%3A%5CFilings%5CMRKnr011011.pdf

Byron, M. (2011b, December 15). *Merc Agrees to Acquire Colomac Gold Mine Consolidating Indin Lake Gold Camp.* Retrieved from SEDAR+: https://www.sedarplus.ca/csfsprod/data125/filings/01840631/00000001/e%3A%5CWorkSpace%5CSEDAR12157239E00023453.pdf

Byron, M. (2013, December 18). *Nighthawk Enters into Option Agreement to Acquire Kim and Cass Properties in Northwest Territories.* Retrieved from SEDAR+: https://www.sedarplus.ca/csfsprod/data149/filings/02148088/00000001/s%3A%5CToronto%5CSteve_Running%5C918648.pdf

Byron, M. (2015, December 29). *Nighthawk's Option on Kim and Cass Properties Expires.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=4d1207bc960e8f41f0e71ffa847b82258df6b2bad1ecdd062379672057759800

Byron, M. (2020, April 3). *Nighthawk Completes Purchase of Royalties Pertaining to Certain Regional Assets Within its Indin Lake Gold Property.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=63f5817e26d86f9b70c776f85293c99c005367001fbe58964751392a44fd0d59

GNWT. (2017, October). *Guidelines for Hazardous Waste Management.* Retrieved from Government of the Northwest Territories: https://www.gov.nt.ca/ecc/sites/ecc/files/resources/128-hazardous_waste-interactive_web_0_0.pdf

Golder Associates Inc. (2015). *Geochemical Characterization of Waste Rock – Damoti Lake Site; Report # 13-1328-002 prepared for Nighthawk Gold Corp.*

MacIntyre-Newell, M. (2024, July 8). *Water Use Inspection Report.* Retrieved from Wek'èezhìi Land and Water Board Public Registry: https://mvlwb.ca/Documents/W2021L2-0004/Indin%20Lake%20-%20Water%20Licence%20Inspection%20Report%20-%20June%206%202024%20-%20Jul%208_24.pdf

McBride, J. (2023a, February 9). *Nighthawk Gold Updated Mineral Resource Estimate Demonstrates Significant Boost to the Global and Open-Pit Mineral Resources.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=665d69344eeb0026f67c8c4f12d57133fdd78118a3d3aaf4cffce479f75c86a8

McBride, J. (2024b, June 13). *STLLR Gold Intersects 1.97 g/t Au over 41.5 m at the Colomac Main Deposit and Wide Zones of Mineralization Near Windjammer Central.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=723632a899873688e2065461e62e995dcab5d8db2ac593307241d2de2965054a

McBride, J. (2024c, June 26). *STLLR Gold Intersects 1.23 g/t Au over 59.00 m at the Colomac Main Deposit and New Zones of Mineralization at Windjammer North.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=e865801f688203a383ee64a6a6b412108cf88ef878c65edf20fe7cebc2da3e2e

McBride, J. (2024d, August 1). *STLLR Gold Intersects 1.56 g/t Au over 62.30 m and 1.12 g/t Au over 99.40 m at the Colomac Main Deposit.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=12aa1629a8d6b233e15f433a32d0660e5abb3fdbd462b22dd97280660060786b

McBride, J. (2024e, September 16). *STLLR Gold Intersects 2.81 g/t Au over 18.50 m (Including 71.80 g/t Au over 0.50 m) at the Colomac Main Deposit.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=ac43a3f7df410cc7e2340b7069d9f39b9ba0c53cd4eed4dcbb2631b8d8ce6538

McBride, J., & Dankowski, J. (2023, November 28). *Nighthawk and Moneta Announce At-Market Merger to Create a Leading Canadian Gold Development Company; Concurrent C$12.5 Million Bought Deal Equity Financing.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=e3ac0b2cf33304c2ebe889b11598d08e4377f63266f94969aa8fb0782fcf8078

MVLWB. (2014). *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits.* Retrieved from Mackenzie Valley Land and Water Board: https://mvlwb.com/sites/default/files/documents/wg/MVLWB%20Engagement%20Guidelines%20for%20Holders%20of%20LUPs%20and%20WLs%20-%20Oct%202014.pdf

MVLWB. (2018, June 5). *Engagement and Consultation Policy.* Retrieved from Mackenzie Valley Land and Water Board: https://mvlwb.com/sites/default/files/mvlwb_engagement_and_consultation_policy_-_nov_25_19.pdf

Nissen, E. (2024, September 23). *Environmental Inspection Report.* Retrieved from Wek'èezhii Land and Water Board Public Registry: https://mvlwb.ca/Documents/W2021C0009/Indin%20Lake%20-%20Federal%20Inspection%20Report%20-%20June%2024%202024%20-%20Nov%2015_24.pdf

STLLR Gold Inc. (2024a, February 6). *Moneta Gold and Nighthawk Gold Complete At-Market Merger to form STLLR Gold Inc.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=b1bac65fbe94f67d22acf34dc1f13fe7d17ac7edfc22111cced6daa384194ba6

STLLR Gold Inc. (2024c, May 29). *STLLR Gold and Tłı̨chǫ Investment Corporation Announce a Solar Farm Installation Agreement at the Colomac Gold Project.* Retrieved from SEDAR+: https://www.sedarplus.ca/csa-party/records/document.html?id=9f2a5e21c0ac68a5652319054d27b826dd19c24e91a548639e3d50ab7642cb32

Tłı̨chǫ Government. (2022). *Tłı̨chǫ Government Guidelines for Proponents of Development.* Retrieved from Tłı̨chǫ Government: https://tlicho.ca/sites/default/files/2022_11_14_Tlicho_Government_weghaa_eleyatitseedi_for_optprinting.pdf

WSP Canada Inc. (2024a). *Damoti Lake Surveillance Network Program: Results from June 2024 Monitoring Event.*

WSP Canada Inc. (2024b). *Damoti Lake Surveillance Network Program: Results from September 2024 Monitoring Event.*

WSP Canada Inc. (2024c). *Closure and Reclamation Completion Report – Spider Lake Site.*

7 CERTIFICATES OF QUALIFICATION

I, John A. Nicholson, of the City of Vancouver, Province of British Columbia, do hereby CERTIFY that:

1. I am a Professional Geologist and a qualified person ("QP"), and a principal of Geominex Consultants Inc. (NAPEG Permit to Practise #P1330, EGBC Permit to Practice #1002226, EGM Permit to Practise #8254) with a postal address at 1411-409 Granville Street Vancouver B.C V6C1T2.

2. I am a graduate of University of British Columbia, with a B.Sc. degree (1986) in Geology.

3. I am registered as a Licensee with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG reg. no. L3197) and entitled to Practice as a Professional Geologist in the Northwest Territories. I am also registered as a Professional Geoscientist (P.Geo.) with the Engineers and Geoscientist of British Columbia (EGBC reg.no. 19933).

4. I have practised my profession as a geologist continuously for over thirty-five years. I have prepared reports, and conducted, supervised, and managed programs for various major and junior mining companies, and have evaluated projects for clients both domestically and internationally.

5. I have no direct or indirect interest, nor do I expect to receive any interest either directly or indirectly in the Indin Lake Gold Property, North Mining District, Northwest Territories, Canada as a result of my involvement with the work covered by this report.

6. I have prepared or supervised the preparation of the scientific and technical information presented in this report and related attached documents.

7. This report, *2024 Annual Water Licence Report*, was prepared by John A. Nicholson for the account of STLLR Gold Inc., at the request of STLLR Gold Inc. The material in this report reflects my best judgement in light of information available to me at the time of preparation. Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. J. Nicholson accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report and related attached documents.

8. Permission is granted for use of this report, in whole or in part, for assessment and qualification requirements with any regulatory authority.

DATED at Vancouver, British Columbia this 15th day of March, 2025

REGISTERED PROFESSIONAL GEOSCIENTIST J.A. NICHOLSON LICENSEE NT/NU

Mar 15th/2025

John A. Nicholson, P.Geo.

I, Brian D. Game, of the City of Richmond, Province of British Columbia, do hereby CERTIFY that:

1. I am a Professional Geologist and a qualified person ("QP"), and a principal of Geominex Consultants Inc. (NAPEG Permit to Practise #P1330, EGBC Permit to Practice #1002226, EGM Permit to Practise #8254) with a postal address at 1411-409 Granville Street Vancouver B.C V6C1T2.

2. I am a graduate of University of British Columbia, with a B.Sc. degree (1985) in Geology.

3. I am registered as a Licensee with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG reg. no. L3252) and entitled to Practice as a Professional Geologist in the Northwest Territories. I am also registered as a Professional Geoscientist (P.Geo.) with the Engineers and Geoscientist of British Columbia (EGBC reg.no. 19896) and the Professional Geoscientists Ontario (PGO reg.no. 4068).

4. I have practised my profession as a geologist continuously for over thirty-five years. I have prepared reports, and conducted, supervised, and managed programs for gold and base metals in Canada, USA, Mexico, South America, Philippines and Albania.

5. I have no direct or indirect interest, nor do I expect to receive any interest either directly or indirectly in the Indin Lake Gold Property, North Mining District, Northwest Territories, Canada as a result of my involvement with the work covered by this report.

6. I have prepared or supervised the preparation of the scientific and technical information presented in this report and related attached documents.

7. This report, *2024 Annual Water Licence Report*, was prepared by Brian D. Game, for the account of STLLR Gold Inc., at the request of STLLR Gold Inc. The material in this report reflects my best judgement in light of information available to me at the time of preparation. Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. Brian D. Game accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report and related attached documents.

8. Permission is granted for use of this report, in whole or in part, for assessment and qualification requirements with any regulatory authority.

DATED at Vancouver, British Columbia this 15th day of March, 2025

March 15 2025

Brian D. Game, P.Geo.

I, Riley T. Ledoux, of the City of North Vancouver, Province of British Columbia, do hereby CERTIFY that:

1. I am a Professional Geologist and a qualified person ("QP"), and a responsible registrant of Geominex Consultants Inc. (NAPEG Permit to Practise #P1330, EGBC Permit to Practice #1002226, EGM Permit to Practise #8254) with a postal address at 1411-409 Granville Street Vancouver B.C V6C1T2.

2. I am a graduate of University of British Columbia, with a B.Sc. degree (2019) in Geology.

3. I am registered as a Licensee with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG reg. no. L5676) and entitled to Practice as a Professional Geologist in the Northwest Territories. I am also registered as a Professional Geoscientist (P.Geo.) with the Engineers and Geoscientist of British Columbia (EGBC reg.no. 59191), Engineers Geoscientists Manitoba (EGM reg.no. 49918), and the Professional Geoscientists Ontario (PGO reg.no. 4063).

4. I have practiced my profession as a geologist continuously for nine years. I have prepared reports, and conducted, supervised, and managed programs for major and junior mining companies in the Northwest Territories, Manitoba, Labrador, and British Columbia.

5. I have no direct or indirect interest, nor do I expect to receive any interest either directly or indirectly in the Indin Lake Gold Property, North Mining District, Northwest Territories, Canada as a result of my involvement with the work covered by this report.

6. I have prepared or supervised the preparation of the scientific and technical information presented in this report and related attached documents.

7. This report, *2024 Annual Water Licence Report*, was prepared by Riley T. Ledoux for the account of STLLR Gold Inc., at the request of STLLR Gold Inc. The material in this report reflects my best judgement in light of information available to me at the time of preparation. Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. Riley T. Ledoux accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report and related attached documents.

8. Permission is granted for use of this report, in whole or in part, for assessment and qualification requirements with any regulatory authority.

DATED at Vancouver, British Columbia this 15th day of March, 2025

Riley T. Ledoux, P.Geo.

I, John McBride, of the City of Thunder Bay, Province of Ontario, do hereby CERTIFY that:

1. I am a Professional Geologist and a qualified person ("QP"), and a responsible registrant of STLLR Gold Inc. with a postal address at 181 Bay St, Suite 4260, Toronto, Ontario M5J 2V1.

2. I am a graduate of Lakehead University, with a M.Sc. degree (2010) in Geology.

3. I am registered as a Licensee with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG reg. no. L5040) and entitled to Practice as a Professional Geologist in the Northwest Territories. I am also registered as a Professional Geoscientist (P.Geo.) with the Association of Professional Geoscientists of Ontario (APGO reg.no. 2208).

4. I have practiced my profession as a geologist continuously for seventeen years. I have prepared reports, and conducted, supervised, managed, and planned programs for junior mining companies in the Ontario, Newfoundland, and the Northwest Territories.

5. I have prepared or supervised the preparation of the scientific and technical information presented in this report and related attached documents.

6. The material in this report reflects my best judgement in light of information available to me at the time of preparation. Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. John McBride accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report and related attached documents.

7. Permission is granted for use of this report, in whole or in part, for assessment and qualification requirements with any regulatory authority.

DATED at Thunder Bay, Ontario this 15th day of March, 2025

John McBride, P.Geo.

APPENDIX A: Attestation from Incinerator Operator

GeoMinEx Consultants

Incinerator Training Acknowledgment

Form No.	GMXO-004
Date of Issue	2024-05-12

This document confirms Fredrich Kaiser of Geominex Consultants Inc. as a trained and principal operator of the Inciner8, Model A600(Sec) Incinerator with a secondary combustion chamber, located at Nighthawk Gold Corp's Indin Lake Camp, approximately 220 km's North of Yellowknife, NT.

The Inciner8, Model A600(Sec) Incinerator is a diesel-fired unit with a high temperature, secondary burner/chamber for additional gas burn. It operates at a thermostatically controlled temperature with a minimum 900 degrees Celsius (°C) and up to a maximum of 1350°C. It has a capacity of 300 kilograms (kg) and burns at an average 75 kg per hour.

The unit is contained within an isolated (from other buildings), framed wood and metal structure that contains weight scales, and separate bins for segregating different types of waste. Bins allocated for combustible waste include the following: 1) kitchen waste; 2) non-hazardous building materials; and 3) cardboard. Paper and digital records are kept of the daily weights of the materials for incineration, weights of the resulting ash, and any other relevant information.

Signed by,

John Nicholson, P. Geo
Project Manager
Geominex Consultants Inc.

Signed on April. 18, 2024

Signed by,

FRED KAISER
(Name)
Geominex Consultants Inc.

Signed on April. 18, 2024

GEOMINEX CONSULTANTS

Incinerator Training Acknowledgment

Form No.	GMXO-004
Date of Issue	2024-05-12

This document confirms Ryan Pownall of Geominex Consultants Inc. as a trained and principal operator of the Inciner8, Model A600(Sec) Incinerator with a secondary combustion chamber, located at Nighthawk Gold Corp's Indin Lake Camp, approximately 220 km's North of Yellowknife, NT.

The Inciner8, Model A600(Sec) Incinerator is a diesel-fired unit with a high temperature, secondary burner/chamber for additional gas burn. It operates at a thermostatically controlled temperature with a minimum 900 degrees Celsius (°C) and up to a maximum of 1350°C. It has a capacity of 300 kilograms (kg) and burns at an average 75 kg per hour.

The unit is contained within an isolated (from other buildings), framed wood and metal structure that contains weight scales, and separate bins for segregating different types of waste. Bins allocated for combustible waste include the following: 1) kitchen waste; 2) non-hazardous building materials; and 3) cardboard. Paper and digital records are kept of the daily weights of the materials for incineration, weights of the resulting ash, and any other relevant information.

Signed by,

John Nicholson, P. Geo
Project Manager
Geominex Consultants Inc.

Signed on Apr. 18, 2024

Signed by,

Ryan Pownall
(Name)
Geominex Consultants Inc.

Signed on Apr. 18, 2024

APPENDIX B: 2024 Incinerator and Camp Water Usage Records

Colomac		Water Usage				Incinerated		Shipped Out								
Date	Camp Population	Kitchen (m3)	Washhouse (m3)	Dorm Trailer (m3)	Total (m3)	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Refundable Bottles (lb)	Construction Material & Pallets (lb)	Driller Garbage (lb)	Metal (lb)	Hydrocarbon Contaminated Material (lb)	Used Oil (lb)	Non-Burnable (lb)
1-Apr-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
2-Apr-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
3-Apr-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
4-Apr-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
5-Apr-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
6-Apr-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
7-Apr-23	5	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
8-Apr-23	5	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
9-Apr-23	5	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
10-Apr-23	5	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
11-Apr-23	9	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
12-Apr-23	9	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
13-Apr-23	6	0.0000	0.0000	0.0000	0.0000	60	0	0	0	0	0	0	0	0	0	0
14-Apr-23	7	0.1842	0.1440	0.0000	0.3282	0	0	0	0	0	0	0	0	0	0	0
15-Apr-23	8	0.1122	0.1820	0.0000	0.2942	36	0	0	0	0	0	0	0	0	0	0
16-Apr-23	8	0.2804	0.2740	0.0000	0.5544	0	0	0	0	0	0	0	0	0	0	0
17-Apr-23	8	0.2840	0.3000	0.0000	0.5840	50	40	0	0	0	0	0	0	0	0	0
18-Apr-23	8	0.2426	0.4000	0.0000	0.6426	28	10	0	0	0	0	0	0	0	0	0
19-Apr-23	8	0.3294	0.5900	0.0000	0.9194	48	30	0	0	0	0	0	0	0	0	0
20-Apr-23	8	0.3228	0.7300	0.3400	1.3928	0	0	0	0	0	0	0	0	0	0	0
21-Apr-23	8	0.3389	0.2800	0.2200	0.8389	0	0	0	0	0	0	0	0	0	0	0
22-Apr-23	10	0.4143	0.6700	0.1100	1.1943	35	15	0	0	0	0	0	0	0	0	0
23-Apr-23	10	0.3700	0.5700	0.2350	1.1750	52	0	0	0	0	0	0	0	0	0	0
24-Apr-23	10	0.4339	0.9880	0.3240	1.7459	48	25	0	0	0	0	0	0	0	0	0
25-Apr-23	10	0.4777	0.4920	0.4640	1.4337	74	20	0	0	0	0	0	0	0	0	0

Date	Camp Population	Kitchen (m3)	Washhouse (m3)	Dorm Trailer (m3)	Total (m3)	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Refundable Bottles (lb)	Construction Material & Pallets (lb)	Driller Garbage (lb)	Metal (lb)	Hydrocarbon Contaminated Material (lb)	Used Oil (lb)	Non-Burnable (lb)
26-Apr-23	9	0.4691	0.2080	0.4280	1.1051	67	10	223	113	0	1036	0	0	153	0	289
27-Apr-23	9	0.2928	0.4470	0.3060	1.0458	38	10	0	0	0	0	0	0	0	0	0
28-Apr-23	9	0.3035	0.3970	0.3300	1.0305	69	10	0	0	0	0	0	0	0	0	0
29-Apr-23	11	0.3629	0.8480	0.2800	1.4909	23	0	0	0	0	0	0	0	0	0	0
30-Apr-23	11	0.3189	0.3750	0.4130	1.1069	59	15	0	0	0	0	0	0	0	0	0
1-May-23	11	0.3684	0.8730	0.2900	1.5314	25	0	0	0	0	0	0	0	0	0	0
2-May-23	12	0.4231	0.4450	0.4080	1.2761	58	29	0	212	0	0	0	0	0	0	438
3-May-23	12	0.4091	0.2540	0.7700	1.4331	57	27	0	0	0	0	0	0	0	0	0
4-May-23	12	0.3983	1.3350	0.2240	1.9573	103	29	0	96	76	0	0	0	0	0	0
5-May-23	12	0.4410	0.3520	0.2700	1.0630	41	153	0	0	0	0	0	0	0	0	0
6-May-23	20	1.4991	0.6740	0.7080	2.8811	51	39	0	0	0	0	0	0	0	0	0
7-May-23	23	0.5650	0.9630	0.3250	1.8530	129	29	0	0	0	0	0	0	0	0	165
8-May-23	23	0.7764	0.5210	0.7270	2.0244	55	48	0	0	0	0	0	0	0	0	0
9-May-23	26	0.8192	0.7530	0.5700	2.1422	85	42	0	176	0	0	0	0	0	0	0
10-May-23	26	0.6227	0.5590	1.0500	2.2317	37	19	0	0	0	0	0	0	0	0	0
11-May-23	29	0.4670	0.4440	1.0870	1.9980	66	40	0	0	0	0	0	0	0	0	0
12-May-23	29	0.8620	0.6370	0.9260	2.4250	120	26	0	0	0	0	0	0	0	0	0
13-May-23	29	0.8800	0.6550	1.1810	2.7160	126	42	0	0	0	0	0	0	0	0	0
14-May-23	29	0.7330	0.6480	1.5310	2.9120	112	19	0	0	0	0	0	0	0	0	0
15-May-23	31	1.1470	0.2980	1.4780	2.9230	114	26	0	132	0	0	175	0	0	0	158
16-May-23	31	0.8730	1.1330	1.7100	3.7160	126	9	0	78	0	0	0	0	0	0	0
17-May-23	31	0.8190	1.4650	1.8300	4.1140	112	36	0	0	0	0	0	0	0	0	0
18-May-23	32	1.1710	0.7910	1.1490	3.1110	126	70	0	0	0	0	0	0	0	0	0
19-May-23	32	1.0950	1.1890	1.9340	4.2180	100	189	0	0	0	0	0	0	0	0	0
20-May-23	32	0.3560	1.0310	1.6430	3.0300	130	16	0	0	0	0	0	0	0	0	0
21-May-23	33	0.7290	0.8220	1.7560	3.3070	109	105	0	0	0	0	0	0	0	0	0
22-May-23	33	0.8830	0.9320	1.4070	3.2220	118	52	0	0	0	0	0	0	0	0	0
23-May-23	33	0.9460	1.0570	1.8790	3.8820	96	50	0	0	0	0	211	0	3800	0	343
24-May-23	33	0.7180	1.1090	1.4190	3.2460	103	4	0	0	0	0	0	0	0	0	0

Date	Camp Population	Kitchen (m3)	Washhouse (m3)	Dorm Trailer (m3)	Total (m3)	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Refundable Bottles (lb)	Construction Material & Pallets (lb)	Driller Garbage (lb)	Metal (lb)	Hydrocarbon Contaminated Material (lb)	Used Oil (lb)	Non-Burnable (lb)
25-May-23	33	0.9340	1.6340	1.9430	4.5110	85	49	0	141	76	0	380	0	0	0	0
26-May-23	33	1.0170	0.8560	2.5940	4.4670	160	122	0	0	0	0	0	0	0	0	0
27-May-23	33	0.8010	1.2850	2.1310	4.2170	137	24	0	0	0	0	0	0	0	0	0
28-May-23	32	0.8600	0.7610	1.9730	3.5940	97	6	0	70	0	0	0	0	0	0	207
29-May-23	32	0.8010	2.3590	1.9850	5.1450	122	47	0	0	0	0	0	0	0	0	0
30-May-23	34	0.9100	1.5420	2.2070	4.6590	96	36	0	0	0	0	484	0	0	800	0
31-May-23	34	1.1110	0.5980	1.6860	3.3950	105	32	0	0	0	0	0	0	0	0	0
1-Jun-23	34	1.2270	0.8590	2.0280	4.1140	154	76	0	0	0	0	0	0	0	0	0
2-Jun-23	34	1.1160	1.2620	2.7520	5.1300	158	161	0	0	0	0	0	0	0	0	0
3-Jun-23	34	1.0990	1.2750	3.4390	5.8130	102	110	0	0	0	0	0	0	0	0	0
4-Jun-23	32	2.1910	1.1440	2.4740	5.8090	137	115	0	0	87	0	284	0	0	0	162
5-Jun-23	32	4.2500	0.6800	2.2050	7.1350	107	51	0	0	0	0	0	0	0	0	0
6-Jun-23	30	3.3130	0.9670	2.5930	6.8730	105	34	0	294	0	107	255	0	0	0	0
7-Jun-23	30	0.9270	0.8700	2.1330	3.9300	122	83	0	0	0	0	0	0	0	0	0
8-Jun-23	31	0.8590	1.0620	1.7410	3.6620	136	98	0	0	0	0	0	0	0	0	0
9-Jun-23	31	0.9520	0.7500	1.6760	3.3780	142	229	0	0	0	0	0	0	0	0	0
10-Jun-23	31	0.6820	0.9170	2.0130	3.6120	85	59	0	0	0	0	0	0	0	0	0
11-Jun-23	31	1.0810	0.7650	2.1990	4.0450	94	87	0	110	0	0	201	0	0	0	168
12-Jun-23	31	1.1360	0.5700	1.5050	3.2110	126	50	0	0	0	0	0	0	0	0	0
13-Jun-23	8	0.9740	1.4570	2.4850	4.9160	150	66	0	0	0	0	0	0	0	0	0
14-Jun-23	8	0.7020	0.7240	1.0450	2.4710	35	34	0	0	0	0	0	0	0	0	0
15-Jun-23	5	0.5380	0.6840	0.9130	2.1350	37	34	0	0	0	0	0	0	0	0	0
16-Jun-23	5	0.2930	0.2760	0.1270	0.6960	55	151	0	0	0	0	0	0	0	0	0
17-Jun-23	5	0.1440	0.1240	0.3360	0.6040	10	15	0	0	0	0	0	0	0	0	0
18-Jun-23	5	0.1940	0.2770	0.2470	0.7180	20	0	0	0	0	0	0	0	0	0	0
19-Jun-23	5	0.2110	0.3230	0.1040	0.6380	30	6	0	0	0	0	0	0	0	0	0
20-Jun-23	5	0.2620	0.3810	0.2740	0.9170	0	0	0	0	0	0	0	0	0	0	0
21-Jun-23	5	0.2570	0.4480	0.1850	0.8900	18	2	0	0	0	0	0	0	0	0	0
22-Jun-23	6	0.2520	0.0490	0.2760	0.5770	26	18	0	0	0	0	0	0	0	0	0

Date	Camp Population	Kitchen (m3)	Washhouse (m3)	Dorm Trailer (m3)	Total (m3)	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Refundable Bottles (lb)	Construction Material & Pallets (lb)	Driller Garbage (lb)	Metal (lb)	Hydrocarbon Contaminated Material (lb)	Used Oil (lb)	Non-Burnable (lb)
23-Jun-23	6	0.4870	0.3040	0.1210	0.9120	35	20	0	0	0	0	0	0	0	0	0
24-Jun-23	6	0.3710	0.3090	0.1960	0.8760	0	0	0	0	0	0	0	0	0	0	0
25-Jun-23	6	0.2490	0.1970	0.2290	0.6750	31	18	0	0	0	0	0	0	0	0	0
26-Jun-23	6	0.3460	0.0880	0.2250	0.6590	0	0	0	0	0	0	0	0	0	0	0
27-Jun-23	8	0.3860	0.2110	0.3060	0.9030	42	0	180	0	87	105	842	129	700	420	0
28-Jun-23	8	0.3860	0.2250	0.2380	0.8490	29	15	0	0	0	0	0	0	0	0	0
29-Jun-23	33	0.5050	0.3630	0.4490	1.3170	59	20	0	83	0	0	0	0	0	0	230
30-Jun-23	33	0.6230	0.3990	1.1230	2.1450	83	127	0	0	0	0	0	0	0	0	0
1-Jul-23	33	0.8130	0.7680	1.8480	3.4290	113	116	0	0	0	0	0	0	0	0	0
2-Jul-23	37	0.9950	1.3860	1.9890	4.3700	126	24	0	103	88	0	0	0	0	0	197
3-Jul-23	38	1.0320	0.8810	1.7740	3.6870	135	17	0	0	0	0	0	0	0	0	0
4-Jul-23	37	1.0530	2.5120	1.8040	5.3690	148	13	0	0	0	0	0	0	0	0	0
5-Jul-23	37	1.1120	1.2830	2.0240	4.4190	103	47	0	0	0	0	0	0	0	0	0
6-Jul-23	38	1.1190	2.0740	1.8250	5.0180	114	39	0	0	0	0	0	0	0	0	0
7-Jul-23	38	0.9390	1.1910	2.3460	4.4760	158	137	0	0	0	0	0	0	0	0	0
8-Jul-23	37	0.9260	1.8030	2.9750	5.7040	153	33	0	0	0	0	0	0	0	0	0
9-Jul-23	38	0.7930	1.6090	1.7970	4.1990	145	13	0	408	0	93	376	0	0	0	169
10-Jul-23	38	0.8780	0.9610	1.3520	3.1910	133	64	0	0	0	0	0	0	0	0	0
11-Jul-23	39	0.8380	2.1930	2.1130	5.1440	126	60	0	0	161	0	448	0	0	0	187
12-Jul-23	39	1.1050	1.7560	2.4320	5.2930	158	22	0	0	0	0	0	0	0	0	0
13-Jul-23	39	1.1140	1.9540	2.2480	5.3160	135	52	0	0	0	0	0	0	0	0	0
14-Jul-23	39	1.1590	1.9140	2.5840	5.6570	175	139	0	0	0	0	0	0	0	0	0
15-Jul-23	39	1.0230	1.4750	2.4000	4.8980	145	14	0	0	0	0	0	0	0	0	0
16-Jul-23	39	0.9190	1.9880	2.2960	5.2030	111	39	0	0	0	0	0	0	0	0	0
17-Jul-23	36	1.4900	1.2180	2.4690	5.1770	144	58	0	0	0	0	0	0	0	0	0
18-Jul-23	36	0.8950	1.7550	2.5640	5.2140	146	56	0	84	72	0	1063	0	0	0	291
19-Jul-23	31	0.7740	2.7260	1.9510	5.4510	114	58	0	0	0	0	0	0	0	0	0
20-Jul-23	31	0.8460	1.3420	2.1830	4.3710	129	124	0	0	0	0	0	0	0	0	0
21-Jul-23	24	0.6520	1.2960	2.1330	4.0810	75	220	0	0	0	0	0	0	0	0	0

Date	Camp Population	Kitchen (m3)	Washhouse (m3)	Dorm Trailer (m3)	Total (m3)	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Refundable Bottles (lb)	Construction Material & Pallets (lb)	Driller Garbage (lb)	Metal (lb)	Hydrocarbon Contaminated Material (lb)	Used Oil (lb)	Non-Burnable (lb)
22-Jul-23	24	0.8930	0.6170	1.3200	2.8300	184	79	0	0	0	0	0	0	0	0	0
23-Jul-23	24	1.1260	1.2290	1.2220	3.5770	77	16	0	0	0	0	270	0	0	0	172
24-Jul-23	21	0.6270	0.5770	1.5020	2.7060	121	49	0	0	0	0	0	0	0	0	0
25-Jul-23	21	1.2380	0.8720	1.6460	3.7560	92	52	0	264	0	0	0	500	0	1708	112
26-Jul-23	21	0.6580	0.9050	1.4360	2.9990	70	44	0	0	0	0	0	0	0	0	0
27-Jul-23	21	0.6510	0.6320	1.8990	3.1820	48	41	0	0	0	0	0	0	0	0	0
28-Jul-23	21	0.6580	1.8000	1.0650	3.5230	109	164	0	263	88	0	306	1220	225	0	133
29-Jul-23	21	0.8340	1.1030	0.6960	2.6330	146	12	0	0	0	0	0	0	0	0	0
30-Jul-23	21	0.9380	0.5190	0.8810	2.3380	137	76	0	0	0	0	277	0	0	0	0
31-Jul-23	16	0.5540	1.2000	0.9920	2.7460	27	8	0	0	0	0	0	0	0	0	0
1-Aug-23	16	0.2880	0.9950	1.0640	2.3470	89	29	0	0	0	0	0	0	0	0	0
2-Aug-23	12	0.4380	0.9290	0.6010	1.9680	123	41	289	0	0	0	258	422	0	0	193
3-Aug-23	12	0.3370	0.7170	0.6970	1.7510	0	0	0	0	0	0	0	0	0	0	0
4-Aug-23	13	0.5330	1.3960	0.5940	2.5230	0	0	0	0	0	0	0	0	0	0	0
5-Aug-23	14	2.1590	0.9320	0.0460	3.1370	0	0	0	0	0	0	0	0	0	0	0
6-Aug-23	14	0.4160	1.5720	0.0000	1.9880	0	0	0	0	0	0	0	0	0	0	0
7-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
8-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
9-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
10-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
11-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
12-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
13-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
14-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
15-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
16-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
17-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
18-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
19-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0

Date	Camp Population	Kitchen (m3)	Washhouse (m3)	Dorm Trailer (m3)	Total (m3)	Kitchen Waste (lb)	Other Sources (lb)	Ash Outgoing (lb)	Cardboard (lb)	Refundable Bottles (lb)	Construction Material & Pallets (lb)	Driller Garbage (lb)	Metal (lb)	Hydrocarbon Contaminated Material (lb)	Used Oil (lb)	Non-Burnable (lb)
20-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
21-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
22-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
23-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
24-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
25-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
26-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
27-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
28-Aug-23	0	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
29-Aug-23	6	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0
30-Aug-23	6	0.3930	1.0180	0.0000	1.4110	16	0	0	0	0	0	0	0	0	0	0
31-Aug-23	6	0.2350	0.3050	0.0000	0.5400	18	0	0	0	0	0	0	0	0	0	0
1-Sep-23	6	0.3380	0.3370	0.0000	0.6750	31	15	0	0	0	0	0	0	0	0	0
2-Sep-23	6	0.4590	0.4840	0.0000	0.9430	32	0	0	0	0	0	0	0	0	0	0
3-Sep-23	6	0.2240	0.3160	0.0000	0.5400	39	0	0	0	0	0	0	0	0	0	0
4-Sep-23	6	0.4060	0.4930	0.0000	0.8990	49	20	0	0	0	0	0	0	0	0	0
5-Sep-23	6	0.4050	0.3570	0.0000	0.7620	72	15	0	0	0	0	0	0	0	0	0
6-Sep-23	6	0.2770	0.2940	0.0000	0.5710	29	35	0	0	0	0	0	0	0	0	0
7-Sep-23	6	0.2440	0.5500	0.0000	0.7940	32	15	0	0	0	0	0	0	0	0	0
8-Sep-23	5	0.4090	0.4560	0.0000	0.8650	44	20	0	0	0	0	0	0	0	0	0
9-Sep-23	5	0.2340	0.8520	0.0000	1.0860	68	0	0	0	0	0	0	0	0	0	0
10-Sep-23	5	0.3160	0.3760	0.0000	0.6920	26	10	0	0	0	0	0	0	0	0	0
11-Sep-23	5	0.3030	0.4840	0.0000	0.7870	35	0	0	0	0	0	0	0	0	0	0
12-Sep-23	4	0.3910	0.4310	0.0000	0.8220	115	0	0	0	0	0	0	0	0	0	0
13-Sep-23	4	0.3460	1.3080	0.0000	1.6540	137	0	0	0	0	0	0	0	0	0	0
Totals	**2728**	**93.7889**	**111.971**	**140.646**	**346.4059**	**10568**	**5365**	**692**	**2627**	**735**	**1341**	**5830**	**2271**	**4878**	**2928**	**3614**

APPENDIX C: Damoti Lake Surveillance Network Program: Results from June 2024 Monitoring Event.

REPORT

DAMOTI LAKE SURVEILLANCE NETWORK PROGRAM

Results From June 2024 Monitoring Event

Submitted to:

STLLR Gold Inc.
181 Bay St., Suite 4260
Toronto, Ontario, Canada M5J 2V1

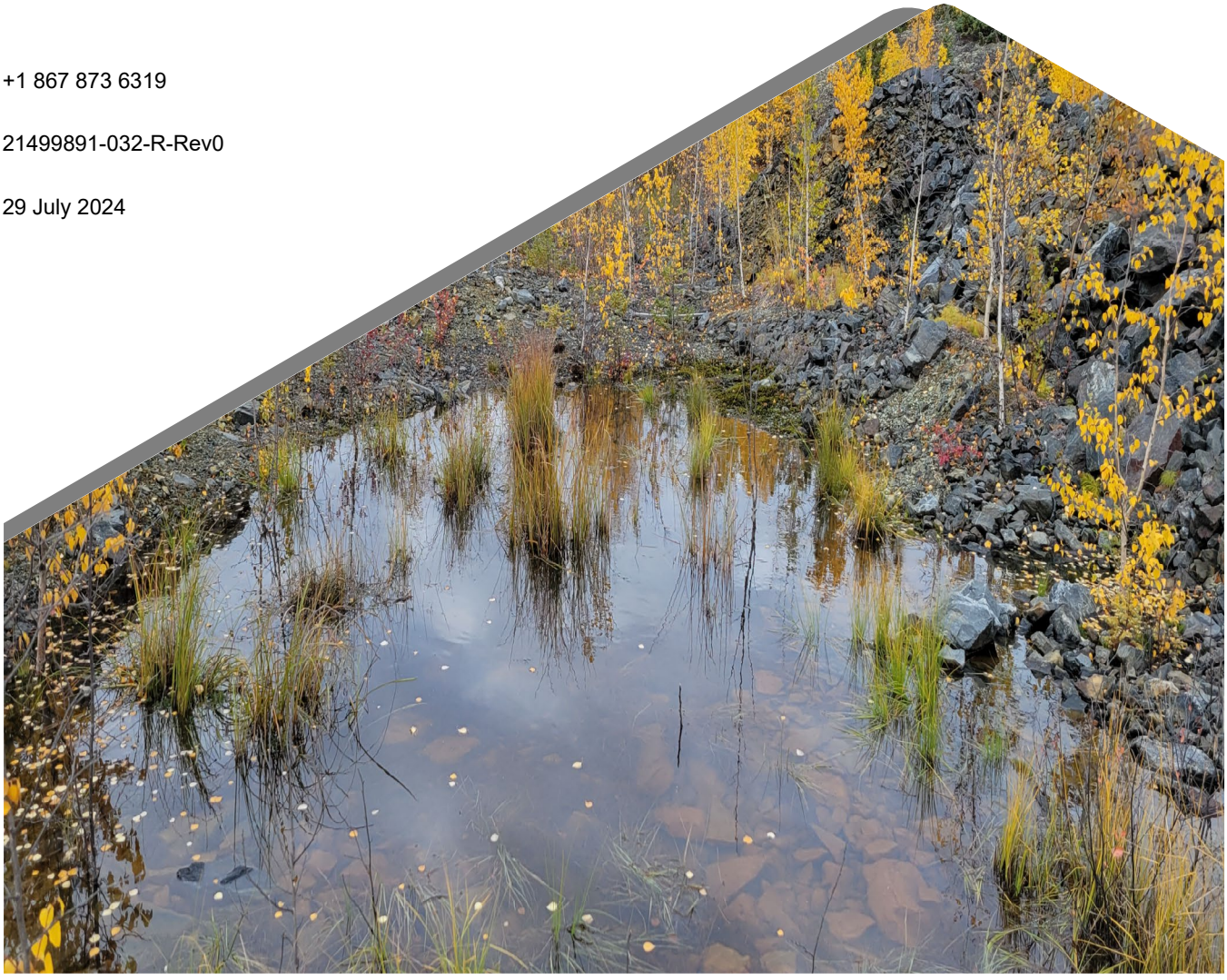
Submitted by:

WSP Canada Inc.
9, 4905 - 48 Street, Yellowknife, Northwest Territories, X1A 3S3, Canada

+1 867 873 6319

21499891-032-R-Rev0

29 July 2024



Distribution List

1 copy STLLR Gold Inc.

1 copy WSP Canada Inc.

Study Limitations

This report was prepared for the exclusive use of STLLR Gold Inc. (STLLR). The report, which specifically includes tables and figures, is based on data and information collected by WSP Canada Inc. (WSP) at the time of the field investigations. The services performed as described in this report were conducted in a manner consistent with the level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services. Any use of this report by a third party, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. In addition, WSP disclaims responsibility for consequential financial effects on transactions or property values or requirements for follow-up actions and costs.

The content of this report is based on information collected during the investigation, our present understanding of the site conditions, and our professional judgment in light of such information at the time of this report. This report provides a professional opinion, and therefore, no warranty is expressed, implied, or made as to the conclusions, advice, and recommendations offered. This report does not provide a legal opinion regarding compliance with applicable laws. Regarding regulatory compliance issues, it should be noted that regulatory statutes and their interpretation are subject to change. The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, WSP should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

Table of Contents

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

The Damoti Lake Site (Damoti) is located 200 km north of Yellowknife in the Northwest Territories (NT), within the Wek'èezhìı co-management land boundaries. Nighthawk Gold Corp (Nighthawk), subsidiary of STLLR Gold Inc. (STLLR), in this report referenced as STLLR, currently holds the leases to Damoti. WSP Canada Inc. (WSP), carried out the Surveillance Network Program (SNP) monitoring on behalf of STLLR on 3 June 2024, to meet the requirements of Type A Water Licence W2021L2-0004 (Water Licence; WLWB 2023). This report summarizes the results of the June 2024 SNP field program.

2.0 METHODS

2.1 Sampling Locations

2.1.1 Water Licence Surveillance Network Program

SNP stations were visited to collect in situ measurements and surface water grab samples on 3 June 2024 (Table 1, Figure 1 and Figure 2, Appendix A). Station SNP 5-14 was visited, although water quality samples were not collected for analysis because insufficient water was present at this location (Appendix A, Photograph A-10).

Table 1: Surveillance Network Program Stations Sampled on 3 June 2024

Station[a]	Location[b]	UTM Coordinates[c]	
		Easting (m)	Northing (m)
SNP 5-4	Inflow from wetlands into Lardass Lake	591819	7113641
SNP 5-5	Lardass Lake	591759	7113638
SNP 5-6	Runoff from ore rock pile	591876	7113876
SNP 5-8	Damoti Lake site decline ramp (Minewater pooled at entrance of Adit)	591859	7113979
SNP 5-9	Pool of standing water immediately west of waste rock pile	591894	7113983
SNP 5-11	Pool of standing water next to waste rock/ore stockpiles	591904	7113947
SNP 5-12	Pool of standing water in rock pile area	591908	7113934
SNP 5-13	Pool of standing water in waste rock/ore pile area	591882	7113922
SNP 5-14[d]	Flow pathway between the rock/ore pile area and Lardass Lake	591821	7113754

Notes:

(a) SNP 5-1, SNP 5-2, SNP 5-3, and SNP 5-15 are currently inactive based on-site conditions (WLWB 2023). SNP 5-1 and SNP 5-2 were not sampled because minewater was not being discharged from the adit into the settling pond, SNP 5-3 was not sampled because water was not being pumped for camp use, and SNP 5-15 was not sampled because no artesian aquifers have been encountered.

(b) Photographs of stations visited during the June 2024 field program are provided in Appendix A.

(c) UTM coordinates are in NAD83, Zone 11W.

(d) Previously referred to as FB-100.

SNP = Surveillance Network Program; UTM = Universal Transverse Mercator; m = metres.

LEGEND

- SNP STATION
- ELEVATION CONTOUR (m)
- FLOW PATH

0 50 100

1:2,500 METRES

REFERENCE(S)

1. BACKGROUND IMAGERY OBTAINED FROM BING MAPS FOR ARCGIS PUBLISHED BY MICROSOFT CORPORATION, REDMOND, WA.
PROJECTION: UTM ZONE 11 DATUM: NAD83

CLIENT

STLR GOLD

PROJECT

DAMOTI LAKE SNP JUNE 2024

TITLE

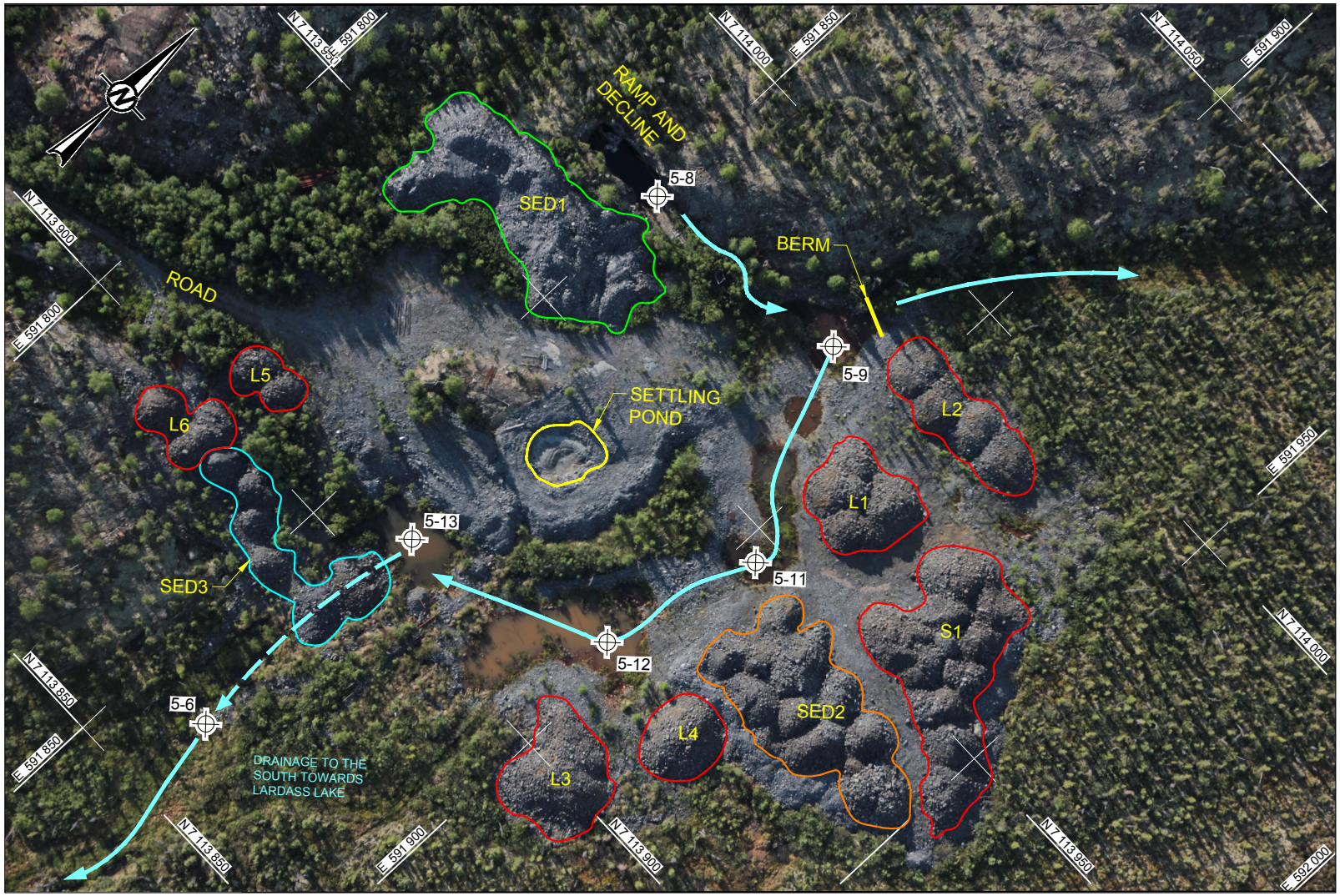
DAMOTI LAKE SURVEILLANCE NETWORK PROGRAM (SNP) STATIONS

wsp

YYYY-MM-DD	2024-07-29
DESIGNED	SP
PREPARED	NB
REVIEWED	MI
APPROVED	KS

PROJECT NO.	PHASE/TASK	REV.	FIGURE
CA0034908.5454	1000.1002	0	1

Last Edited By: gld_gurwsingh Date: 2024-07-29 Time:1:21:47 PM | Printed By: gld_gurwsingh Date: 2024-07-29 Time:1:44:19 PM
Path: \\corp.pbwan.net\CA\CAVAN400\CAD-GIS\Client\Nighthawk Gold Corporation\Damoti Lake\99_PROJECTS\CA0034908.5454\1000\1002\NA\02_PRODUCTION\DWG\ | File Name: CA0034908.5454-1000-1002-02.dwg



LEGEND

- S1, L1, L2, L3, L4, L5, L6
- SED1
- SED2
- SED3
- SNP STATION
- SURFICIAL DRAINAGE PATTERNS
- GENERAL DRAINAGE PATTERNS

DOMINANT WASTE ROCK TYPE IN PILE

S = SULPHIDE BANDED IRON FORMATION
L = LOW SULPHIDE BANDED IRON FORMATION
SED = SEDIMENTARY

NOTES

1. GRID IS DISPLAYED IN NAD83 UTM ZONE 11 COORDINATES.
2. AIRPHOTO SCALE IS APPROXIMATE.

REFERENCE

JUNE 2012 AIRPHOTO TAKEN BY GOLDER ASSOCIATES LTD. FIELD STAFF.

PLAN VIEW

SCALE 1:1,000

0 25 50
1:1,000 METRES

CLIENT

STLR GOLD

CONSULTANT

wsp

YYYY-MM-DD	2024-07-29
DESIGNED	NB/SP
PREPARED	GS
REVIEWED	MI
APPROVED	KS

PROJECT
DAMOTI SNP JUNE 2024

TITLE
SITE DRAINAGE PATTERNS AT THE DAMOTI LAKE ROCK PILE AREA

PROJECT NO.	PHASE/TASK	REV.	FIGURE
CA0034908.5454	1000/1002	0	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

0 25 mm

2.2 Sampling Methods

2.2.1 Field Measurements

Prior to collecting surface water grab samples, ambient wind and weather conditions were recorded along with in-situ measurements of the following water quality parameters:

- water temperature (°C)
- pH
- dissolved oxygen (DO; milligrams per litre [mg/L] and percent saturation [%])
- specific conductivity (microsiemens per centimetre [µS/cm])

A YSI multiparameter water quality meter was used for the in-situ measurements. An Oakton 30 handheld pH meter was used to confirm field measurements. Water depth was measured at each sampling location. Flow and volume measurements were not recorded because water was not being pumped for camp or industrial use.

2.2.2 Water Quality and Acute Toxicity Sampling

Surface water quality grab samples were collected in accordance with WSP's technical procedures for surface water sample collection, using plastic and glass bottles depending on the parameter or parameter group being sampled. Sample bottles were submerged approximately 0.3 m below the water surface at each SNP station, except at the following stations where water depths were <0.3 m:

- SNP 5-6: A syringe was used to collect water from the surface and fill the sample bottle due to low water levels (<0.1 m), as well as to collect the sample from the same depth as the toxicity sample (near the surface).
- SNP 5-12: The sample bottle was submerged approximately 0.2 m below the water surface due to low water levels (<0.1 m).

Water quality samples were field-filtered and preserved according to laboratory instructions and were kept cool until delivery to ALS Environmental (ALS) in Yellowknife, NT. After delivery to ALS in Yellowknife, samples were shipped to Burnaby, British Columbia, for analysis.

Acute toxicity samples from SNP 5-6 were collected at the same depth of the water quality sample (i.e., near the surface, as the water level was low) using a peristaltic pump, tubing, and 10-litre low-density polyethylene plastic carboys. Although water level was low, an adequate volume of water was available for sample collection. Carboys and lids were rinsed three times with sample water prior to sample collection. Acute toxicity samples were kept cool and shipped to Nautilus Environmental (Nautilus) in Calgary, Alberta. Upon receipt at Nautilus, samples were refrigerated at 4°C and acute toxicity tests were initiated within five days of sample collection (within the recommended hold time for acute toxicity tests).

2.3 Laboratory Analyses

Surface water samples were analyzed for the parameters outlined in Table 2. These parameters are either required by the SNP annexed to the Water Licence or were analyzed to support the Interim Closure and Reclamation Plan and to develop the historical dataset for the aquatic receiving environment.

Table 2: Parameter List for Each Surveillance Network Program Station

Station	Parameters
SNP 5-4	Conventional (pH, specific conductivity, hardness, total suspended solids, total dissolved solids, and dissolved organic carbon), major ions (calcium, magnesium, potassium, sodium, and sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus, and dissolved phosphorus), total metals[(a)] (plus total mercury), dissolved metals[(a)]
SNP 5-5	
SNP 5-6	Conventional (pH, specific conductivity, hardness, total suspended solids, total dissolved solids, and dissolved organic carbon), major ions (calcium, magnesium, potassium, sodium, and sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus, and dissolved phosphorus), total metals[(a),] dissolved metals[(a)], acute toxicity (Rainbow Trout [*Oncorhynchus mykiss*] and *Daphnia magna*)[(b)]
SNP 5-8	Conventional (pH, specific conductivity, hardness, total suspended solids, total dissolved solids, and dissolved organic carbon), major ions (calcium, magnesium, potassium, sodium, and sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus, and dissolved phosphorus), total metals[(a)], dissolved metals[(a)]
SNP 5-9	
SNP 5-11	
SNP 5-12	
SNP 5-13	
SNP 5-14[(c)]	Conventional (pH, specific conductivity, and total suspended solids, total dissolved solids (calculated)), major ions (calcium, magnesium, potassium, sodium, and sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus, total metals[(a)] (plus total mercury), dissolved metals[(a)]

Notes:

(a) Total and dissolved metals include metalloids such as arsenic and non-metals such as selenium (WLWB 2023). The list of elements include: aluminum (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), cobalt (Co), copper (Cu), chromium (Cr), cesium (Cs), iron (Fe), lead (Pb), lithium (Li), manganese (Mn), molybdenum (Mo), nickel (Ni), rubidium (Rb), selenium (Se), strontium (Sr), titanium (Ti), thallium (Tl), uranium (U), vanadium (V), and zinc (Zn).

(b) Static pass/fail (single-concentration) test for Rainbow Trout and *Daphnia magna* per Environment Canada's Biological Test Methods Environment Protection Series (EPS 1/RM/13 – Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout [Environment Canada 2007], and EPS 1/RM/14 – Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* [Environment Canada 2000]).

(c) SNP 5-14 was visited on 3 June, but no water quality sample was collected due to insufficient water.

SNP = Surveillance Network Program.

2.4 Data Analysis

Analytical results from station SNP 5-6 were compared to applicable effluent quality criteria (EQC) as specified in the Water Licence, i.e., maximum average concentration and maximum concentration of any grab sample. For SNP stations at Lardass Lake (SNP 5-4 and SNP 5-5), analytical results were compared to water quality objectives, i.e. the lowest of the Canadian Council of Ministers of the Environment (CCME) guidelines for the protection of aquatic life and livestock (wildlife) health (CCME 1999 with updates) as well as the federal environmental quality guidelines (FEQG) for cobalt (ECCC 2017), strontium (ECCC 2020), and vanadium (ECCC 2016).

Laboratory pH is considered less reliable than field pH because the recommended holding time of 15 minutes cannot be met due to sample transport and shipping. Field pH values were therefore used to calculate CCME guidelines, where applicable.

Results of acute toxicity testing for samples collected at SNP 5-6 were expressed as percent survival for Rainbow Trout (*Oncorhynchus mykiss*) and percent survival and immobility for *Daphnia magna.* A sample was considered acutely lethal if survival less than 50% was observed in the full-strength sample, per the regulatory definition (WLWB 2023).

2.5 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) procedures and requirements are an important aspect of any field or laboratory testing program. The objective of the QA/QC program is to standardize methods such that field sampling, data entry, data analysis, and report preparation produce technically sound and scientifically defensible results.

As part of routine practices for field operations, the following QA procedures were undertaken:

- YSI/AquaTROLL water quality and Oakton pH meters were calibrated according to manufacturer recommendations prior to sample collection for the day.
- Field-measured pH values were verified using a second pH meter at the time of sample collection.
- Surface water samples were collected by experienced personnel following WSP's technical procedures for surface water sample collection.
- Detailed field notes were recorded in a waterproof field notebook.
- Field data were checked at the end of the sampling event for completeness and accuracy.
- Chain-of-custody (COC) forms were used to track all sample shipments from the field to the analytical laboratory.

The following QC samples were collected:

- A duplicate sample at SNP 5-6 to assess variability potentially introduced during sample collection, sample handling, and laboratory analytical procedures.
- A field blank at SNP 5-8 to assess potential contamination during sample collection.
- A travel blank to determine whether any contamination may have occurred during transportation, storage, or analysis.

The analytical laboratories, ALS and Nautilus, also have their own QA/QC programs, including laboratory replicate samples, sample blanks and control standards.

Upon receipt of the final Nautilus toxicity test reports, the following information was verified:

- The condition of samples received by Nautilus was acceptable (e.g., no broken containers or lids).
- The appropriate test species and test methods were used.
- Sample hold times were met.
- Sample temperatures at the time of sample receipt were within an acceptable range.
- Test conditions were within the required range and no unusual results were reported (e.g., pH, specific conductivity, storage temperature, or loading density).
- Test validity criteria were met for the laboratory control water as it pertains to the health histories and sensitivities of the organisms.
- No deviations from test procedures occurred that would influence the reliability of the data.

In addition, internal laboratory QC results were reviewed, and toxicity results were checked for completeness.

3.0 RESULTS

3.1 Water Quality and Acute Toxicity

Water quality results from the June 2024 program are presented in Appendix B. Ambient weather at the time of sampling included temperatures of approximately 12°C, mainly sunny and calm conditions with wind from the east, and cloud cover of approximately 20%.

Water quality and toxicity results for station SNP 5-6 are provided in Table B-1, including comparisons to applicable Water Licence limits (WLWB 2023). Results from Lardass Lake, SNP 5-4 and SNP 5-5, are provided in Table B-2, including comparisons to applicable CCME guidelines (CCME 1999 with updates). Results from the remaining SNP stations are presented in Table B-3. Analytical results provided by the laboratories (i.e., the certificate of analysis and the final toxicity report provided by Nautilus) are included in Appendix C.

At station SNP 5-6, parameter concentrations were below Water Licence EQC and within the required pH range of 5.5 to 9.5. The acute toxicity sample was not acutely toxic to Rainbow Trout or *D. magna* (survival = 100%) per the regulatory definition (Appendix B, Table B-1).

At Lardass Lake, SNP 5-4 and SNP 5-5, parameter concentrations were below the water quality objectives, i.e., the lowest of the CCME acute and chronic guidelines for the protection of aquatic life, the wildlife health guidelines, and applicable FEQG (Appendix B, Table B-2).

3.2 Quality Assurance/Quality Control

The QA/QC assessment of the data collected during the 3 June 2024 sampling event indicated that the data are adequate to address the objectives of the program (Appendix D). There was limited potential for contamination during sampling, transport, and laboratory analysis. Duplicate sample results indicated that intrastation variability was low (i.e., sampling precision was high). Parameter concentrations were consistently less than five times the detection limit in the field and travel blanks.

Recommended hold times between sample collection and analysis were generally met, except for total mercury. The low-level total mercury vials provided by ALS for sample collection were not cleaned by the laboratory to the required level to provide reliable detection limits. ALS analyzed this parameter 8 days after sample collection (within the standard hold time of 190 hours), but a qualifier was applied to the results.

All QA/QC requirements for the acute toxicity testing with samples collected from SNP 5-6 (Section 2.5) were met.

4.0 CLOSURE

We trust the above information satisfies the Water Licence requirements. If you have any questions or require additional information, please contact the undersigned.

WSP Canada Inc.

Saad Pasha, MSc
Water Quality Scientist

Kate Sinclair, PhD
Principal Water Quality Scientist

Michael Iwanyshyn, Ph.D.
Lead Water Quality Scientist

SP/KS/MI/jlb/jr

5.0 REFERENCES

CCME (Canadian Council of Ministers of the Environment). 1999. Canadian Environmental Quality Guidelines 1999, with updates to 2020. Winnipeg, MB. Accessed July 2023.

EC (Environment Canada). 2000. Reference method for determining acute lethality of effluents to *Daphnia magna*, 2000. Environment Canada, EPS 1/RM/14. Second Edition.

EC. 2007. Reference method for determining acute lethality of effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13. Second Edition (amended May 2007 and February 2016).

ECCC (Environment and Climate Change Canada). 2016. Federal Environmental Quality Guidelines – Vanadium. Available at: FEQG Vanadium EN.pdf (ec.gc.ca).

ECCC. 2017. Federal Environmental Quality Guidelines – Cobalt. Available at: FEQG Cobalt Final EN.pdf (ec.gc.ca).

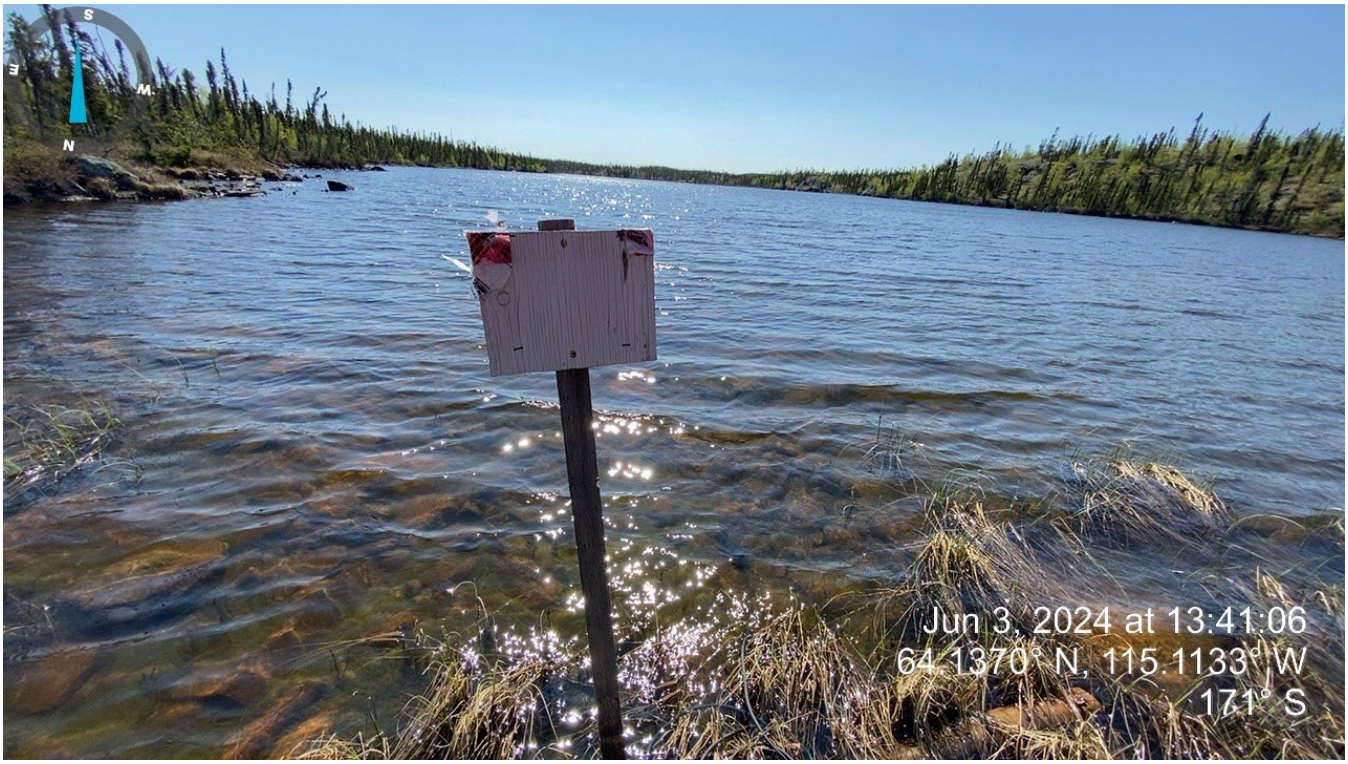
ECCC. 2020. Federal Environmental Quality Guidelines – Strontium. Available at: Federal-environmental-quality-guidelines-strontium.pdf.

WLWB (Wek'èezhìı Land and Water Board). 2023. Type A Water Licence W2021L2-0004. Issued 13 January 2023.

APPENDIX A

Site Photographs

Photograph A-1: SNP 5-4, Inflow from Wetlands into Lardass Lake. Note: Sample was collected at the edge of the submerged former dock, near the sign in the background. Photo Orientation: South.



Photograph A-2: SNP 5-4, Sampling location at inflow from Wetlands into Lardass Lake. Photo Orientation: South.

Photograph A-3: SNP 5-5, Lardass Lake. Photo Orientation: Southeast.

Photograph A-4: SNP 5-6, Combined Runoff from Damoti Rock Piles. Note: Carboys used for toxicity sampling can be seen near water. Photo Orientation: West.

Photograph A-5: SNP 5-8, Damoti Lake Site Decline Ramp (Minewater Pooled at Entrance of Adit). Photo Orientation: West.

Photograph A-6: SNP 5-9, Pool of Standing Water Immediately West of Waste Rock Pile. Photo Orientation: Northwest.

Photograph A-7: SNP 5-11, Pool of Standing Water Between Waste Rock/Ore Stockpiles. Photo Orientation: North.

Photograph A-8: SNP 5-12, Pool of Standing Water in Rock Pile Area. Photo Orientation: South.

Photograph A-9: SNP 5-13, Pool of Standing Water in Rock Pile Area. Photo Orientation: South.

Photograph A-10: SNP 5-14, Flow pathway between rock ore pile area and Lardass Lake. Note: Low water level and no flow observed. Field measurements were collected (probe shown in foreground) but a water quality sample was not collected. Photo Orientation: Southeast.

Photograph A-11: Aerial View of site and drainage to Lardass Lake. Photo Orientation: West.

APPENDIX B

Water Quality Data

Table B-1: Surveillance Network Program Results at SNP 5-6 Compared to Water Licence Limits, 3 June 2024

Parameter	Unit	Maximum Concentration of Any Grab Sample[(a)]	Maximum Average Concentration[(b)]	Station
				SNP 5-6
Field Measured Parameters				
pH	unitless	5.5 - 9.5	-	6.5
Specific conductivity	µS/cm	-	-	334
Temperature	°C	-	-	7.9
Dissolved oxygen	mg/L	-	-	2.7
Dissolved oxygen	%	-	-	23
Conventional Parameters				
pH	unitless	5.5 - 9.5	-	7.5
Specific conductivity	µS/cm	-	-	294
Hardness, as $CaCO_3$	mg/L	-	-	129
Total alkalinity, as $CaCO_3$	mg/L			24
Total dissolved solids (calculated)	mg/L	-	-	175
Total suspended solids	mg/L	30	15	5.9
Major Ions				
Calcium	mg/L	-	-	32
Chloride	mg/L	-	-	1.5
Fluoride	mg/L	-	-	0.16
Magnesium	mg/L	-	-	12
Potassium	mg/L	-	-	2.6
Sodium	mg/L	-	-	3.1
Sulphate	mg/L	-	-	102
Nutrients				
Nitrate	mg-N/L	-	-	<0.005
Nitrite	mg-N/L		-	<0.001
Total ammonia	mg-N/L	-	12	0.0084
Total phosphorus (colourimetric)	mg-P/L	-	-	0.039
Dissolved phosphorus	mg-P/L	-	-	<0.05
Total Metals				
Aluminum	mg/L	-	-	0.13
Antimony	mg/L	-	-	<0.0001
Arsenic	mg/L	0.2	0.1	0.00081
Barium	mg/L	-	-	0.014
Beryllium	mg/L	-	-	<0.00002
Bismuth	mg/L	-	-	<0.00005
Boron	mg/L	-	-	0.030
Cadmium	mg/L	0.002	0.001	0.000015
Cesium	mg/L	-	-	0.00076
Chromium	mg/L	-	-	<0.0005
Cobalt	mg/L	-	-	0.00066
Copper	mg/L	0.02	0.01	0.0035
Iron	mg/L	-	-	1.3
Lead	mg/L	0.04	0.02	0.00037
Lithium	mg/L	-	-	0.012
Manganese	mg/L	-	-	0.058
Molybdenum	mg/L	-	-	<0.00005
Nickel	mg/L	0.5	0.25	0.024
Rubidium	mg/L	-	-	0.0067
Selenium	mg/L	-	-	<0.00005
Silicon	mg/L	-	-	2.6
Silver	mg/L	-	-	<0.00001
Strontium	mg/L	-	-	0.094
Sulphur	mg/L	-	-	37
Tellurium	mg/L	-	-	<0.0002
Thallium	mg/L	-	-	<0.00001
Thorium	mg/L	-	-	<0.0001
Tin	mg/L	-	-	<0.0001
Titanium	mg/L	-	-	0.00062
Tungsten	mg/L	-	-	<0.0001
Uranium	mg/L	-	-	0.00011
Vanadium	mg/L	-	-	<0.0005
Zinc	mg/L	0.2	0.1	0.0071
Zirconium	mg/L	-	-	<0.0002

Table B-1: Surveillance Network Program Results at SNP 5-6 Compared to Water Licence Limits, 3 June 2024

Parameter	Unit	Maximum Concentration of Any Grab Sample[(a)]	Maximum Average Concentration[(b)]	Station
				SNP 5-6
Dissolved Metals				
Aluminum	mg/L	-	-	0.063
Antimony	mg/L	-	-	<0.0001
Arsenic	mg/L	-	-	0.00056
Barium	mg/L	-	-	0.013
Beryllium	mg/L	-	-	<0.00002
Bismuth	mg/L	-	-	<0.00005
Boron	mg/L	-	-	0.029
Cadmium	mg/L	-	-	0.000016
Cesium	mg/L	-	-	0.00077
Chromium	mg/L	-	-	<0.0005
Cobalt	mg/L	-	-	0.00076
Copper	mg/L	-	-	0.0025
Iron	mg/L	-	-	0.51
Lead	mg/L	-	-	0.00010
Lithium	mg/L	-	-	0.012
Manganese	mg/L	-	-	0.072
Molybdenum	mg/L	-	-	<0.00005
Nickel	mg/L	-	-	0.023
Rubidium	mg/L	-	-	0.0065
Selenium	mg/L	-	-	0.000054
Silicon	mg/L	-	-	2.5
Silver	mg/L	-	-	<0.00001
Strontium	mg/L	-	-	0.094
Sulphur	mg/L	-	-	36
Tellurium	mg/L	-	-	<0.0002
Thallium	mg/L	-	-	<0.00001
Thorium	mg/L	-	-	<0.0001
Tin	mg/L	-	-	<0.0001
Titanium	mg/L	-	-	<0.0003
Tungsten	mg/L	-	-	<0.0001
Uranium	mg/L	-	-	0.000080
Vanadium	mg/L	-	-	<0.0005
Zinc	mg/L	-	-	0.0063
Zirconium	mg/L	-	-	<0.0003
Acute Toxicity				
Daphnia magna survival	%	≥50	-	100
Daphnia magna immobility	%	-	-	0
Rainbow trout survival	%	≥50	-	100

Notes:

a) Maximum concentration of any grab sample as per Type A Water Licence W2021L2-0004 (WLWB 2023).

b) Maximum average concentration as per Type A Water Licence W2021L2-0004 (WLWB 2023).

WLWB = Wek'èezhii Land and Water Board; SNP = Surveillance Network Program; $CaCO_3$ = calcium carbonate; µS/cm = microsiemens per centimetre; mg/L = milligrams per litre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorus per litre; % = percent; °C = degrees Celsius; < = less than; - = no Water Licence limit.

Reference:

WLWB (Wek'èezhii Land and Water Board). 2023.Type A Water Licence W2021L2-0004. Issued 13 January 2023.

Table B-2: Surveillance Network Program Sample Results at Lardass Lake Compared to Water Quality Objectives, 3 June 2024

Parameter	Unit	Guideline:			Station	
		For the Protection of Aquatic Life		Wildlife Health (Livestock)	SNP 5-4	SNP 5-5
		Acute	Chronic			
Field Measured Parameters						
pH	unitless	-	6.5 - 9.0	-	8.2	8.1
Specific conductivity	µS/cm	-	-	-	121	122
Temperature	°C	-	-	-	16	16
Dissolved oxygen	mg/L	-	6.5	-	10	10
Dissolved oxygen	%	-	-	-	105	105
Conventional Parameters						
pH	unitless	-	6.5 - 9.0	-	7.9	7.9
Specific conductivity	µS/cm	-	-	-	127	128
Hardness, as $CaCO_3$	mg/L	-	-	-	59	57
Total alkalinity, as $CaCO_3$	mg/L				43	44
Total dissolved solids (calculated)	mg/L	-	-	3000	88	88
Total suspended solids	mg/L	-	-	-	7.9	7.2
Dissolved organic carbon	mg/L	-	-	-	22	22
Major Ions						
Calcium	mg/L	-	-	1,000	17	16
Chloride	mg/L	640	120	-	0.79	0.77
Fluoride	mg/L	-	0.12	2	0.076	0.082
Magnesium	mg/L	-	-	-	4.2	4.3
Potassium	mg/L	-	-	-	1.4	1.4
Sodium	mg/L	-	-	-	2.5	2.7
Sulphate	mg/L	-	-	1,000	14	14
Nutrients						
Nitrate	mg-N/L	124	2.9	-	<0.005	<0.005
Nitrite	mg-N/L		0.06	10	<0.001	<0.001
Total ammonia	mg-N/L	-	0.35[(a)]	-	0.033	0.032
Total phosphorus (colourimetric)	mg-P/L	-	-	-	0.021	0.019
Dissolved phosphorus	mg/-P/L	-	-	-	<0.05	<0.05
Total Metals						
Aluminum	mg/L	-	0.10[(b)]	5.0	0.091	0.095
Antimony	mg/L	-	-	-	<0.0001	<0.0001
Arsenic	mg/L	-	0.005	0.025	0.00026	0.00027
Barium	mg/L	-	-	-	0.0089	0.0092
Beryllium	mg/L	-	-	0.1	<0.00002	<0.00002
Bismuth	mg/L	-	-	-	<0.00005	<0.00005
Boron	mg/L	29	1.5	5.0	0.010	0.011
Cadmium	mg/L	0.0012[(c)]	0.000099[(c)]	0.08	<0.000005	<0.000005
Calcium	mg/L	-	-	-	16	16
Cesium	mg/L	-	-	-	0.000026	0.000028
Chromium	mg/L	-	0.001[(d)]	0.05	<0.0005	0.00056
Cobalt	mg/L	-	0.00081[(e)]	1.0	0.00014	0.00016
Copper	mg/L	-	0.002[(c)]	0.5	0.00080	0.00084
Iron	mg/L	-	0.30	-	0.11	0.093
Lead	mg/L	-	0.001[(c)]	0.1	<0.00005	<0.00005
Lithium	mg/L	-	-	-	0.0024	0.0024
Magnesium	mg/L	-	-	-	4.3	4.3
Manganese	mg/L	-	-	-	0.069	0.079
Mercury	mg/L	-	0.000026	0.003	0.0000019	0.0000021
Molybdenum	mg/L	-	0.073	0.5	0.000095	0.00011
Nickel	mg/L	-	0.025[(c)]	1.0	0.0016	0.0019
Potassium	mg/L	-	-	-	1.4	1.4
Rubidium	mg/L	-	-	-	0.0024	0.0024
Selenium	mg/L	-	0.001	0.05	<0.00005	<0.00005
Silicon	mg/L	-	-	-	0.21	0.23
Silver	mg/L	-	0.00025	-	<0.00001	<0.00001
Sodium	mg/L	-	-	-	2.5	2.6
Strontium	mg/L	-	-	-	0.041	0.041
Sulphur	mg/L	-	-	-	5.1	5.3
Tellurium	mg/L	-	-	-	<0.0002	<0.0002
Thallium	mg/L	-	0.0008	-	<0.00001	<0.00001
Thorium	mg/L	-	-	-	<0.0001	<0.0001
Tin	mg/L	-	-	-	<0.0001	<0.0001
Titanium	mg/L	-	-	-	0.00058	0.00079
Tungsten	mg/L	-	-	-	<0.0001	<0.0001
Uranium	mg/L	0.033	0.015	0.2	0.00015	0.00015
Vanadium	mg/L	-	0.12[(f)]	0.1	<0.0005	<0.0005
Zinc	mg/L	-	-	50	<0.003	<0.003
Zirconium	mg/L	-	-	-	<0.0002	<0.0002

Table B-2: Surveillance Network Program Sample Results at Lardass Lake Compared to Water Quality Objectives, 3 June 2024

Parameter	Unit	Guideline:			Station	
		For the Protection of Aquatic Life		Wildlife Health (Livestock)	SNP 5-4	SNP 5-5
		Acute	Chronic			
Dissolved Metals						
Aluminum	mg/L	-	-	-	0.054	0.049
Antimony	mg/L	-	-	-	<0.0001	<0.0001
Arsenic	mg/L	-	-	-	0.00028	0.00026
Barium	mg/L	-	-	-	0.0080	0.0081
Beryllium	mg/L	-	-	-	<0.00002	<0.00002
Bismuth	mg/L	-	-	-	<0.00005	<0.00005
Boron	mg/L	-	-	-	<0.01	<0.01
Cadmium	mg/L	-	-	-	<0.000005	<0.000005
Cesium	mg/L	-	-	-	0.000025	0.000026
Chromium	mg/L	-	-	-	<0.0005	<0.0005
Cobalt	mg/L	-	-	-	<0.0001	<0.0001
Copper	mg/L	-	-	-	0.00064	0.00059
Iron	mg/L	-	-	-	0.018	<0.01
Lead	mg/L	-	-	-	<0.00005	<0.00005
Lithium	mg/L	-	-	-	0.0022	0.0022
Manganese	mg/L	4.1[(c)]	0.22[(g)]	-	0.0068	0.00055
Molybdenum	mg/L	-	-	-	0.00010	0.000089
Nickel	mg/L	-	-	-	0.0013	0.0012
Rubidium	mg/L	-	-	-	0.0023	0.0024
Selenium	mg/L	-	-	-	<0.00005	<0.00005
Silicon	mg/L	-	-	-	0.16	0.17
Silver	mg/L	-	-	-	<0.00001	<0.00001
Strontium	mg/L	-	2.5[(h)]	-	0.040	0.042
Sulphur	mg/L	-	-	-	4.8	5.3
Tellurium	mg/L	-	-	-	<0.0002	<0.0002
Thallium	mg/L	-	-	-	<0.00001	<0.00001
Thorium	mg/L	-	-	-	<0.0001	<0.0001
Tin	mg/L	-	-	-	<0.0001	<0.0001
Titanium	mg/L	-	-	-	<0.0003	<0.0003
Tungsten	mg/L	-	-	-	<0.0001	<0.0001
Uranium	mg/L	-	-	-	0.00013	0.00012
Vanadium	mg/L	-		-	<0.0005	<0.0005
Zinc	mg/L	0.097[(i)]	0.022[(i)]	-	0.0010	<0.001
Zirconium	mg/L	-	-	-	<0.0003	<0.0003

Notes:

a) The ammonia guideline is pH and temperature dependent. The ammonia guideline (0.35 mg-N/L) is based on the combination of field pH (8.2) and water temperature (16°C).
b) Guideline is pH dependent. The guideline shown is based on the field pH (8.1 and 8.2).
c) Guideline is hardness dependent. The guideline shown is based on the minimum hardness observed in the dataset (57 mg/L).
d) Guideline is for chromium VI.
e) Federal environmental quality guideline for cobalt is dependent on water hardness. The guideline shown is based on the minimum hardness observed in the dataset (57 mg/L) (ECCC 2017).
f) Federal environmental quality guideline for vanadium (ECCC 2016).
g) The chronic dissolved manganese guideline is pH and hardness dependent. The chronic manganese guideline (0.22 mg/L) is based on the combination of field pH (8.1) and hardness (57 mg/L).
h) Federal environmental quality guideline for strontium (ECCC 2020).
i) The acute and chronic dissolved zinc guidelines are dependent on pH, hardness, and DOC (acute only). The guidelines (0.097 and 0.022 mg/L, respectively) are based on the combination of field pH (8.1), hardness (57 mg/L), and DOC (22 mg/L) (CCME 1999).

CCME = Canadian Council of Ministers of the Environment; SNP = Surveillance Network Program; µS/cm = microsiemens per centimetre; mg/L = milligrams per litre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorus per litre; $CaCO_3$ = calcium carbonate; DOC = dissolved organic carbon; % = percent; °C = degrees Celsius; < = less than; - = no guideline.

References:

CCME (Canadian Council of Ministers of the Environment). 1999. Canadian Environmental Quality Guidelines 1999, with updates to 2020. Winnipeg, MB. Accessed October 2022.
ECCC (Environment and Climate Change Canada). 2016. Federal Environmental Quality Guidelines – Vanadium. Available at: https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/canadian-environmental-protection-act-1999-8.html
ECCC. 2017. Federal Environmental Quality Guidelines – Cobalt. Available at: https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/canadian-environmental-protection-act-1999-federal-environmental-quality-guidelines-cobalt.html
ECCC. 2020. Federal Environmental Quality Guidelines - Strontium. Available at: https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/federal-environmental-quality-guidelines-strontium.html#toc7

Table B-3: Surveillance Network Program Sample Results for Stations around the Rock Piles, 3 June 2024

Parameter	Unit	Station				
		SNP 5-8	SNP 5-9	SNP 5-11	SNP 5-12	SNP 5-13
Field Measured Parameters						
pH	unitless	6.6	6.5	6.5	6.6	6.6
Specific conductivity	µS/cm	113	379	383	291	286
Temperature	°C	2.9	8.8	11	13	11
Dissolved oxygen	mg/L	5.8	6.8	5.9	6.7	7.8
Dissolved oxygen	%	43	58	53	63	70
Conventional Parameters						
pH	unitless	7.4	7.9	7.5	7.3	7.4
Specific conductivity	µS/cm	115	505	374	304	302
Hardness, as $CaCO_3$	mg/L	49	220	166	130	132
Total alkalinity, as $CaCO_3$	mg/L	24	59	23	15	16
Total dissolved solids (calculated)	mg/L	68	303	221	178	177
Total suspended solids	mg/L	2.8	4.7	4.0	4.4	4.5
Major Ions						
Calcium	mg/L	13	60	42	33	33
Chloride	mg/L	1.4	3.9	1.9	1.5	1.4
Fluoride	mg/L	0.053	0.17	0.21	0.21	0.20
Magnesium	mg/L	3.8	17	15	12	12
Potassium	mg/L	1.7	3.2	3.4	2.8	2.9
Sodium	mg/L	1.6	5.5	3.5	3.1	3.1
Sulphate	mg/L	26	168	133	108	106
Nutrients						
Nitrate	mg-N/L	0.016	<0.005	<0.005	<0.005	<0.005
Nitrite	mg-N/L	<0.001	<0.001	<0.001	<0.001	<0.001
Total ammonia	mg-N/L	0.0065	0.023	0.027	0.012	0.010
Total phosphorus (colourimetric)	mg-P/L	0.024	0.018	0.012	0.015	0.015
Dissolved phosphorus	mg-P/L	<0.05	<0.05	<0.05	<0.05	<0.05
Total Metals						
Aluminum	mg/L	0.35	0.061	0.12	0.19	0.19
Antimony	mg/L	<0.0001	0.00074	0.00011	<0.0001	0.00010
Arsenic	mg/L	0.00065	0.00070	0.00068	0.00068	0.00068
Barium	mg/L	0.016	0.044	0.016	0.015	0.015
Beryllium	mg/L	0.00002	0.000022	0.000031	0.000039	0.000030
Bismuth	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron	mg/L	<0.01	0.031	0.037	0.032	0.031
Cadmium	mg/L	0.000031	0.000013	0.000041	0.000031	0.000036
Cesium	mg/L	0.00014	0.00026	0.00051	0.00065	0.00065
Chromium	mg/L	0.00094	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	mg/L	0.0011	0.0021	0.0098	0.0058	0.0053
Copper	mg/L	0.0067	0.0048	0.0038	0.0040	0.0040
Iron	mg/L	0.56	1.8	1.6	1.5	1.5
Lead	mg/L	0.00025	0.00025	0.00032	0.00028	0.00029
Lithium	mg/L	0.0032	0.012	0.017	0.014	0.013
Manganese	mg/L	0.058	0.31	0.65	0.43	0.39
Molybdenum	mg/L	0.00046	0.000084	0.000052	<0.00005	0.000063
Nickel	mg/L	0.0096	0.026	0.071	0.053	0.052
Rubidium	mg/L	0.0039	0.0069	0.0076	0.0064	0.0063
Selenium	mg/L	0.000069	0.000066	0.000088	0.000078	0.000069
Silicon	mg/L	2.3	3.4	2.8	2.9	2.9
Silver	mg/L	0.000046	<0.00001	<0.00001	<0.00001	<0.00001
Strontium	mg/L	0.033	0.17	0.13	0.096	0.095
Sulphur	mg/L	9.3	60	49	38	38
Tellurium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Thorium	mg/L	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001
Tin	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	mg/L	0.0036	<0.0006	0.00058	0.00046	0.00072
Tungsten	mg/L	0.00047	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	0.00069	0.00014	0.00015	0.00015	0.00015
Vanadium	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc	mg/L	0.0055	0.0041	0.015	0.013	0.014
Zirconium	mg/L	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002
Dissolved Metals						
Aluminum	mg/L	0.21	0.027	0.041	0.078	0.074
Antimony	mg/L	<0.0001	0.00051	<0.0001	<0.0001	<0.0001
Arsenic	mg/L	0.00059	0.00060	0.00047	0.00049	0.00050
Barium	mg/L	0.015	0.041	0.017	0.016	0.015
Beryllium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Bismuth	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron	mg/L	<0.01	0.030	0.033	0.030	0.030
Cadmium	mg/L	0.000028	0.0000092	0.000038	0.000035	0.000034
Cesium	mg/L	0.00013	0.00028	0.00056	0.00071	0.00072
Chromium	mg/L	0.00068	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	mg/L	0.00074	0.00037	0.0086	0.0053	0.0048
Copper	mg/L	0.0063	0.0034	0.0030	0.0032	0.0035
Iron	mg/L	0.13	0.48	0.40	0.48	0.48
Lead	mg/L	0.00008	0.000073	0.000076	0.000085	0.000085
Lithium	mg/L	0.0031	0.012	0.015	0.013	0.014
Manganese	mg/L	0.037	0.12	0.61	0.42	0.39
Molybdenum	mg/L	0.00047	0.00011	0.000050	<0.00005	0.00011
Nickel	mg/L	0.009	0.024	0.069	0.051	0.051
Rubidium	mg/L	0.0039	0.0072	0.0078	0.0069	0.0069
Selenium	mg/L	0.000066	0.000050	0.000063	0.000060	0.000061
Silicon	mg/L	2.2	3.4	2.7	2.9	2.9
Silver	mg/L	0.000021	<0.00001	<0.00001	<0.00001	<0.00001
Strontium	mg/L	0.034	0.18	0.13	0.10	0.11
Sulphur	mg/L	9	59	47	37	36
Tellurium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Thorium	mg/L	0.00017	<0.0001	<0.0001	<0.0001	<0.0001
Tin	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	mg/L	0.0012	<0.0003	<0.0003	<0.0003	<0.0003
Tungsten	mg/L	0.00037	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	0.00056	0.00012	0.000081	0.000092	0.000090
Vanadium	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc	mg/L	0.0041	0.0020	0.012	0.011	0.0097
Zirconium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003

Notes:

SNP = Surveillance Network Program; µS/cm = microsiemens per centimetre; mg/L = milligrams per litre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorus per litre; $CaCO_3$ = calcium carbonate; % = percent; °C = degrees Celsius; < = less than.

APPENDIX C

Laboratory Certificate of Analysis

Acute Toxicity Test Results

Sample collected June 3, 2024

Final Report

July 5, 2024

Submitted to: **ALS Environmental**
Yellowknife, NT

10823 27 Street SE, Calgary, AB T2Z 3V9

SAMPLE INFORMATION

Sample ID/ Internal ID	Dates				Receipt temperature
	Collected	Received	Rainbow trout test initiation	*Daphnia magna* test initiation	
YL2400571-001 SNP 5-6 / 2324-2287	2024-06-03 at 1200h	2024-06-05 at 1420h	2024-06-06 at 1405h	2024-06-06 at 1300h	5.9°C

TEST TYPES

- Rainbow trout 96-h single concentration screening test
- *Daphnia magna* 48-h single concentration screening test

RESULTS

Toxicity test results

Sample ID	Percent survival in 100% (v/v) sample	
	Rainbow trout	*Daphnia magna*
YL2400571-001 SNP 5-6	100	100

Sample ID	*Daphnia magna* Percent Immobility in 100% (v/v)
YL2400571-001 SNP 5-6	0

QA/QC

QA/QC summary	Rainbow trout	*Daphnia magna*
Reference toxicant LC50 (95% CL)	3.3 (2.8-3.8) g/L KCl[1]	6.2 (5.9-6.5) g/L NaCl[2]
Reference toxicant historical mean (2 SD Range)	3.8 (3.0-5.0) g/L KCl	6.2 (5.6 -6.8) g/L NaCl
Reference toxicant CV	8.5%	3.4%
Organism health history	Acceptable	Acceptable
Protocol deviations	None	None
Water quality range deviations	None	None
Control performance	Acceptable	Acceptable
Test performance	Valid	Valid

[1] Test date 2024-05-23; [2] Test date 2024-06-05

LC = Lethal Concentration, CL = Confidence Limit, SD = Standard Deviation, CV = Coefficient of Variation

Report By:
Jessica Knoch, BSc
Laboratory Assistant

Reviewed By:
Daisy Meyer, BSc
Project Coordinator

This report has been prepared by Nautilus Environmental Company Inc. based on data and/or samples provided by our client and the results of this study are for their sole benefit. Any reliance on the data by a third party is at the sole and exclusive risk of that party. The results presented here relate only to the samples tested.

APPENDIX A – Summary of test conditions

Table 1. Summary of test conditions: 96-h rainbow trout (*Oncorhynchus mykiss*) survival test.

Test species	*Oncorhynchus mykiss*
Organism source	Fish hatchery
Organism age	Juvenile
Test type	Static
Test duration	96 hours
Test vessel	5-gallon glass aquariums
Test volume	10 - 20 L, depending on size of fish
Test solution depth	Minimum 15 cm
Test concentrations	100% (undiluted) sample plus laboratory control
Test replicates	1 per treatment
Number of organisms	10 per replicate
Control/dilution water	De-chlorinated City of Calgary tap water
Test solution renewal	None
Test temperature	15 ± 1°C
Feeding	None
Light intensity	100 to 500 lux
Photoperiod	16 hours light/8 hours dark
Aeration	6.5 ±1 mL/min/L
Test Measurements	pH, conductivity, dissolved oxygen, and temperature were measured at test initiation and test completion; salinity measured at test initiation; evaluated for survival daily
Test protocol	Environment Canada (2000), EPS 1/RM/13, with 2007, 2016, & 2023 amendments
Statistical software	None
Test endpoints	Percent survival
Test acceptability criteria for controls	Survival ≥ 90%
Reference toxicant	Potassium chloride (KCl)

Table 2. Summary of test conditions: 48-h *Daphnia magna* survival test.

Test species	*Daphnia magna*
Organism source	In-house culture
Organism age	<24 hours
Test type	Static
Test duration	48 hours
Test vessel	375 mL glass vessels
Test volume	150 mL
Test concentrations	100% (undiluted) sample plus laboratory control
Test replicates	3 per treatment
Number of organisms	10 per replicate
Control/dilution water	De-chlorinated City of Calgary tap water amended with 4 mg/L KCl and with B12 (2 µg/L) and Na_2SeO_4 (2 µg Se/L)
Test solution renewal	None
Test temperature	20 ± 2°C
Feeding	None
Light intensity	400 to 800 lux
Photoperiod	16 hours light/8 hours dark
Aeration	None
Test measurements	pH, conductivity, dissolved oxygen, and temperature measured at test initiation and completion; salinity and hardness measured at test initiation in undiluted sample; evaluated daily for survival
Test protocol	Environment Canada (2000), EPS 1/RM/14 with February 2016 amendments
Statistical software	None
Test endpoints	Mean percent survival
Test acceptability criteria for controls	Survival ≥ 90%
Reference toxicant	Sodium chloride (NaCl)

APPENDIX B – Toxicity test data

NAUTILUS

Trout Bench Sheet

Method TRS Client ALS106 Reference 2324-2287 Chamber 3

Test Log

Day	Date	Time	Initial	Chem. Cart	Double Counted	Daily Data Review
0	2024/06/06	1405 *	AC/KN	4	KN	AM
1	2024/06/07	0755	MS	-	-	KO
2	2024/06/08	0755	PK	-	-	AM
3	2024/06/09	0800	KN	-	-	MS
4	2024/06/10	13 15	MS/PK 10	1	-	KC

Note: * ; time when the test was loaded with fish

Sample Information

Initial pH: 7.6
Initial EC (µS/cm): 327
Salinity (ppt): 1

Sample Pre-Aeration

Aeration rate adjusted to 6.5 +/- 1 mL/min/L : **yes/no**

Preaeration time	0 hours	0.5 hours	1 hour	1.5 hours	2 hours
DO(mg/L) of 100%	8.2	8.3			
Temp (°C) of 100%	16				

DO in mg/L (70% - 100% saturation)**
6.2 mg/L - 8.9 mg/L at 14°C
6.1 mg/L - 8.8 mg/L at 15°C
6.0 mg/L - 8.6 mg/L at 16°C
**corrected for altitude

Test Chemistry and Biology

	Conc.						
	100						
pH (units) (range: 5.5-8.5)							
Day 0	7.0						
Day 4	7.3						
EC (uS/cm)							
Day 0	335						
Day 4	784						
DO (mg/L) (70-100% saturation at test temp.)							
Day 0	8.3						
Day 4	6.6						
Temperature (°C) (range: 14-16°C)							
Day 0	16						
Day 4	15						
Number Alive (In brackets number stressed)							
Day 0	10						
Day 1	10						
Day 2	10						
Day 3	10						
Day 4	10						

Unless otherwise noted, behavior is considered to be normal

Test Volume (L) 18

Control Reference Number: 20240606CTLA

Comments :

Reviewed By: KO Date Reviewed: 2024-06-17

NAUTILUS

Control Trout Bench Sheet

Client NE Control Reference Number 20240606CTLA Chamber 3

Test Log

Day	Date	Time	Initial	Chem. Cart	Double Counted	Daily Data Review
0	2024/06/06	1330 *	AC/KN	7	KN	AM
1	2024/06/07	0950	MS	-	-	KO
2	2024/06/08	0950	PK	-	-	AM
3	2024/06/09	0800	KN	-	-	MS
4	2024/06/10	1310	MS/PK / AD	1	-	YC

Note: * ; time when the test was loaded with fish

Sample Reference Number(s):
2324-2278-01
2324-2278-02
2324-2287
2324-2293
2324-2294

Control Pre-Aeration

Aeration rate adjusted to 6.5 +/- 1 mL/min/L: **yes/no**

Test Chemistry and Biology

Conc. CTL

pH (units) (range: **5.5-8.5**)

Day 0	7.8
Day 4	7.9

EC (uS/cm)

Day 0	426
Day 4	358

DO (mg/L) (**70-100% saturation at test temp.**)

Day 0	8.8
Day 4	9.6

DO in mg/L (70% - 100% saturation)**
6.2 mg/L - 8.9 mg/L at 14°C
6.1 mg/L - 8.8 mg/L at 15°C
6.0 mg/L - 8.6 mg/L at 16°C

**corrected for altitude

Temperature (°C) (range: **14-16°C**)

Day 0	15
Day 4	16

Number Alive (In brackets number stressed)

Day 0	10
Day 1	10
Day 2	10
Day 3	10
Day 4	10

Validity Criteria: must be ≤ 10% mortality and/or stressed behavior in the control

Unless otherwise noted, behavior is considered to be normal

Test Organism Information

Batch	20240306TR
Source	Trout Lodge
Tank #	5
Held at 15± 2°C for ≥14 days (must be ≥14 days)	Y
Percent stock mortality (7 days prior to test, must be <2%)	0.28
Test Volume (L)	16

Acceptable Test Volume Ranges
(10% of the control)

14 L control allows for 13 L - 15 L test(s)
16 L control allows for 14 L - 18 L test(s)
18 L control allows for 16 L - 20 L test(s)

Control Organism Data

Control Fish	Length (cm)	Weight (g)
1	3.9	0.5
2	4.3	0.7
3	3.9	0.5
4	3.8	0.4
5	3.7	0.4
6	3.9	0.5
7	4.3	0.6
8	3.9	0.6
9	4.1	0.6
10	3.9	0.4

Loading Density (g/L): 0.3
(must be ≤0.5 g/L)

Mean Length (cm): 4.0

Length Range (cm): 3.7-4.3

Mean Weight (g): 0.5
(Must be ≥0.3g)

Weight Range: (g): 0.4-0.7

Comments/Protocol Deviations :

none

Reviewed By: YC Date Reviewed: 2024-06-10

NAUTILUS ENVIRONMENTAL

Daphnia Bench Sheet

Method DAS20 Client ALS 106 Reference 2324-2287

Test Log

Day	Date	Time	Technician	Chem. Cart	Daily Data Review
0	2024/06/06	1300	EP/LS	2	DM
1	2024/06/07	0835	AP	-	KO
2	2024/06/08	1230	KN	2	AM

Sample Information

Initial pH: 7.6
Initial EC (µS/cm): 322
Salinity (ppt): 1

Lab Code	CTLA	CTLB	CTLC	100A	100B	100C				

pH (units) (range: 6.0-8.5)

day										
0	7.9	7.9	7.9	7.9	7.6	7.5				
2	8.1	8.1	8.1	7.8	7.7	7.6				

The pH of the sample was not adjusted prior to test setting, unless noted in the comments below

EC (uS/cm)

0	410	423	423	332	326	326				
2	420	427	427	335	331	331				

DO (mg/L) (**40-100% saturation at test temp.**)

0	7.9	7.9	7.9	7.9	7.9	7.9				
2	7.9	7.9	7.9	7.9	7.9	7.9				

Temperature (°C) (range: **18-22 °C**)

0	20	20	20	20	20	20				
2	20	20	20	20	20	20				

Number Alive (I, immobile)

0	10	10	10	10	10	10				
1	10	10	10	10	10	10				
2	10	10	10	10	10	10				

Validity Criteria: must be ≤ 10% mortality and/or abnormal behavior in the control
Notes: Immobile; daphnid can't swim after 60 sec. even if antenna still move
Unless otherwise noted, behaviour is considered to be normal

Culture
Young jar: Wed D4 — Jar(s) mortality 7 days prior to test (must be ≤25%): 0%

QA (previous month)
Days to first brood (≤12 days): 8
Average number of young produced (≥15 young): 31
Were test treatments randomized on test tray? (Yes) / No

Control Validity Criteria
Mean % mortality at 48 hours - (must be ≤10%): 0%

Sample
DO (mg/L) of sample prior to aeration: 7.1 — Temperature (°C) of sample prior to aeration: 20°C
DO % of sample prior to aeration: 90% — Is aeration required (<40% or >100%)? **Yes or No**
Duration of aeration (37.5 +/- 12.5 mL/min/L) : - — Filtered with 110um screen prior to testing **Yes or No**
Hardness (mg $CaCO_3$/L) of 100% : 113 — Is hardness adjustment required (<25 mg $CaCO_3$/L)? **Yes or No**
Hardness of sample after adjustment (must be between 25 - 30 mg $CaCO_3$/L): -
Alkalinity of 100% sample (mg $CaCO_3$/L): -

Dilution Water
Pail label / preparation date: P2:06/03
Hardness of dilution water (mg/L): 167

DO Levels (40-100% saturation) - corrected for altitude -
3.3 to 8.2 mg/L at 18°C
3.2 to 8.1 mg/L at 19°C
3.2 to 7.9 mg/L at 20°C
3.1 to 7.7 mg/L at 21°C
3.0 to 7.6 mg/L at 22°C

Comments/Observations:

Reviewed By: AP Date Reviewed: 2024-06-17

APPENDIX C – Chain-of-custody form

Chain of Custody

ALS Environmental - Yellowknife
314 Old Airport Road, Unit 116
Yellowknife NT Canada X1A
3T3

185344

Destination Lab:	**Nautilus Environmental (Calgary)**
Address:	10828 27 Street SE Calgary AB Canada T2Z 3V9
Work Order Number:	**YL2400571**
Original Receipt Date/Time	Instructions Received
04/06/2024 09:57	

Relinquished By
Date/Time
Received By
Date/Time
Receipt Temp

Return as Indicated: Results: ALSYK.ClientServices@alsglobal.com Invoice: ALSYK.ClientServices@alsglobal.com Electronic Data: ALSYK.ClientServices@alsglobal.com

Attention: Oliver Gregg

ALS Sample ID	Client ID	Matrix	Container Type	Test Codes	Method Description	Due Date	Sampling Date and Time	Remarks
YL2400571-001	SNP 5-6	Water	LDPE carboy	TRT-SCR-96	Survival/Screening Rainbow Trout (96 hours)	26-06-2024	03/06/2024 12:00	
YL2400571-001	SNP 5-6	Water	LDPE carboy	DAP-SCR-48	Survival/Screening Daphnia Magna 48 hours	26-06-2024	03/06/2024 12:00	

2224-2257
2024/06/04
14:26
Buffalo Air.
JC
2x10L carboys
NGS/NGL
Good Cond.
5.9°C

END OF REPORT

CERTIFICATE OF ANALYSIS

Work Order	: **YL2400572**	Page	: 1 of 14
Amendment	: **1**		
Client	: **WSP Canada Inc.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Saad Pasha	Account Manager	: Oliver Gregg
Address	: 2800, 700 - 2nd Street SW Calgary AB Canada T2P 2W2	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: 403.512.6580	Telephone	: 1 867 445 7143
Project	: CA0034908.5454-1000.1002	Date Samples Received	: 04-Jun-2024 09:57
PO	: 2024CA215454/1000.1001	Date Analysis Commenced	: 06-Jun-2024
C-O-C number	: ----	Issue Date	: 24-Jun-2024 10:26
Sampler	: Emily Finstad		
Site	:		
Quote number	: YL24-GOLD100-002		
No. of samples received	: 11		
No. of samples analysed	: 11		

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*
Angelo Salandanan	Lab Assistant	Metals, Burnaby, British Columbia
Brieanna Allen	Production/Validation Manager	Inorganics, Burnaby, British Columbia
Dan Gebert	Laboratory Analyst	Metals, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Inorganics, Burnaby, British Columbia

General Comments

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

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

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.
Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

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

Unit	*Description*
-	no units
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
ng/L	nanograms per litre
pH units	pH units

<: less than.

>: greater than.

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

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

YL2400572 #1,2,10,11 (E508-L): Samples received in 40mL glass vials, which are not proofed for low level Hg. Travel blank and Field blank using these vials are clean at 0.5 ng/L LOR, which supports this LOR, however we cannot be certain the hits in samples 1 & 2 are from the vials themselves, or the samples.

Qualifiers

Qualifier	*Description*
DLM	*Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).*
RRR	*Refer to report comments for issues regarding this analysis.*

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	03-Jun-2024 13:40	03-Jun-2024 13:40	03-Jun-2024 12:00	03-Jun-2024 11:15	03-Jun-2024 11:15
						YL2400572-001	YL2400572-002	YL2400572-003	YL2400572-004	YL2400572-005
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		127	128	294	115	505
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		58.6	56.9	129	48.6	220
pH	----	E108/VA	0.10	pH units		7.90	7.90	7.47	7.38	7.86
Solids, total dissolved [TDS], calculated	----	EC103/VA	1.0	mg/L		87.6	87.7	175	68.4	303
Solids, total suspended [TSS]	----	E160-L/VA	1.0	mg/L		7.9	7.2	5.9	2.8	4.7
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		43.2	44.4	23.8	23.5	59.3
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0332	0.0317	0.0084	0.0065	0.0232
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		0.79	0.77	1.53	1.35	3.92
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.076	0.082	0.162	0.053	0.170
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	0.0158	<0.0050
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0209	0.0186	0.0389	0.0235	0.0178
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		14.1	14.0	102	26.2	168
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		21.5	21.6	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0908	0.0949	0.132	0.349	0.0612
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00074
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00026	0.00027	0.00081	0.00065	0.00070
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00889	0.00916	0.0140	0.0156	0.0440
Beryllium, total	7440-41-7	E420/VA	0.000020	mg/L		<0.000020	<0.000020	<0.000020	0.000020	0.000022
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.010	0.011	0.030	<0.010	0.031
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	<0.0000050	0.0000151	0.0000312	0.0000132
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		16.1	16.0	31.8	13.6	63.5
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000026	0.000028	0.000757	0.000139	0.000262

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	03-Jun-2024 13:40	03-Jun-2024 13:40	03-Jun-2024 12:00	03-Jun-2024 11:15	03-Jun-2024 11:15
						YL2400572-001	YL2400572-002	YL2400572-003	YL2400572-004	YL2400572-005
						Result	Result	Result	Result	Result
Total Metals										
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	0.00056	<0.00050	0.00094	<0.00050
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		0.00014	0.00016	0.00066	0.00112	0.00208
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00080	0.00084	0.00350	0.00670	0.00480
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.114	0.093	1.26	0.560	1.78
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	0.000374	0.000247	0.000249
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0024	0.0024	0.0120	0.0032	0.0118
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		4.31	4.27	11.6	3.67	17.3
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0694	0.0793	0.0581	0.0576	0.314
Mercury, total	7439-97-6	E508-L/VA	0.50	ng/L		1.92 RRR	2.07 RRR	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000095	0.000112	<0.000050	0.000462	0.000084
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		0.00163	0.00191	0.0243	0.00955	0.0256
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.39	1.38	2.71	1.61	3.11
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00238	0.00240	0.00671	0.00387	0.00688
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	0.000069	0.000066
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		0.21	0.23	2.57	2.27	3.35
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	0.000046	<0.000010
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		2.54	2.63	3.08	1.45	5.36
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0409	0.0405	0.0942	0.0332	0.171
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		5.10	5.27	36.7	9.26	60.3
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<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	<0.000010
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00030 DLM	<0.00010
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00058	0.00079	0.00062	0.00364	<0.00060 DLM
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	0.00047	<0.00010
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000145	0.000148	0.000106	0.000693	0.000139
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	<0.0030	0.0071	0.0055	0.0041
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00040 DLM	<0.00040 DLM

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	03-Jun-2024 13:40	03-Jun-2024 13:40	03-Jun-2024 12:00	03-Jun-2024 11:15	03-Jun-2024 11:15
						YL2400572-001	YL2400572-002	YL2400572-003	YL2400572-004	YL2400572-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0536	0.0486	0.0627	0.212	0.0273
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00051
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00028	0.00026	0.00056	0.00059	0.00060
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00796	0.00807	0.0128	0.0152	0.0412
Beryllium, dissolved	7440-41-7	E421/VA	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		<0.010	<0.010	0.029	<0.010	0.030
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000050	<0.0000050	0.0000162	0.0000283	0.0000092
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		16.6	15.7	32.2	13.2	59.7
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000025	0.000026	0.000773	0.000134	0.000275
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	0.00068	<0.00050
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	<0.00010	0.00076	0.00074	0.00037
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00064	0.00059	0.00247	0.00625	0.00342
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.018	<0.010	0.513	0.132	0.475
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	0.000103	0.000080	0.000073
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0022	0.0022	0.0116	0.0031	0.0116
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		4.16	4.30	11.8	3.81	17.2
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00683	0.00055	0.0724	0.0373	0.121
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.000100	0.000089	<0.000050	0.000468	0.000106
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		0.00127	0.00121	0.0228	0.00899	0.0242
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.38	1.42	2.64	1.67	3.22
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00226	0.00235	0.00645	0.00390	0.00717
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	<0.000050	0.000054	0.000066	0.000050
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		0.158	0.174	2.51	2.22	3.37
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	0.000021	<0.000010
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		2.54	2.65	3.14	1.56	5.54
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0397	0.0424	0.0939	0.0342	0.179
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		4.76	5.26	35.9	8.97	59.4
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	03-Jun-2024 13:40	03-Jun-2024 13:40	03-Jun-2024 12:00	03-Jun-2024 11:15	03-Jun-2024 11:15
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2400572-001	YL2400572-002	YL2400572-003	YL2400572-004	YL2400572-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	0.00017	<0.00010
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	<0.00030	0.00124	<0.00030
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	0.00037	<0.00010
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000131	0.000123	0.000080	0.000556	0.000120
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0010	<0.0010	0.0063	0.0041	0.0020
Zirconium, dissolved	7440-67-7	E421/VA	0.00030	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Laboratory	Field	Laboratory	Laboratory

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

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

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6-D	SNP 5-8-FB
					Client sampling date / time	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 12:00	03-Jun-2024 13:40
						YL2400572-006	YL2400572-007	YL2400572-008	YL2400572-009	YL2400572-010
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		374	304	302	298	<2.0
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		166	130	132	127	<0.50
pH	----	E108/VA	0.10	pH units		7.48	7.30	7.35	7.64	5.35
Solids, total dissolved [TDS], calculated	----	EC103/VA	1.0	mg/L		221	178	177	174	<1.0
Solids, total suspended [TSS]	----	E160-L/VA	1.0	mg/L		4.0	4.4	4.5	4.9	<1.0
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		22.5	14.9	15.8	24.2	<2.0
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0274	0.0118	0.0103	0.0102	<0.0050
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		1.86	1.45	1.44	1.51	<0.50
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.212	0.211	0.195	0.160	<0.020
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0121	0.0149	0.0147	0.0183	<0.0020
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		133	108	106	101	<0.30
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		----	----	----	----	<0.50
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.121	0.191	0.188	0.103	<0.0030
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		0.00011	<0.00010	0.00010	<0.00010	<0.00010
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00068	0.00068	0.00068	0.00068	<0.00010
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0161	0.0151	0.0149	0.0136	<0.00010
Beryllium, total	7440-41-7	E420/VA	0.000020	mg/L		0.000031	0.000039	0.000030	<0.000020	<0.000020
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.037	0.032	0.031	0.030	<0.010
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000406	0.0000310	0.0000360	0.0000176	<0.0000050
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		42.0	32.9	32.2	32.9	<0.050
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000510	0.000647	0.000653	0.000755	<0.000010

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6-D	SNP 5-8-FB
					Client sampling date / time	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 12:00	03-Jun-2024 13:40
						YL2400572-006	YL2400572-007	YL2400572-008	YL2400572-009	YL2400572-010
						Result	Result	Result	Result	Result
Total Metals										
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		0.00979	0.00580	0.00532	0.00067	<0.00010
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00382	0.00399	0.00402	0.00321	<0.00050
Iron, total	7439-89-6	E420/VA	0.010	mg/L		1.59	1.50	1.45	1.02	<0.010
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		0.000323	0.000279	0.000287	0.000291	<0.000050
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0168	0.0139	0.0132	0.0116	<0.0010
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		14.2	11.2	11.1	11.5	<0.0050
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.650	0.427	0.389	0.0600	<0.00010
Mercury, total	7439-97-6	E508-L/VA	0.50	ng/L		----	----	----	----	<0.50 RRR
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000052	<0.000050	0.000063	<0.000050	<0.000050
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		0.0710	0.0527	0.0521	0.0239	<0.00050
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		3.13	2.62	2.61	2.67	<0.050
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00761	0.00637	0.00631	0.00674	<0.00020
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		0.000088	0.000078	0.000069	<0.000050	<0.000050
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		2.77	2.88	2.89	2.44	<0.10
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		3.51	2.86	2.86	3.09	<0.050
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.126	0.0961	0.0945	0.0942	<0.00020
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		48.9	38.2	38.4	36.1	<0.50
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<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	<0.000010
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<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	<0.00010
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00058	0.00046	0.00072	0.00040	<0.00030
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000148	0.000148	0.000146	0.000094	<0.000010
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0148	0.0130	0.0136	0.0065	<0.0030
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6-D	SNP 5-8-FB
					Client sampling date / time	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 12:00	03-Jun-2024 13:40
						YL2400572-006	YL2400572-007	YL2400572-008	YL2400572-009	YL2400572-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0414	0.0781	0.0742	0.0599	<0.0010
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00047	0.00049	0.00050	0.00055	<0.00010
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.0170	0.0157	0.0153	0.0127	<0.00010
Beryllium, dissolved	7440-41-7	E421/VA	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.033	0.030	0.030	0.029	<0.010
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000381	0.0000346	0.0000338	0.0000145	<0.0000050
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		42.4	32.8	33.2	31.9	<0.050
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000556	0.000705	0.000718	0.000768	<0.000010
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		0.00858	0.00532	0.00478	0.00063	<0.00010
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00300	0.00321	0.00354	0.00251	<0.00020
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.402	0.482	0.478	0.499	<0.010
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		0.000076	0.000085	0.000085	0.000106	<0.000050
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0154	0.0134	0.0135	0.0116	<0.0010
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		14.6	11.8	12.0	11.5	<0.0050
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.608	0.419	0.387	0.0680	<0.00010
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.000050	<0.000050	0.000112	<0.000050	<0.000050
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		0.0686	0.0511	0.0514	0.0221	<0.00050
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		3.35	2.81	2.85	2.60	<0.050
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00784	0.00690	0.00691	0.00639	<0.00020
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		0.000063	0.000060	0.000061	<0.000050	<0.000050
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		2.73	2.86	2.86	2.50	<0.050
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		3.48	3.07	3.06	3.05	<0.050
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.132	0.101	0.105	0.0936	<0.00020
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		47.2	37.2	36.4	35.3	<0.50
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6-D	SNP 5-8-FB
					Client sampling date / time	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 11:15	03-Jun-2024 12:00	03-Jun-2024 13:40
						YL2400572-006	YL2400572-007	YL2400572-008	YL2400572-009	YL2400572-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000081	0.000092	0.000090	0.000077	<0.000010
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0116	0.0107	0.0097	0.0050	<0.0010
Zirconium, dissolved	7440-67-7	E421/VA	0.00030	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved metals filtration location	----	EP421/VA	-	-		Laboratory	Laboratory	Laboratory	Field	Field

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

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

Analytical Results

Sub-Matrix: Water (Matrix: Water)				Client sample ID	TB	----	----	----	----
				Client sampling date / time	03-Jun-2024 13:40	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2400572-011	--------	--------	--------	--------
					Result	----	----	----	----
Physical Tests									
Conductivity	----	E100/VA	2.0	µS/cm	<2.0	----	----	----	----
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L	<0.50	----	----	----	----
pH	----	E108/VA	0.10	pH units	5.50	----	----	----	----
Solids, total dissolved [TDS], calculated	----	EC103/VA	1.0	mg/L	<1.0	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/VA	1.0	mg/L	<1.0	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	<2.0	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	<0.0050	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	<0.50	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	<0.020	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	<0.0050	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	<0.0020	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	<0.30	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	<0.50	----	----	----	----
Total Metals									
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	<0.0030	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000020	mg/L	<0.000020	----	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L	<0.010	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000050	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	<0.050	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)									
				Client sample ID	TB	----	----	----	----
				Client sampling date / time	03-Jun-2024 13:40	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2400572-011	--------	--------	--------	--------
					Result	----	----	----	----
Total Metals									
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	<0.0010	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	<0.0050	----	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Mercury, total	7439-97-6	E508-L/VA	0.50	ng/L	<0.50 RRR	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	<0.050	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	<0.10	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	<0.050	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	<0.50	----	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	<0.0030	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)									
				Client sample ID	TB	----	----	----	----
				Client sampling date / time	03-Jun-2024 13:40	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2400572-011	--------	--------	--------	--------
					Result	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	<0.0010	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000020	mg/L	<0.000020	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L	<0.010	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000050	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	<0.050	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	<0.0010	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	<0.0050	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L	<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	<0.050	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	<0.050	----	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	<0.050	----	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	<0.50	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)									
				Client sample ID	TB	----	----	----	----
				Client sampling date / time	03-Jun-2024 13:40	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2400572-011	--------	--------	--------	--------
					Result	----	----	----	----
Dissolved Metals									
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L	<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	<0.0010	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/VA	0.00030	mg/L	<0.00030	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----

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	: **YL2400572**	Page	: 1 of 27
Amendment	: **1**		
Client	: **WSP Canada Inc.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Saad Pasha	Account Manager	: Oliver Gregg
Address	: 2800, 700 - 2nd Street SW Calgary AB Canada T2P 2W2	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 403.512.6580	Telephone	: 1 867 445 7143
Project	: CA0034908.5454-1000.1002	Date Samples Received	: 04-Jun-2024 09:57
PO	: 2024CA215454/1000.1001	Issue Date	: 24-Jun-2024 10:21
C-O-C number	: ----		
Sampler	: Emily Finstad		
Site	:		
Quote number	: YL24-GOLD100-002		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Physical Tests	QC-MRG2-1480527 001	----	Alkalinity, total (as CaCO3)	----	E290	2.0 mg/L [B]	1.5 mg/L	Blank result exceeds permitted value

Result Qualifiers

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

Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-11	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-12	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-13	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-4	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-5	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-6	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-6-D	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SNP 5-8	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SNP 5-8-FB	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SNP 5-9	E298	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (lab preserved)										
TB	E298	03-Jun-2024	07-Jun-2024	3 days	3 days	✓	08-Jun-2024	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-4	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-5	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-6	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-6-D	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-8-FB	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 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 : Bromide in Water by IC (Low Level)										
HDPE SNP 5-11	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SNP 5-12	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SNP 5-13	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SNP 5-8	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SNP 5-9	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE TB	E235.Br-L	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-4	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-5	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-6	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 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 : Chloride in Water by IC										
HDPE										
SNP 5-6-D	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-8-FB	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-11	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-12	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-13	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-8	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-9	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
TB	E235.Cl	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-4	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-5	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-6	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-6-D	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-8-FB	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-11	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-12	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-13	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-8	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SNP 5-9	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE TB	E235.F	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-11	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-12	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-13	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-4	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-5	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-6	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-6-D	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-8	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-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 SNP 5-8-FB	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SNP 5-9	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE TB	E235.NO3-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	07-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-11	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-12	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-13	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-4	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-5	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-6	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-6-D	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-8	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-8-FB	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-9	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	06-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
TB	E235.NO2-L	03-Jun-2024	06-Jun-2024	3 days	3 days	✓	07-Jun-2024	3 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-4	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-5	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-6	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-6-D	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 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 : Sulfate in Water by IC										
HDPE										
SNP 5-8-FB	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-11	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-12	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-13	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-8	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SNP 5-9	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	06-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
TB	E235.SO4	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SNP 5-11	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SNP 5-12	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-13	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-4	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-5	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-6	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-6-D	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-8	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-8-FB	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-9	E372-U	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	13-Jun-2024	28 days	10 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (lab preserved) TB	E372-U	03-Jun-2024	07-Jun-2024	3 days	3 days	✓	08-Jun-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
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-4	E421	03-Jun-2024	09-Jun-2024	180 days	6 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-6	E421	03-Jun-2024	09-Jun-2024	180 days	6 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-6-D	E421	03-Jun-2024	09-Jun-2024	180 days	6 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-8-FB	E421	03-Jun-2024	09-Jun-2024	180 days	6 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) TB	E421	03-Jun-2024	09-Jun-2024	180 days	6 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-11	E421	03-Jun-2024	10-Jun-2024	180 days	7 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-12	E421	03-Jun-2024	10-Jun-2024	180 days	7 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-13	E421	03-Jun-2024	10-Jun-2024	180 days	7 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-5	E421	03-Jun-2024	10-Jun-2024	180 days	7 days	✓	11-Jun-2024	180 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-8	E421	03-Jun-2024	10-Jun-2024	180 days	7 days	✓	11-Jun-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) SNP 5-9	E421	03-Jun-2024	10-Jun-2024	180 days	7 days	✓	11-Jun-2024	180 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) SNP 5-4	E358-L	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) SNP 5-5	E358-L	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) SNP 5-8-FB	E358-L	03-Jun-2024	11-Jun-2024	28 days	8 days	✓	11-Jun-2024	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved) TB	E358-L	03-Jun-2024	07-Jun-2024	3 days	3 days	✓	07-Jun-2024	28 days	0 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-11	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-12	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-13	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-4	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-5	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-6	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-6-D	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-8	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-8-FB	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-9	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	07-Jun-2024	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE TB	E290	03-Jun-2024	06-Jun-2024	14 days	3 days	✓	10-Jun-2024	14 days	7 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-11	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE SNP 5-12	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-13	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-4	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-5	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-6	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-6-D	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-8	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-8-FB	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-9	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	07-Jun-2024	28 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE TB	E100	03-Jun-2024	06-Jun-2024	28 days	3 days	✓	10-Jun-2024	28 days	7 days	✓
Physical Tests : pH by Meter										
HDPE SNP 5-4	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	78 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	94 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-5	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	78 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	94 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-8-FB	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	78 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	94 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-6	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	79 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	96 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-6-D	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	79 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	96 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-11	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	80 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	97 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-12	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	80 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	97 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-13	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	80 hrs	× EHTR-FM	07-Jun-2024	0.25 hrs	97 hrs	× EHTR-FM

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE SNP 5-8	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	80 hrs	✗ EHTR-FM	07-Jun-2024	0.25 hrs	97 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-9	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	80 hrs	✗ EHTR-FM	07-Jun-2024	0.25 hrs	97 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE TB	E108	03-Jun-2024	06-Jun-2024	0.25 hrs	81 hrs	✗ EHTR-FM	10-Jun-2024	0.25 hrs	176 hrs	✗ EHTR-FM
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE SNP 5-11	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE SNP 5-12	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE SNP 5-13	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE SNP 5-4	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE SNP 5-5	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE SNP 5-6	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
SNP 5-6-D	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
SNP 5-8	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
SNP 5-8-FB	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
SNP 5-9	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
TB	E160-L	03-Jun-2024	----	----	----		10-Jun-2024	7 days	7 days	✓
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Glass vial total (hydrochloric acid)										
SNP 5-4	E508-L	03-Jun-2024	11-Jun-2024	0 hrs	190 hrs	✗ UCP	11-Jun-2024	0 hrs	190 hrs	✗ UCP
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Glass vial total (hydrochloric acid)										
SNP 5-5	E508-L	03-Jun-2024	11-Jun-2024	0 hrs	190 hrs	✗ UCP	11-Jun-2024	0 hrs	190 hrs	✗ UCP
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Glass vial total (hydrochloric acid)										
SNP 5-8-FB	E508-L	03-Jun-2024	11-Jun-2024	0 hrs	190 hrs	✗ UCP	11-Jun-2024	0 hrs	190 hrs	✗ UCP
Total Metals : Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)										
Glass vial - total (lab preserved)										
TB	E508-L	03-Jun-2024	11-Jun-2024	0 hrs	190 hrs	✗ UCP	11-Jun-2024	0 hrs	190 hrs	✗ UCP

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-11	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-12	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-13	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-4	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-5	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-6	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-6-D	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-8	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) SNP 5-8-FB	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-9	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
TB	E420	03-Jun-2024	07-Jun-2024	180 days	4 days	✓	09-Jun-2024	180 days	6 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).

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1480385	2	40	5.0	5.0	✓
Ammonia by Fluorescence	E298	1480663	2	12	16.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1480389	2	23	8.7	5.0	✓
Chloride in Water by IC	E235.Cl	1480388	2	40	5.0	5.0	✓
Conductivity in Water	E100	1480386	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1481562	2	29	6.9	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1480661	2	5	40.0	5.0	✓
Fluoride in Water by IC	E235.F	1480387	2	40	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1480390	2	40	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1480391	2	40	5.0	5.0	✓
pH by Meter	E108	1480384	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1480392	2	40	5.0	5.0	✓
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	1487332	0	4	0.0	5.0	✗
Total Metals in Water by CRC ICPMS	E420	1480771	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1480662	2	12	16.6	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1480385	2	40	5.0	5.0	✓
Ammonia by Fluorescence	E298	1480663	2	12	16.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1480389	2	23	8.7	5.0	✓
Chloride in Water by IC	E235.Cl	1480388	2	40	5.0	5.0	✓
Conductivity in Water	E100	1480386	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1481562	2	29	6.9	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1480661	2	5	40.0	5.0	✓
Fluoride in Water by IC	E235.F	1480387	2	40	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1480390	2	40	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1480391	2	40	5.0	5.0	✓
pH by Meter	E108	1480384	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1480392	2	40	5.0	5.0	✓
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	1487332	1	4	25.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1480771	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1480662	2	12	16.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1485354	1	20	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1480385	2	40	5.0	5.0	✓
Ammonia by Fluorescence	E298	1480663	2	12	16.6	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Method Blanks (MB) - Continued							
Bromide in Water by IC (Low Level)	E235.Br-L	1480389	2	23	8.7	5.0	✓
Chloride in Water by IC	E235.Cl	1480388	2	40	5.0	5.0	✓
Conductivity in Water	E100	1480386	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1481562	3	29	10.3	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1480661	2	5	40.0	5.0	✓
Fluoride in Water by IC	E235.F	1480387	2	40	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1480390	2	40	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1480391	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1480392	2	40	5.0	5.0	✓
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	1487332	1	4	25.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1480771	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1480662	2	12	16.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1485354	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1480663	1	12	8.3	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1480389	2	23	8.7	5.0	✓
Chloride in Water by IC	E235.Cl	1480388	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1481562	2	29	6.9	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1480661	1	5	20.0	5.0	✓
Fluoride in Water by IC	E235.F	1480387	2	40	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1480390	2	40	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1480391	2	40	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1480392	2	40	5.0	5.0	✓
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L	1487332	0	4	0.0	5.0	✗
Total Metals in Water by CRC ICPMS	E420	1480771	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1480662	1	12	8.3	5.0	✓

Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Vancouver	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry (Low Level)	E160-L ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - 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 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 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Vancouver	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAFS (Low Level, LOR = 0.5 ppt)	E508-L 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 CVAFS.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	“Hardness (as CaCO3), dissolved” is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. “Total Hardness” refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
TDS in Water (Calculation)	EC103 ALS Environmental - Vancouver	Water	APHA 1030E (mod)	Total Dissolved Solids is calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Dissolved species are used where available. Minor ions are included where data is present.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.

QUALITY CONTROL REPORT

Work Order	: **YL2400572**	Page	: 1 of 23
Amendment	: **1**		
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Saad Pasha	Account Manager	: Oliver Gregg
Address	: 2800, 700 - 2nd Street SW Calgary AB Canada T2P 2W2	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 403.512.6580	Telephone	: 1 867 445 7143
Project	: CA0034908.5454-1000.1002	Date Samples Received	: 04-Jun-2024 09:57
PO	: 2024CA215454/1000.1001	Date Analysis Commenced	: 06-Jun-2024
C-O-C number	: ----	Issue Date	: 24-Jun-2024 10:16
Sampler	: Emily Finstad		
Site	:		
Quote number	: YL24-GOLD100-002		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Angelo Salandanan	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
Brieanna Allen	Production/Validation Manager	Vancouver Inorganics, Burnaby, British Columbia
Dan Gebert	Laboratory Analyst	Vancouver Metals, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Vancouver Inorganics, Burnaby, British Columbia

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1480384)											
VA24B3059-003	Anonymous	pH	----	E108	0.10	pH units	7.82	7.85	0.383%	4%	----
Physical Tests (QC Lot: 1480385)											
VA24B3059-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	36.3	34.6	4.80%	20%	----
Physical Tests (QC Lot: 1480386)											
VA24B3059-003	Anonymous	Conductivity	----	E100	2.0	µS/cm	71.1	69.0	3.00%	10%	----
Physical Tests (QC Lot: 1480526)											
VA24B3010-003	Anonymous	pH	----	E108	0.10	pH units	8.42	8.43	0.119%	4%	----
Physical Tests (QC Lot: 1480527)											
VA24B3010-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	185	186	0.754%	20%	----
Physical Tests (QC Lot: 1480528)											
VA24B3010-003	Anonymous	Conductivity	----	E100	2.0	µS/cm	750	745	0.669%	10%	----
Anions and Nutrients (QC Lot: 1480387)											
VA24B3059-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.027	<0.020	0.007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480388)											
VA24B3059-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480389)											
VA24B3059-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480390)											
VA24B3059-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0215	0.0216	0.00008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480391)											
VA24B3059-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480392)											
VA24B3059-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	6.46	6.42	0.558%	20%	----
Anions and Nutrients (QC Lot: 1480529)											
VA24B3010-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.064	0.064	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480530)											
VA24B3010-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	0.73	0.72	0.007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480531)											
VA24B3010-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480532)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 1480532) - continued											
VA24B3010-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480533)											
VA24B3010-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	33.0	32.9	0.276%	20%	----
Anions and Nutrients (QC Lot: 1480534)											
VA24B3114-001	Anonymous	Bromide	24959-67-9	E235.Br-L	2.50	mg/L	<2.50	<2.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480662)											
YL2400572-011	TB	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1480663)											
YL2400572-011	TB	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1486558)											
VA24B3358-012	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0046	0.0044	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1486559)											
VA24B3358-012	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1480661)											
YL2400572-011	TB	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1486557)											
YL2400572-001	SNP 5-4	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	21.5	20.3	5.90%	20%	----
Total Metals (QC Lot: 1480771)											
VA24B2961-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	2.41	2.41	0.210%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00389	0.00390	0.170%	20%	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.0149	0.0150	0.548%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0146	0.0147	1.07%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000202	0.000198	1.65%	20%	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	0.000098	0.000100	0.000002	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.000575	0.000557	3.12%	20%	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	8.54	8.62	0.882%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.00505	0.00505	0.0299%	20%	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00171	0.00182	0.00011	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00141	0.00140	0.275%	20%	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00464	0.00459	0.00004	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	1.59	1.61	1.25%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.00232	0.00237	2.10%	20%	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0035	0.0035	0.00002	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1480771) - continued											
VA24B2961-001	Anonymous	Magnesium, total	7439-95-4	E420	0.100	mg/L	0.500	0.504	0.0045	Diff <2x LOR	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.314	0.316	0.576%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000244	0.000248	0.000003	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00302	0.00307	0.00005	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	0.100	mg/L	2.66	2.67	0.327%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.0148	0.0151	2.31%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	4.92	4.90	0.361%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	0.000032	0.000030	0.000002	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	0.176	0.176	0.00009	Diff <2x LOR	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0132	0.0132	0.242%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	3.93	4.01	0.09	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000242	0.000251	3.28%	20%	----
		Thorium, total	7440-29-1	E420	0.00030	mg/L	<0.00030	<0.00030	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	0.0314	0.0318	1.33%	20%	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000094	0.000098	0.000005	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00317	0.00317	0.000003	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0984	0.0981	0.333%	20%	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1481562)											
YL2400574-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00020	mg/L	0.00708	0.00704	0.487%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00020	mg/L	0.00621	0.00615	0.956%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00020	mg/L	0.0264	0.0266	0.901%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.020	mg/L	0.278	0.280	0.733%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000100	mg/L	0.00122	0.00119	2.05%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.100	mg/L	615	608	1.05%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000020	mg/L	0.000275	0.000260	5.39%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1481562) - continued											
YL2400574-001	Anonymous	Chromium, dissolved	7440-47-3	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00020	mg/L	0.0266	0.0264	0.646%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00040	mg/L	0.00734	0.00722	1.67%	20%	----
		Iron, dissolved	7439-89-6	E421	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0020	mg/L	0.0414	0.0412	0.531%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0100	mg/L	125	121	3.02%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00020	mg/L	0.442	0.435	1.62%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000100	mg/L	0.00263	0.00262	0.482%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00100	mg/L	0.0439	0.0437	0.476%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	10.8	10.7	0.885%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00040	mg/L	0.0122	0.0120	2.17%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000100	mg/L	0.000225	0.000217	0.000008	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.100	mg/L	1.07	1.04	2.67%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.100	mg/L	309	306	1.13%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00040	mg/L	6.58	6.50	1.18%	20%	----
		Sulfur, dissolved	7704-34-9	E421	1.00	mg/L	308	307	0.349%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00060	mg/L	<0.00060	<0.00060	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000020	mg/L	0.00288	0.00283	1.82%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0020	mg/L	0.124	0.122	1.28%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1483032)											
VA24B3253-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0020	mg/L	1.61	1.57	2.42%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00020	mg/L	0.00511	0.00518	1.23%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00020	mg/L	0.00534	0.00541	1.47%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00020	mg/L	0.0649	0.0647	0.342%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1483032) - continued											
VA24B3253-001	Anonymous	Beryllium, dissolved	7440-41-7	E421	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.020	mg/L	0.110	0.112	0.002	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000100	mg/L	<0.0000100	<0.0000100	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.100	mg/L	375	374	0.265%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000020	mg/L	0.00242	0.00235	3.02%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00100	mg/L	0.0102	0.0103	0.388%	20%	----
		Cobalt, dissolved	7440-48-4	E421	0.00020	mg/L	0.00143	0.00142	0.000008	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00040	mg/L	0.00883	0.00864	2.19%	20%	----
		Iron, dissolved	7439-89-6	E421	0.020	mg/L	0.025	0.024	0.0007	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0020	mg/L	0.0049	0.0049	0.00001	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0100	mg/L	4.23	4.04	4.45%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00020	mg/L	0.00961	0.00946	1.57%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000100	mg/L	0.0333	0.0332	0.202%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00100	mg/L	0.00100	0.00112	0.00012	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	43.4	42.2	2.70%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00040	mg/L	0.0695	0.0679	2.26%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000100	mg/L	0.00296	0.00308	3.83%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.100	mg/L	1.36	1.35	1.26%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.100	mg/L	258	250	3.06%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00040	mg/L	3.49	3.51	0.538%	20%	----
		Sulfur, dissolved	7704-34-9	E421	1.00	mg/L	450	446	0.882%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00060	mg/L	<0.00060	<0.00060	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00020	mg/L	0.00386	0.00385	0.474%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000020	mg/L	0.000043	0.000046	0.000002	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421	0.00100	mg/L	0.0172	0.0171	0.536%	20%	----
		Zinc, dissolved	7440-66-6	E421	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1483032) - continued											
VA24B3253-001	Anonymous	Zirconium, dissolved	7440-67-7	E421	0.00040	mg/L	<0.00040	<0.00040	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: 1480385)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1480386)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 1480527)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	# 2.0	B
Physical Tests (QCLot: 1480528)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 1485354)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 1480387)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1480388)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1480389)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1480390)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1480391)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1480392)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1480529)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1480530)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1480531)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1480532)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1480533)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1480534)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 1480534) - continued						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1480662)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1480663)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1486558)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1486559)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1480661)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 1486557)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 1480771)						
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	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1480771) - continued						
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 1487332)						
Mercury, total	7439-97-6	E508-L	0.5	ng/L	<0.50	----
Dissolved Metals (QCLot: 1481562)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	MBRR
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1481562) - continued						
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1483032)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1483032) - continued						
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----

Qualifiers

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MBRR	Initial MB for this submission had positive results for flagged analyte (data not shown). Low level samples were repeated with new QC (2nd MB results shown). High level results (>5x initial MB level) and non-detect results were reported and are defensible

Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1480384)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests (QCLot: 1480385)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1480386)									
Conductivity	----	E100	1	µS/cm	147 µS/cm	104	90.0	110	----
Physical Tests (QCLot: 1480526)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1480527)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1480528)									
Conductivity	----	E100	1	µS/cm	147 µS/cm	101	90.0	110	----
Physical Tests (QCLot: 1485354)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	96.0	85.0	115	----
Anions and Nutrients (QCLot: 1480387)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.2	90.0	110	----
Anions and Nutrients (QCLot: 1480388)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	97.4	90.0	110	----
Anions and Nutrients (QCLot: 1480389)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	99.1	85.0	115	----
Anions and Nutrients (QCLot: 1480390)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 1480391)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	96.0	90.0	110	----
Anions and Nutrients (QCLot: 1480392)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	97.2	90.0	110	----
Anions and Nutrients (QCLot: 1480529)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.9	90.0	110	----
Anions and Nutrients (QCLot: 1480530)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 1480531)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	97.9	90.0	110	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1480532)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.5	90.0	110	----
Anions and Nutrients (QCLot: 1480533)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	99.5	90.0	110	----
Anions and Nutrients (QCLot: 1480534)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	97.2	85.0	115	----
Anions and Nutrients (QCLot: 1480662)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.4	80.0	120	----
Anions and Nutrients (QCLot: 1480663)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	101	85.0	115	----
Anions and Nutrients (QCLot: 1486558)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	97.0	80.0	120	----
Anions and Nutrients (QCLot: 1486559)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.0	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1480661)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	92.6	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1486557)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	102	80.0	120	----
Total Metals (QCLot: 1480771)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	99.7	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.6	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	98.2	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	99.0	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.2	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	97.8	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	94.5	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	104	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	102	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1480771) - continued									
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	99.2	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.2	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	98.3	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	99.2	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	94.7	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	93.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	109	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	91.4	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	104	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	96.3	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	93.4	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	99.9	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	104	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	99.2	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	99.9	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	103	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	98.7	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	96.0	80.0	120	----
Total Metals (QCLot: 1487332)									
Mercury, total	7439-97-6	E508-L	0.5	ng/L	5 ng/L	92.0	80.0	120	----
Dissolved Metals (QCLot: 1481562)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	97.8	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	100	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	97.8	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	98.0	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	93.5	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	96.7	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	99.1	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1481562) - continued									
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	96.7	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.3	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	95.5	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	93.3	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	93.4	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	98.7	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	96.9	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	99.2	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	97.1	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	103	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	97.3	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	93.9	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	95.7	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	102	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	89.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	107	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	95.3	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	95.6	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	94.4	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	93.9	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	91.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	94.8	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	97.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	92.3	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	95.4	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	98.0	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	101	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	92.9	80.0	120	----
Dissolved Metals (QCLot: 1483032)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	101	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	109	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	98.3	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1483032) - continued									
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	98.7	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	100	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	101	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	98.9	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	99.8	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	100	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	99.0	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	99.7	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	105	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	100	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	103	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	94.8	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	107	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	101	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	100	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	98.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	98.0	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.0	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	105	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	100	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: 1480387)										
VA24B3059-002	Anonymous	Fluoride	16984-48-8	E235.F	0.990 mg/L	1 mg/L	99.0	75.0	125	----
Anions and Nutrients (QCLot: 1480388)										
VA24B3059-002	Anonymous	Chloride	16887-00-6	E235.Cl	97.3 mg/L	100 mg/L	97.3	75.0	125	----
Anions and Nutrients (QCLot: 1480389)										
VA24B3059-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.513 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1480390)										
VA24B3059-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.44 mg/L	2.5 mg/L	97.5	75.0	125	----
Anions and Nutrients (QCLot: 1480391)										
VA24B3059-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.490 mg/L	0.5 mg/L	97.9	75.0	125	----
Anions and Nutrients (QCLot: 1480392)										
VA24B3059-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.3 mg/L	100 mg/L	96.3	75.0	125	----
Anions and Nutrients (QCLot: 1480529)										
VA24B3010-002	Anonymous	Fluoride	16984-48-8	E235.F	4.89 mg/L	5 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 1480530)										
VA24B3010-002	Anonymous	Chloride	16887-00-6	E235.Cl	481 mg/L	500 mg/L	96.3	75.0	125	----
Anions and Nutrients (QCLot: 1480531)										
VA24B3010-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	12.0 mg/L	12.5 mg/L	96.2	75.0	125	----
Anions and Nutrients (QCLot: 1480532)										
VA24B3010-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.43 mg/L	2.5 mg/L	97.3	75.0	125	----
Anions and Nutrients (QCLot: 1480533)										
VA24B3010-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	479 mg/L	500 mg/L	95.8	75.0	125	----
Anions and Nutrients (QCLot: 1480534)										
VA24B3114-002	Anonymous	Bromide	24959-67-9	E235.Br-L	24.2 mg/L	25 mg/L	96.8	75.0	125	----
Anions and Nutrients (QCLot: 1486558)										
YL2400572-001	SNP 5-4	Phosphorus, total	7723-14-0	E372-U	0.0480 mg/L	0.05 mg/L	95.9	70.0	130	----
Anions and Nutrients (QCLot: 1486559)										
YL2400572-001	SNP 5-4	Ammonia, total (as N)	7664-41-7	E298	0.0948 mg/L	0.1 mg/L	94.8	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1486557)										
YL2400572-002	SNP 5-5	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1480771)										
VA24B2961-002	Anonymous	Aluminum, total	7429-90-5	E420	ND mg/L	----	ND	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0186 mg/L	0.02 mg/L	93.2	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Barium, total	7440-39-3	E420	0.0196 mg/L	0.02 mg/L	97.9	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0390 mg/L	0.04 mg/L	97.6	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00983 mg/L	0.01 mg/L	98.3	70.0	130	----
		Boron, total	7440-42-8	E420	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00390 mg/L	0.004 mg/L	97.6	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00945 mg/L	0.01 mg/L	94.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0389 mg/L	0.04 mg/L	97.2	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Copper, total	7440-50-8	E420	0.0188 mg/L	0.02 mg/L	93.9	70.0	130	----
		Iron, total	7439-89-6	E420	1.86 mg/L	2 mg/L	93.2	70.0	130	----
		Lead, total	7439-92-1	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0944 mg/L	0.1 mg/L	94.4	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.925 mg/L	1 mg/L	92.5	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	----	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0192 mg/L	0.02 mg/L	95.9	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0388 mg/L	0.04 mg/L	97.0	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.46 mg/L	10 mg/L	94.6	70.0	130	----
		Potassium, total	7440-09-7	E420	3.76 mg/L	4 mg/L	94.1	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0192 mg/L	0.02 mg/L	96.2	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0373 mg/L	0.04 mg/L	93.2	70.0	130	----
		Silicon, total	7440-21-3	E420	9.98 mg/L	10 mg/L	99.8	70.0	130	----
		Silver, total	7440-22-4	E420	0.00374 mg/L	0.004 mg/L	93.6	70.0	130	----
		Sodium, total	7440-23-5	E420	2.00 mg/L	2 mg/L	99.9	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0186 mg/L	0.02 mg/L	92.8	70.0	130	----
		Sulfur, total	7704-34-9	E420	18.6 mg/L	20 mg/L	93.2	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0376 mg/L	0.04 mg/L	94.0	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00386 mg/L	0.004 mg/L	96.6	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Tin, total	7440-31-5	E420	0.0197 mg/L	0.02 mg/L	98.4	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0402 mg/L	0.04 mg/L	101	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0196 mg/L	0.02 mg/L	97.9	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00392 mg/L	0.004 mg/L	98.1	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0952 mg/L	0.1 mg/L	95.2	70.0	130	----
		Zinc, total	7440-66-6	E420	0.388 mg/L	0.4 mg/L	96.9	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0376 mg/L	0.04 mg/L	93.9	70.0	130	----
Dissolved Metals (QCLot: 1481562)										
YL2400574-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.371 mg/L	0.4 mg/L	92.6	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0361 mg/L	0.04 mg/L	90.2	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0389 mg/L	0.04 mg/L	97.4	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0337 mg/L	0.04 mg/L	84.3	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1481562) - continued										
YL2400574-002	Anonymous	Beryllium, dissolved	7440-41-7	E421	0.0740 mg/L	0.08 mg/L	92.6	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0157 mg/L	0.02 mg/L	78.4	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00694 mg/L	0.008 mg/L	86.7	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0725 mg/L	0.08 mg/L	90.6	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0336 mg/L	0.04 mg/L	84.1	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0312 mg/L	0.04 mg/L	77.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	3.47 mg/L	4 mg/L	86.7	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0324 mg/L	0.04 mg/L	80.9	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.181 mg/L	0.2 mg/L	90.3	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0388 mg/L	0.04 mg/L	97.1	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0641 mg/L	0.08 mg/L	80.1	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	19.5 mg/L	20 mg/L	97.6	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0354 mg/L	0.04 mg/L	88.6	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0728 mg/L	0.08 mg/L	90.9	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	18.6 mg/L	20 mg/L	93.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00686 mg/L	0.008 mg/L	85.8	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0723 mg/L	0.08 mg/L	90.4	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00630 mg/L	0.008 mg/L	78.8	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0345 mg/L	0.04 mg/L	86.2	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0363 mg/L	0.04 mg/L	90.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0773 mg/L	0.08 mg/L	96.6	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0345 mg/L	0.04 mg/L	86.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00714 mg/L	0.008 mg/L	89.2	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.188 mg/L	0.2 mg/L	93.8	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.669 mg/L	0.8 mg/L	83.7	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0761 mg/L	0.08 mg/L	95.1	70.0	130	----
Dissolved Metals (QCLot: 1483032)										
VA24B3256-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.185 mg/L	0.2 mg/L	92.7	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0198 mg/L	0.02 mg/L	99.0	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0374 mg/L	0.04 mg/L	93.4	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00866 mg/L	0.01 mg/L	86.6	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.096 mg/L	0.1 mg/L	96.1	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00392 mg/L	0.004 mg/L	97.9	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1483032) - continued										
VA24B3256-001	Anonymous	Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00966 mg/L	0.01 mg/L	96.6	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0386 mg/L	0.04 mg/L	96.4	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0183 mg/L	0.02 mg/L	91.7	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.88 mg/L	2 mg/L	94.0	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0182 mg/L	0.02 mg/L	91.1	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0931 mg/L	0.1 mg/L	93.1	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0180 mg/L	0.02 mg/L	89.8	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0201 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0376 mg/L	0.04 mg/L	94.0	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	9.82 mg/L	10 mg/L	98.2	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.18 mg/L	10 mg/L	91.8	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00374 mg/L	0.004 mg/L	93.5	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00356 mg/L	0.004 mg/L	89.0	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0160 mg/L	0.02 mg/L	79.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0193 mg/L	0.02 mg/L	96.7	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0390 mg/L	0.04 mg/L	97.6	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0188 mg/L	0.02 mg/L	94.0	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00371 mg/L	0.004 mg/L	92.8	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0970 mg/L	0.1 mg/L	97.0	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.396 mg/L	0.4 mg/L	99.0	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0399 mg/L	0.04 mg/L	99.8	70.0	130	----

APPENDIX D

Quality Assurance and Quality Control

QUALITY ASSURANCE/QUALITY CONTROL

1.0 INTRODUCTION

Key findings of the quality assurance and quality control (QA/QC) review for water quality are summarized below. For water quality, the field QC program included collecting one duplicate sample, one field blank, and one travel blank. The assessment of QC sample results was completed using analytical data provided by ALS Canada Ltd. (ALS). For toxicity, QA/QC was completed for the sample collected at SNP 5-6 using the test report provided by Nautilus Environmental Inc. (Nautilus).

2.0 WATER QUALITY

2.1 Parameter List

All parameters required by the Type A Water Licence W2021L2-0004 (WLWB 2023) were analyzed, as requested.

2.2 Detection Limits

Standard ALS detection limits (DLs) were used when analyzing samples collected during the June 2024 field program.

2.3 Hold Times

Hold times between sample collection and analysis for each parameter are specified by ALS and should be met to obtain reliable data. For this program, the 15-minute hold time for pH (APHA 2012) was not met because the samples cannot be processed by ALS Canada Ltd. (ALS) within this time limit. The hold time for total mercury was not met because the containers provided by ALS for sample collection were not cleaned by the laboratory to the required level to provide reliable detection limits for low-level mercury). As a result of this error, a maximum hold time of zero was applied instead of the standard 190 hours. ALS analyzed this parameter 8 days after sample collection at SNP 5-4, SNP 5-5, the field blank, and the travel blank. The hold times were met for all other parameters.

2.4 Units

All reported units were correct, and no issues were identified during the review of electronic data against the final certificate of analysis provided by ALS.

2.5 Qualifiers

The ALS internal data quality report indicated that the DL was adjusted due to sample matrix effects for total thorium and total zirconium in the sample collected at SNP 5-8 and for total titanium and total zirconium in the sample collected at SNP 5-9.

2.6 Total versus Dissolved Metal Concentrations

Dissolved metal concentrations in water samples were compared to corresponding total metal concentrations. Dissolved and total concentrations were considered notable if the dissolved concentration was more than 20% higher than the total concentration. Dissolved concentrations were within 20% of total concentrations for samples collected in June 2024.

2.7 Duplicate Sample Results

A duplicate water sample was collected from SNP 5-6 on 3 June 2024 to assess variability during sample collection, handling, and analysis.

The relative percent difference (RPD) was used to determine the variability between the primary and duplicate sample and was calculated using the following formula:

$$RPD = ABS\left(\frac{(field\ sample\ concentration - duplicate\ sample\ concentration)}{average\ concentration}\right) x\ 100$$

where ABS = absolute value.

Values reported below the DLs were included in the calculations at half the applicable DL. The RPD was not calculated in cases where the concentration in both samples was less than five times the DL (i.e., within the range of analytical uncertainty).

The variability in parameter concentrations between primary and duplicate samples was considered notable if:

- the parameter concentration in at least one sample was greater than five times the DL
- the RPD was greater than 20%

These criteria are consistent with those used by ALS for internal QC procedures (Dang 2015, pers. comm.) and account for potential analytical uncertainty when concentrations approach DLs (Weiner 2000). Variability between the field and duplicate samples was rated as follows:

- **low** if less than 10% of the parameters included in the duplicate analysis were notably different from one another
- **moderate** if 10 to 30% of the parameters included in the duplicate analysis were notably different from one another
- **high** if more than 30% of the parameters included in the duplicate or split sample analysis were notably different from one another

The results of the comparison between the SNP 5-6 primary and duplicate samples are summarized in Table D-1. The pH measurements and concentrations of total phosphorus, total aluminum, total iron, total lead, total titanium, and dissolved zinc in the duplicate samples collected at SNP 5-6 had an RPD greater than 20%. Data re-checks were requested from the laboratory and total phosphorus results were updated while all the other results were confirmed. Variability in metal concentrations between the sample and its duplicate may be due to low water levels at the site during collection. Overall, the variability between the primary and duplicate sample was rated as low; less than 10% of parameters included in the analysis were notably different from one another.

Table D-1: Duplicate Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	SNP 5-6		Relative Percent Difference
			Sample	Duplicate	
Conventional Parameters					
pH[(a)]	unitless	0.1	7.5	7.6	**39%**
Specific conductivity	µS/cm	2	294	298	1%
Hardness, as $CaCO_3$	mg/L	0.5	129	127	2%
Total suspended solids	mg/L	2	5.9	4.9	2%
Total dissolved solids (calculated)	mg/L	1	175	174	1%
Major Ions					
Calcium	mg/L	0.05	32	31	1%
Chloride	mg/L	0.5	1.5	1.5	-
Fluoride	mg/L	0.02	0.16	0.16	1%
Magnesium	mg/L	0.005	12	12	3%
Potassium	mg/L	0.05	2.6	2.6	2%
Sodium	mg/L	0.05	3.1	3.1	3%
Sulphate	mg/L	0.3	102	101	1%
Nutrients					
Nitrate	mg-N/L	0.005	<0.005	<0.005	-
Nitrite	mg-N/L	0.001	<0.001	<0.001	-
Total ammonia	mg-N/L	0.005	0.0084	0.010	-
Total phosphorus (colourimetric)	mg-P/L	0.002	0.039	0.018	**72%**
Dissolved phosphorus	mg-P/L	0.05	<0.05	<0.05	-
Total Metals					
Aluminum	mg/L	0.003	0.13	0.10	**25%**
Antimony	mg/L	0.0001	<0.0001	<0.0001	-
Arsenic	mg/L	0.0001	0.00081	0.00068	17%
Barium	mg/L	0.0001	0.014	0.014	3%
Beryllium	mg/L	0.00002	<0.00002	<0.00002	-
Bismuth	mg/L	0.00005	<0.00005	<0.00005	-
Boron	mg/L	0.01	0.030	0.030	-
Cadmium	mg/L	0.000005	0.000015	0.000018	-
Calcium	mg/L	0.05	32	33	3%
Cesium	mg/L	0.00001	0.00076	0.00076	0%
Chromium	mg/L	0.0005	<0.0005	<0.0005	-
Cobalt	mg/L	0.0001	0.00066	0.00067	2%
Copper	mg/L	0.0005	0.0035	0.0032	9%
Iron	mg/L	0.01	1.3	1.0	**21%**
Lead	mg/L	0.00005	0.00037	0.00029	**25%**
Lithium	mg/L	0.001	0.012	0.012	3%
Magnesium	mg/L	0.005	12	12	1%
Manganese	mg/L	0.0001	0.058	0.060	3%

Table D-1: Duplicate Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	SNP 5-6		Relative Percent Difference
			Sample	Duplicate	
Mercury	mg/L	0.0000005	-	-	-
Molybdenum	mg/L	0.00005	<0.00005	<0.00005	-
Nickel	mg/L	0.0005	0.024	0.024	2%
Potassium	mg/L	0.05	2.7	2.7	1%
Rubidium	mg/L	0.0002	0.0067	0.0067	0%
Selenium	mg/L	0.00005	<0.00005	<0.00005	-
Silicon	mg/L	0.1	2.6	2.4	5%
Silver	mg/L	0.00001	<0.00001	<0.00001	-
Sodium	mg/L	0.05	3.1	3.1	0%
Strontium	mg/L	0.0002	0.094	0.094	0%
Sulphur	mg/L	0.5	37	36	2%
Tellurium	mg/L	0.0002	<0.0002	<0.0002	-
Thallium	mg/L	0.00001	<0.00001	<0.00001	-
Thorium	mg/L	0.0001	<0.0001	<0.0001	-
Tin	mg/L	0.0001	<0.0001	<0.0001	-
Titanium	mg/L	0.0003	0.00062	0.00040	**43%**
Tungsten	mg/L	0.0001	<0.0001	<0.0001	-
Uranium	mg/L	0.00001	0.00011	0.000094	12%
Vanadium	mg/L	0.0005	<0.0005	<0.0005	-
Zinc	mg/L	0.003	0.0071	0.0065	-
Zirconium	mg/L	0.0002	<0.0002	<0.0002	-
Dissolved Metals					
Aluminum	mg/L	0.001	0.063	0.060	5%
Antimony	mg/L	0.0001	<0.0001	<0.0001	-
Arsenic	mg/L	0.0001	0.00056	0.00055	2%
Barium	mg/L	0.0001	0.013	0.013	1%
Beryllium	mg/L	0.00002	<0.00002	<0.00002	-
Bismuth	mg/L	0.00005	<0.00005	<0.00005	-
Boron	mg/L	0.01	0.029	0.029	-
Cadmium	mg/L	0.000005	0.000016	0.000014	-
Cesium	mg/L	0.00001	0.00077	0.00077	1%
Chromium	mg/L	0.0005	<0.0005	<0.0005	-
Cobalt	mg/L	0.0001	0.00076	0.00063	19%
Copper	mg/L	0.0002	0.0025	0.0025	2%
Iron	mg/L	0.01	0.51	0.50	3%
Lead	mg/L	0.00005	0.00010	0.00011	-
Lithium	mg/L	0.001	0.012	0.012	0%
Manganese	mg/L	0.0001	0.072	0.068	6%
Molybdenum	mg/L	0.00005	<0.00005	<0.00005	-

Table D-1: Duplicate Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	SNP 5-6		Relative Percent Difference
			Sample	Duplicate	
Nickel	mg/L	0.0005	0.023	0.022	3%
Rubidium	mg/L	0.0002	0.0065	0.0064	1%
Selenium	mg/L	0.00005	0.000054	<0.00005	-
Silicon	mg/L	0.05	2.5	2.5	0%
Silver	mg/L	0.00001	<0.00001	<0.00001	-
Strontium	mg/L	0.0002	0.094	0.094	0%
Sulphur	mg/L	0.5	36	35	2%
Tellurium	mg/L	0.0002	<0.0002	<0.0002	-
Thallium	mg/L	0.00001	<0.00001	<0.00001	-
Thorium	mg/L	0.0001	<0.0001	<0.0001	-
Tin	mg/L	0.0001	<0.0001	<0.0001	-
Titanium	mg/L	0.0003	<0.0003	<0.0003	-
Tungsten	mg/L	0.0001	<0.0001	<0.0001	-
Uranium	mg/L	0.00001	0.000080	0.000077	4%
Vanadium	mg/L	0.0005	<0.0005	<0.0005	-
Zinc	mg/L	0.001	0.0063	0.0050	**23%**
Zirconium	mg/L	0.0003	<0.0003	<0.0003	-

Notes:

Bolded values indicate relative percent difference is greater than 20%.

The relative percent difference is calculated for duplicate samples using the following formula: RPD = (absolute value (difference in concentration between field sample and duplicate sample) / average concentration) x 100%.

a) pH values were converted to hydrogen ion concentrations prior to calculating the relative percent difference.

SNP = Surveillance Network Program; < = less than; $CaCO_3$ = calcium carbonate; mg/L = milligrams per litre; µS/cm = microsiemens per centimetre; % = percent; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorous per litre; - = the relative percent difference was not calculated because the concentration in both samples was less than five times the detection limit.

2.8 Field Blank Results

A field blank was collected at SNP 5-8 during the 3 June 2024 sampling event, with results summarized in Table D-2. Concentrations of all parameters were less than applicable DLs in the field blank, indicating low potential for contamination during sampling.

Table D-2: Field Blank Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	Field Blank (SNP 5-8)
Conventional Parameters			
pH	unitless	0.1	5.4
Specific conductivity	µS/cm	2	<2
Hardness, as $CaCO_3$	mg/L	0.5	<0.5
Total alkalinity, as $CaCO_3$	mg/L	2	<2
Total dissolved solids (calculated)	mg/L	1	<1
Total suspended solids	mg/L	1	<1
Dissolved organic carbon	mg/L	0.5	<0.5
Major Ions			
Calcium	mg/L	0.05	<0.05
Chloride	mg/L	0.5	<0.5
Fluoride	mg/L	0.02	<0.02
Magnesium	mg/L	0.005	<0.005
Potassium	mg/L	0.05	<0.05
Sodium	mg/L	0.05	<0.05
Sulphate	mg/L	0.3	<0.3
Nutrients			
Nitrate as N	mg-N/L	0.005	<0.005
Nitrite as N	mg-N/L	0.001	<0.001
Total ammonia	mg-N/L	0.005	<0.005
Total phosphorus (colourimetric)	mg-P/L	0.002	<0.002
Dissolved phosphorus	mg-P/L	0.05	<0.05
Total Metals			
Aluminum	mg/L	0.003	<0.003
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Calcium	mg/L	0.05	<0.05
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005
Cobalt	mg/L	0.0001	<0.0001

Table D-2: Field Blank Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	Field Blank (SNP 5-8)
Copper	mg/L	0.0005	<0.0005
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Magnesium	mg/L	0.005	<0.005
Manganese	mg/L	0.0001	<0.0001
Mercury	mg/L	0.0000005	<0.0000005
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Potassium	mg/L	0.05	<0.05
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.1	<0.1
Silver	mg/L	0.00001	<0.00001
Sodium	mg/L	0.05	<0.05
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.003	<0.003
Zirconium	mg/L	0.0002	<0.0002
Dissolved Metals			
Aluminum	mg/L	0.001	<0.001
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005
Cobalt	mg/L	0.0001	<0.0001
Copper	mg/L	0.0002	<0.0002

Table D-2: Field Blank Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	Field Blank (SNP 5-8)
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Manganese	mg/L	0.0001	<0.0001
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.05	<0.05
Silver	mg/L	0.00001	<0.00001
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.001	<0.001
Zirconium	mg/L	0.0003	<0.0003

Notes:

< = less than; mg/L = milligrams per litre; µS/cm = microsiemens per centimetre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorous per litre.

2.9 Travel Blank

A travel blank was prepared by the analytical laboratory and accompanied the field team during travel to/from the site and sampling activities. Results for the travel blank sample are summarized in Table D-3. Parameter concentrations were less than five times the applicable DLs, indicating low potential for contamination during sample handling, transport, and storage.

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	Travel Blank
Conventional Parameters			
pH	unitless	0.1	5.5
Specific conductivity	µS/cm	2	<2
Hardness, as $CaCO_3$	mg/L	0.5	<0.5
Total alkalinity, as $CaCO_3$	mg/L	2	<2
Total dissolved solids (calculated)	mg/L	1	<1
Total suspended solids	mg/L	1	<1
Dissolved organic carbon	mg/L	0.5	<0.5
Major Ions			
Calcium	mg/L	0.05	<0.05
Chloride	mg/L	0.5	<0.5
Fluoride	mg/L	0.02	<0.02
Magnesium	mg/L	0.005	<0.005
Potassium	mg/L	0.05	<0.05
Sodium	mg/L	0.05	<0.05
Sulphate	mg/L	0.3	<0.3
Nutrients			
Nitrate	mg-N/L	0.005	<0.005
Nitrite	mg-N/L	0.001	<0.001
Total ammonia	mg-N/L	0.005	<0.005
Total phosphorus (colourimetric)	mg-P/L	0.002	<0.002
Dissolved phosphorus	mg-P/L	0.05	<0.05
Total Metals			
Aluminum	mg/L	0.003	<0.003
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Calcium	mg/L	0.05	<0.05
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	Travel Blank
Cobalt	mg/L	0.0001	<0.0001
Copper	mg/L	0.0005	<0.0005
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Magnesium	mg/L	0.005	<0.005
Manganese	mg/L	0.0001	<0.0001
Mercury	mg/L	0.0000005	<0.0000005
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Potassium	mg/L	0.05	<0.05
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.1	<0.1
Silver	mg/L	0.00001	<0.00001
Sodium	mg/L	0.05	<0.05
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.003	<0.003
Zirconium	mg/L	0.0002	<0.0002
Dissolved Metals			
Aluminum	mg/L	0.001	<0.001
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005
Cobalt	mg/L	0.0001	<0.0001

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, 3 June 2024

Parameter	Unit	Detection Limit	Travel Blank
Copper	mg/L	0.0002	<0.0002
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Manganese	mg/L	0.0001	<0.0001
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.05	<0.05
Silver	mg/L	0.00001	<0.00001
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.001	<0.001
Zirconium	mg/L	0.0003	<0.0003

Notes:

< = less than; mg/L = milligrams per litre; µS/cm = microsiemens per centimetre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorous per litre.

3.0 TOXICITY

The QA/QC results for the acute toxicity testing at SNP 5-6 are as follows:

- Samples were received in good condition.
- Tests were initiated within the recommended holding time, i.e., five days from sample collection for acute tests.
- The acute toxicity samples were within the recommended temperature range of 4°C ± 3°C upon receipt at Nautilus Environmental (5.9°C).
- Health culture criteria were met for all test species.
- Water quality data were within acceptable ranges per standard protocols for each test species.
- Test acceptability for laboratory control performance was met in all tests (Table D-4).

- Results of the Rainbow Trout and *Daphnia magna* reference toxicant tests were within acceptable ranges per the standard protocol.

Table D-4: Test Validity and Quality Assurance Results for SNP 5-6 Acute Toxicity Tests in Laboratory Control Water, June 2024

Test Species	Acceptable Control Criteria	SNP 5-6
		03 June 2024
***Oncorhynchus mykiss* (Rainbow Trout)**		
Mean Control Mortality and Abnormal Behaviour	≤10%	0%
***Daphnia magna* (water flea)**		
Mean Control Mortality and Immobility	≤10%	0%

4.0 SUMMARY

The QA/QC assessment of the data collected during the 3 June 2024 sampling event indicated limited potential for contamination during sampling, handling, or transport. Duplicate sample results indicate that intrastation variability was low (i.e., sampling precision was high). No deviations in the acute toxicity tests for SNP 5-6 were identified. Overall, the data are considered adequate to address the objectives of the program.

5.0 REFERENCES

APHA (American Public Health Association). 2012. Standard Methods for the Examination of Water and Wastewater. 22nd Edition, with updates to 2015. Washington, D.C.

Dang C. 2015. ALS Laboratory Group, Environmental Division. Personal Communication at ALS Vancouver, 11 February 2015.

Weiner ER. 2000. Applications of Environmental Chemistry: A Practical Guide for Environmental Professionals. Lewis Publishers, Boca Raton, FL. 288 pp.

WLWB (Wek'èezhìı Land and Water Board). 2023. Type A Water Licence W2021L2-0004. Issued 13 January 2023.

wsp.com

APPENDIX D: Damoti Lake Surveillance Network Program: Results from September 2024 Monitoring Event

REPORT

DAMOTI LAKE SURVEILLANCE NETWORK PROGRAM

Results from September 2024 Monitoring Event

Submitted to:

STLLR Gold Inc.
181 Bay St., Suite 4260
Toronto, Ontario, Canada M5J 2V1

Submitted by:

WSP Canada Inc.
9, 4905 - 48 Street, Yellowknife, Northwest Territories, X1A 3S3, Canada

+1 867 873 6319

CA0034908.5454-004-R-Rev0-1000

October 28, 2024

Distribution List

1 copy STLLR Gold Inc.

1 copy WSP Canada Inc.

Study Limitations

This report was prepared for the exclusive use of STLLR Gold Inc. (STLLR). The report, which specifically includes tables and figures, is based on data and information collected by WSP Canada Inc. (WSP) at the time of the field investigations. The services performed as described in this report were conducted in a manner consistent with the level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services. Any use of this report by a third party, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. In addition, WSP disclaims responsibility for consequential financial effects on transactions or property values or requirements for follow-up actions and costs.

The content of this report is based on information collected during the investigation, our present understanding of the site conditions, and our professional judgment in light of such information at the time of this report. This report provides a professional opinion, and therefore, no warranty is expressed, implied, or made as to the conclusions, advice, and recommendations offered. This report does not provide a legal opinion regarding compliance with applicable laws. Regarding regulatory compliance issues, it should be noted that regulatory statutes and their interpretation are subject to change. The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, WSP should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

Table of Contents

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

The Damoti Lake Site (Damoti) is located 200 km north of Yellowknife in the Northwest Territories (NT), within the Wek'èezhìı co-management land boundaries. Nighthawk Gold Corp (Nighthawk), a subsidiary of STLLR Gold Inc. (STLLR), in this report referenced as STLLR, currently holds the leases to Damoti. WSP Canada Inc. (WSP) carried out the Surveillance Network Program (SNP) monitoring on behalf of STLLR on September 10, 2024, to meet the requirements of Type A Water Licence W2021L2-0004 (Water Licence; WLWB 2023). This report summarizes the results of the September 2024 SNP field program.

2.0 METHODS

2.1 Sampling Locations

2.1.1 Water Licence Surveillance Network Program

SNP stations were visited to collect in situ measurements and surface water grab samples on September 10, 2024 (Table 1, Figure 1 and Figure 2, Appendix A). Station SNP 5-14 was visited, but water quality samples were not collected for analysis because insufficient water was present (Appendix A, Photograph A-9).

Table 1: Surveillance Network Program Stations Sampled on September 10, 2024

Station[a]	Location[b]	UTM Coordinates[c]	
		Easting (m)	Northing (m)
SNP 5-4	Inflow from wetlands into Lardass Lake	591821	7113637
SNP 5-5	Lardass Lake	591759	7113638
SNP 5-6	Runoff from ore rock pile	591875	7113866
SNP 5-8	Damoti Lake site decline ramp (water pooled at the entrance)	591856	7113981
SNP 5-9	Pool of standing water immediately west of waste rock pile	591896	7113984
SNP 5-11	Pool of standing water next to waste rock/ore stockpiles	591906	7113947
SNP 5-12	Pool of standing water in rock pile area	591907	7113936
SNP 5-13	Pool of standing water in waste rock/ore pile area	591883	7113917
SNP 5-14[d]	Flow pathway between the rock/ore pile area and Lardass Lake	591822	7113757

Notes:

a) SNP 5-7 and SNP 5-10 are not part of the program as per the Water Licence (WLWB 2023). SNP 5-1, SNP 5-2, SNP 5-3, and SNP 5 15 are currently inactive based on on-site conditions. SNP 5-1 and SNP 5-2 were not sampled because mine water was not being discharged from the Adit into the settling pond, SNP 5-3 was not sampled because the water was not being pumped for camp use, and SNP 5-15 was not sampled because no artesian aquifers have been encountered.

b) Photographs of stations visited during the September 2024 field program are provided in Appendix A.

c) UTM coordinates are in NAD83, Zone 11W.

d) Previously referred to as FB-100. The station was visited in September 2024, but the water level was too low for sample collection.

SNP = Surveillance Network Program; UTM = Universal Transverse Mercator; m = metres.

LEGEND

- SNP STATION
- ELEVATION CONTOUR (m)
- FLOW PATH

0 50 100

1:2,500 METRES

REFERENCE(S)

1. BACKGROUND IMAGERY OBTAINED FROM BING MAPS FOR ARCGIS PUBLISHED BY MICROSOFT CORPORATION, REDMOND, WA.
PROJECTION: UTM ZONE 11 DATUM: NAD83

CLIENT

STLR GOLD

PROJECT

DAMOTI LAKE SURVEILLANCE NETWORK PROGRAM (SNP)
SEPTEMBER 2024

TITLE

DAMOTI LAKE SURVEILLANCE NETWORK PROGRAM (SNP) STATIONS

YYYY-MM-DD	2024-10-28
DESIGNED	SP
PREPARED	SP
REVIEWED	MI
APPROVED	KS

PROJECT NO.	PHASE/TASK	REV.	FIGURE
CA0034908.5454	1000.1004	0	1

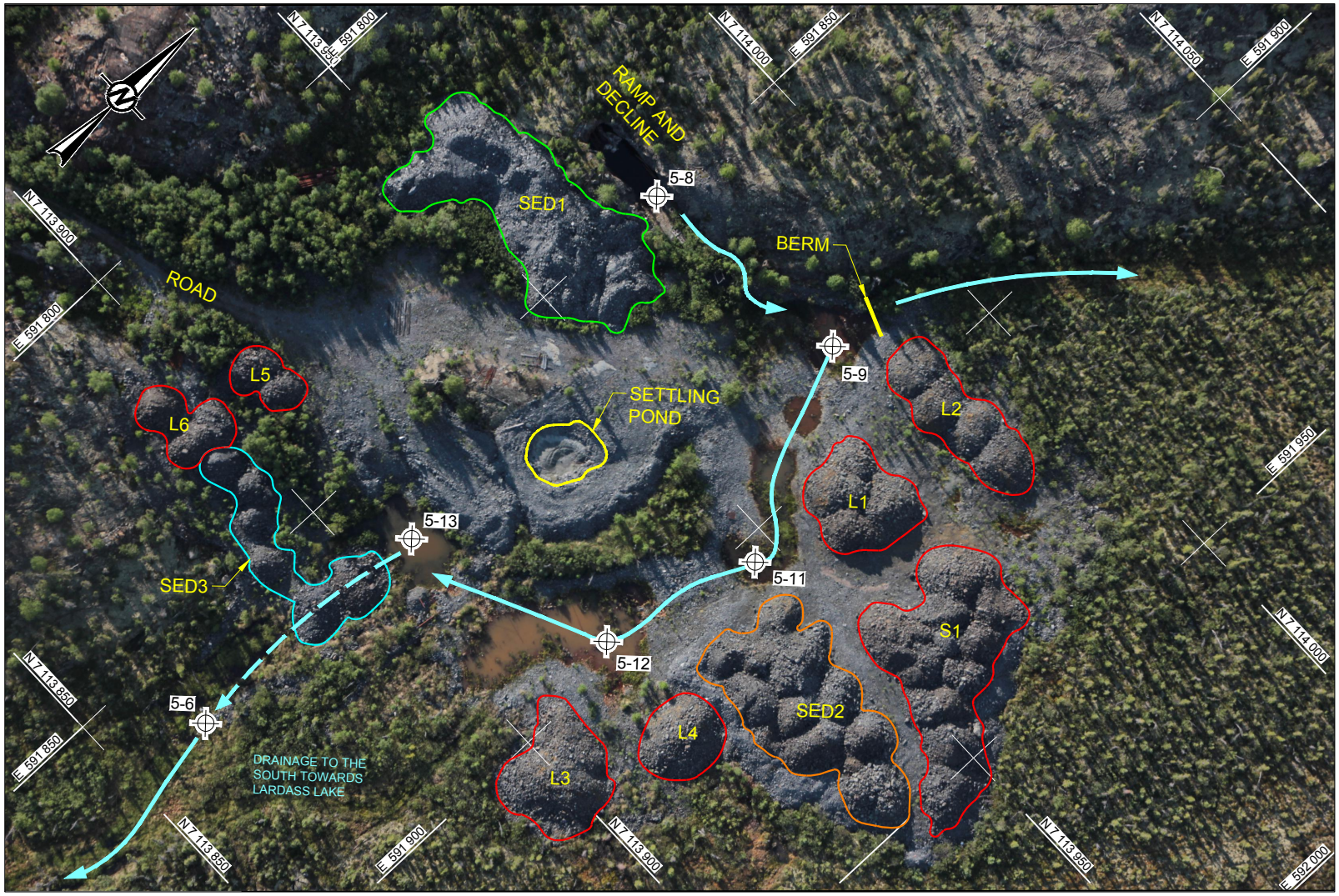
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

25mm

0

PATH: I:\CLIENTS\STLLR GOLD\CA0034908 5454\Mapping\01 General\SNP June 2024\Fig1 CA0034908 5454-1000-1002 SNP Stations RevA.mxd PRINTED ON: 2024-06-26 AT: 1:14:08 PM

Last Edited By: SaadPasha Date: 2024-10-02 Time:12:31:24 PM | Printed By: GurwSingh Date: 2024-06-28 Time:12:55:51 PM
Path: \\golder.gds\complexdata\office\Vancouver\CAD-GIS\Client\Nighthawk Gold Corporation\Damoti Lake\99_PROJECTS\CA0034908.5454\1000\1002\NA\02_PRODUCTION\DWG\ | File Name: CA0034908.5454-1000-1004-02.dwg



PLAN VIEW

SCALE 1:1,000

0 25 50
1:1,000 METRES

LEGEND

- S1, L1, L2, L3, L4, L5, L6
- SED1
- SED2
- SED3
- SNP STATION
- SURFICIAL DRAINAGE PATTERNS
- GENERAL DRAINAGE PATTERNS

DOMINANT WASTE ROCK TYPE IN PILE
S = SULPHIDE BANDED IRON FORMATION
L = LOW SULPHIDE BANDED IRON FORMATION
SED = SEDIMENTARY

NOTES
1. GRID IS DISPLAYED IN NAD83 UTM ZONE 11 COORDINATES.
2. AIRPHOTO SCALE IS APPROXIMATE.

REFERENCE
JUNE 2012 AIRPHOTO TAKEN BY GOLDER ASSOCIATES LTD. FIELD STAFF.

CLIENT: STLR GOLD

CONSULTANT: wsp

YYYY-MM-DD	2024-10-28
DESIGNED	NB/SP
PREPARED	GS
REVIEWED	MI
APPROVED	KS

PROJECT
DAMOTI LAKE SURVEILLANCE NETWORK PROGRAM SEPTEMBER 2024

TITLE
SITE DRAINAGE PATTERNS AT THE DAMOTI LAKE ROCK PILE AREA

PROJECT NO.	PHASE/TASK	REV.	FIGURE
CA0034908.5454	1000/1004	0	02

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
0 25 mm

2.2 Sampling Methods

2.2.1 Field Measurements

Prior to collecting surface water grab samples, ambient wind and weather conditions were recorded along with in-situ measurements of the following water quality parameters:

- water temperature (°C)
- pH
- dissolved oxygen (DO; milligrams per litre [mg/L] and percent saturation [%])
- specific conductivity (micro siemens per centimetre [µS/cm])

An AquaTROLL multiparameter water quality meter was used to collect in situ measurements. A handheld LaMotte pH meter was used to confirm field measurements. Water depth was measured at each sampling location. Flow and volume measurements were not recorded because water was not pumped for camp or industrial use.

2.2.2 Water Quality Sampling

Surface water quality grab samples were collected per WSP's technical procedures for surface water sample collection, using plastic and glass bottles, depending on the parameter or parameter group being sampled. Sample bottles were submerged approximately 0.3 m below the water surface at each SNP station, except for at SNP 5-4, where an extension pole was used to collect water off an old dock.

Water quality samples were preserved in the field and filtered in the WSP laboratory at the end of the day. They were kept cool until delivery to ALS Environmental (ALS) in Yellowknife, NT. After delivery to ALS in Yellowknife, samples were shipped to Burnaby, British Columbia, for analysis.

2.3 Laboratory Analyses

Surface water samples were analyzed for the parameters outlined in Table 2. These parameters are either required by the SNP annexed to the Water Licence or were analyzed to support the Interim Closure and Reclamation Plan and develop the historical dataset for the aquatic receiving environment.

Table 2: Parameter List for Each Surveillance Network Program Station

Station	Parameters
SNP 5-4	Conventional (pH, specific conductivity, hardness, total alkalinity, total suspended solids, total dissolved solids [calculated], and dissolved organic carbon), major ions (including sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus, and dissolved phosphorus), total metals[(a)] (plus total mercury), dissolved metals[(a)].
SNP 5-5	Conventional (pH, specific conductivity, hardness, total alkalinity, total suspended solids, total dissolved solids [calculated], and dissolved organic carbon), major ions (including sulphate), nutrients (nitrate, nitrite, total ammonia, and low-level total phosphorus), total metals[(a)] (plus total mercury).
SNP 5-6	Conventional (pH, specific conductivity, hardness, total alkalinity, total suspended solids, and total dissolved solids [calculated]), major ions (including sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus, and dissolved phosphorus), total metals[(a),] dissolved metals[(a)].
SNP 5-8	Conventional (pH, specific conductivity, hardness, total alkalinity, total suspended solids, and total dissolved solids [calculated]), major ions (including sulphate), nutrients (nitrate, nitrite, total ammonia, and low-level total phosphorus), and total metals[(a)].
SNP 5-9	
SNP 5-11	
SNP 5-12	
SNP 5-13	
SNP 5-14[(b)]	Conventional (pH, specific conductivity, hardness, total alkalinity, total suspended solids, and total dissolved solids [calculated]), major ions (including sulphate), nutrients (nitrate, nitrite, total ammonia, low-level total phosphorus), total metals[(a)] (plus total mercury), dissolved metals[(a)].

Notes:

a) Total and dissolved metals include metalloids such as arsenic and non-metals such as selenium (WLWB 2023). The list of elements includes aluminum (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), cobalt (Co), copper (Cu), chromium (Cr), cesium (Cs), iron (Fe), lead (Pb), lithium (Li), manganese (Mn), molybdenum (Mo), nickel (Ni), rubidium (Rb), selenium (Se), strontium (Sr), titanium (Ti), thallium (Tl), uranium (U), vanadium (V), and zinc (Zn).

b) SNP 5-14 was visited on September 10, but the water level was too low for sample collection.

SNP = Surveillance Network Program.

2.4 Data Analysis

Analytical results from station SNP 5-6 were compared to applicable effluent quality criteria (EQC) as specified in the Water Licence, i.e., maximum average concentration and maximum concentration of any grab sample. For SNP stations at Lardass Lake (SNP 5-4 and SNP 5-5), analytical results were compared to Canadian Council of Ministers of the Environment (CCME) guidelines for the protection of aquatic life and livestock (wildlife) health (CCME 1999 with updates), as well as the federal environmental quality guidelines (FEQG) for cobalt (ECCC 2017), strontium (ECCC 2020), and vanadium (ECCC 2016). Water quality objectives for SNP 5-4 are the lowest of each applicable guideline, as specified in the Water Management Plan (Nighthawk 2024).

Laboratory pH is considered less reliable than field pH because the recommended holding time of 15 minutes cannot be met due to sample transport and shipping. Field pH values were therefore used to calculate CCME guidelines, where applicable.

2.5 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) procedures and requirements are essential to any field or laboratory testing program. The objective of the QA/QC program is to standardize methods such that field sampling, data entry, data analysis, and report preparation produce technically sound and scientifically defensible results.

As part of routine practices for field operations, the following QA procedures were undertaken:

- AquaTROLL water quality meter was calibrated according to manufacturer recommendations prior to sample collection for the day.
- Field-measured pH values were verified using a second pH meter at the time of sample collection.
- Surface water samples were collected by experienced personnel following WSP's technical procedures for surface water sample collection.
- Detailed field notes were recorded in a waterproof field notebook.
- Field data were checked at the end of the sampling event for completeness and accuracy.
- Chain-of-custody (COC) forms were used to track all sample shipments from the field to the analytical laboratory.

The following QC samples were collected:

- A duplicate sample at SNP 5-6 to assess variability potentially introduced during sample collection, sample handling, and laboratory analytical procedures.
- A field blank at SNP 5-8 will be used to assess potential contamination during sample collection.
- A travel blank to determine whether any contamination may have occurred during transportation, storage, or analysis.

The analytical laboratory, ALS, also has its own QA/QC programs, including laboratory replicate samples, sample blanks and control standards.

3.0 RESULTS

3.1 Water Quality

Water quality results from the September 2024 program are presented in Appendix B. Ambient weather at the time of sampling included temperatures of approximately 10°C, mainly cloudy skies with some sun, and calm conditions with wind from the northwest.

Water quality results for station SNP 5-6 are provided in Table B-1, including comparisons to applicable Water Licence limits (WLWB 2023). Results from Lardass Lake, SNP 5-4 and SNP 5-5, are provided in Table B-2, including comparisons to applicable water quality objectives (e.g., CCME 1999 with updates). Results from the remaining SNP stations are presented in Table B-3. Analytical results provided by the laboratories (i.e., the certificate of analysis) are included in Appendix C.

At station SNP 5-6, parameter concentrations were below Water Licence EQC and within the required pH range of 5.5 to 9.5 (Appendix B, Table B-1).

At Lardass Lake, SNP 5-4 and SNP 5-5, parameter concentrations were below the water quality objectives, i.e., the lowest of the CCME acute and chronic guidelines for the protection of aquatic life, the wildlife health guidelines, and applicable FEQG (Appendix B, Table B-2).

3.2 Quality Assurance/Quality Control

The QA/QC assessment of the data collected during the September 10, 2024; sampling event indicated that the data adequately addresses the program's objectives (Appendix D). There was limited potential for contamination during sampling, transport, and laboratory analysis. Duplicate sample results indicated that intrastation variability was low (i.e., sampling precision was high). Parameter concentrations were consistently less than five times the detection limit in the field and travel blanks.

Recommended hold times between sample collection and analysis were generally met, except for pH, nitrate, and nitrate in all samples, as well as ammonia, dissolved organic carbon, and total phosphorus in the travel blank.

4.0 CLOSURE

We trust the above information satisfies the Water Licence requirements. Please contact the undersigned if you have any questions or require additional information.

WSP Canada Inc.

Saad Pasha, MSc
Water Quality Scientist

Kate Sinclair, PhD
Principal Water Quality Scientist

Michael Iwanyshyn, PhD
Lead Water Quality Scientist

SP/KS/MI/pr/jr

5.0 REFERENCES

CCME (Canadian Council of Ministers of the Environment). 1999. Canadian Environmental Quality Guidelines 1999, with updates to 2020. Winnipeg, MB. Accessed July 2023.

ECCC (Environment and Climate Change Canada). 2016. Federal Environmental Quality Guidelines – Vanadium. Available at: FEQG Vanadium EN.pdf (ec.gc.ca).

ECCC. 2017. Federal Environmental Quality Guidelines – Cobalt. Available at: FEQG Cobalt Final EN.pdf (ec.gc.ca).

ECCC. 2020. Federal Environmental Quality Guidelines – Strontium. Available at: Federal-environmental-quality-guidelines-strontium.pdf.

Nighthawk (Nighthawk Gold Corporation). 2024 (in preparation). Indin Lake Gold Project Water Management Plan Version 1.1.

WLWB (Wek'èezhìı Land and Water Board). 2023. Type A Water Licence W2021L2-0004. Issued January 13, 2023.

APPENDIX A

Site Photographs

Photograph A-1: SNP 5-4, Inflow from Wetlands into Lardass Lake.
Note: Sample was collected at the edge of the submerged former dock, near the sign in the background. Photo Orientation: South.

Photograph A-2: SNP 5-5, Lardass Lake. Photo Orientation: Southeast.

Photograph A-3: SNP 5-6, Combined Runoff from Damoti Rock Piles. Photo Orientation: West.

Photograph A-4: SNP 5-8, Damoti Lake Site Decline Ramp (Minewater Pooled at Entrance of Adit). Photo Orientation: West.

Photograph A-5: SNP 5-9, Pool of Standing Water Immediately West of Waste Rock Pile. Photo Orientation: Northwest.

Photograph A-6: SNP 5-11, Pool of Standing Water Between Waste Rock/Ore Stockpiles. Photo Orientation: North.

Photograph A-7: SNP 5-12, Pool of Standing Water in Rock Pile Area. Photo Orientation: South.

Photograph A-8: SNP 5-13, Pool of Standing Water in Rock Pile Area. Photo Orientation: South.

Photograph A-9: **SNP 5-14, Flow pathway between rock ore pile area and Lardass Lake. Note: Low water level and no flow observed. Field measurements were collected but a water quality sample was not collected. Photo Orientation: Southeast.**

Photograph A-10: Aerial View of site and drainage to Lardass Lake. Photo Orientation: West.

APPENDIX B

Water Quality Data

Table B-1: Surveillance Network Program Results at SNP 5-6 Compared to Water Licence Limits, September 10, 2024

Parameter	Unit	Maximum Concentration of Any Grab Sample[a]	Maximum Average Concentration[b]	Station
				SNP 5-6
Field Measured Parameters				
pH	unitless	5.5 - 9.5	-	7.1
Specific conductivity	µS/cm	-	-	356
Temperature	°C	-	-	11
Dissolved oxygen	mg/L	-	-	4.0
Dissolved oxygen	%	-	-	37
Conventional Parameters				
pH	unitless	5.5 - 9.5	-	8.1
Specific conductivity	µS/cm	-	-	370
Hardness, as $CaCO_3$	mg/L	-	-	188
Total alkalinity, as $CaCO_3$	mg/L	-	-	159
Total suspended solids	mg/L	30	15	3.9
Total dissolved solids (calculated)	mg/L	-	-	218
Major Ions				
Calcium	mg/L	-	-	44
Chloride	mg/L	-	-	3.7
Fluoride	mg/L	-	-	0.21
Magnesium	mg/L	-	-	19
Potassium	mg/L	-	-	5.0
Sodium	mg/L	-	-	6.6
Sulphate	mg/L	-	-	35
Nutrients				
Nitrate	mg-N/L	-	-	<0.005
Nitrite	mg-N/L	-	-	<0.001
Total ammonia	mg-N/L	-	12	0.013
Total phosphorus (colourimetric)	mg-P/L	-	-	0.038
Dissolved phosphorus	mg-P/L	-	-	0.32[c]
Total Metals				
Aluminum	mg/L	-	-	0.072
Antimony	mg/L	-	-	<0.0001
Arsenic	mg/L	0.2	0.1	0.0010
Barium	mg/L	-	-	0.014
Beryllium	mg/L	-	-	<0.00002
Bismuth	mg/L	-	-	<0.00005
Boron	mg/L	-	-	0.034
Cadmium	mg/L	0.002	0.001	0.0000097
Calcium	mg/L	-	-	47
Cesium	mg/L	-	-	0.00070
Chromium	mg/L	-	-	0.00074
Cobalt	mg/L	-	-	0.0013
Copper	mg/L	0.02	0.01	0.0015
Iron	mg/L	-	-	0.66
Lead	mg/L	0.04	0.02	0.000088
Lithium	mg/L	-	-	0.017
Magnesium	mg/L	-	-	18
Manganese	mg/L	-	-	0.27
Molybdenum	mg/L	-	-	0.000073
Nickel	mg/L	0.5	0.25	0.0098
Potassium	mg/L	-	-	3.8
Rubidium	mg/L	-	-	0.0085
Selenium	mg/L	-	-	0.000078
Silicon	mg/L	-	-	2.9
Silver	mg/L	-	-	<0.00001
Sodium	mg/L	-	-	6.5
Strontium	mg/L	-	-	0.14
Sulphur	mg/L	-	-	14
Tellurium	mg/L	-	-	<0.0002
Thallium	mg/L	-	-	<0.00001
Thorium	mg/L	-	-	<0.0003
Tin	mg/L	-	-	<0.0001
Titanium	mg/L	-	-	0.0017
Tungsten	mg/L	-	-	<0.0001
Uranium	mg/L	-	-	0.00043
Vanadium	mg/L	-	-	<0.0005
Zinc	mg/L	0.2	0.1	<0.003
Zirconium	mg/L	-	-	<0.0006

Table B-1: Surveillance Network Program Results at SNP 5-6 Compared to Water Licence Limits, September 10, 2024

Parameter	Unit	Maximum Concentration of Any Grab Sample[a]	Maximum Average Concentration[b]	Station
				SNP 5-6
Dissolved Metals				
Aluminum	mg/L	-	-	0.061
Antimony	mg/L	-	-	<0.0001
Arsenic	mg/L	-	-	0.0012
Barium	mg/L	-	-	0.012
Beryllium	mg/L	-	-	<0.00002
Bismuth	mg/L	-	-	<0.00005
Boron	mg/L	-	-	0.034
Cadmium	mg/L	-	-	0.0000078
Cesium	mg/L	-	-	0.00078
Chromium	mg/L	-	-	0.00071
Cobalt	mg/L	-	-	0.0010
Copper	mg/L	-	-	0.0017
Iron	mg/L	-	-	0.36
Lead	mg/L	-	-	0.00013
Lithium	mg/L	-	-	0.016
Manganese	mg/L	-	-	0.32
Molybdenum	mg/L	-	-	0.000053
Nickel	mg/L	-	-	0.0085
Rubidium	mg/L	-	-	0.012
Selenium	mg/L	-	-	0.000091
Silicon	mg/L	-	-	2.8
Silver	mg/L	-	-	<0.00001
Strontium	mg/L	-	-	0.13
Sulphur	mg/L	-	-	14
Tellurium	mg/L	-	-	<0.0002
Thallium	mg/L	-	-	<0.00001
Thorium	mg/L	-	-	0.00017
Tin	mg/L	-	-	<0.0001
Titanium	mg/L	-	-	0.0013
Tungsten	mg/L	-	-	<0.0001
Uranium	mg/L	-	-	0.00028
Vanadium	mg/L	-	-	<0.0005
Zinc	mg/L	-	-	0.0034
Zirconium	mg/L	-	-	0.00052

Notes:
a) Maximum concentration of any grab sample as per Type A Water Licence W2021L2-0004 (WLWB 2023).
b) Maximum average concentration as per Type A Water Licence W2021L2-0004 (WLWB 2023).
c) Lab qualifier provided: The dissolved concentration exceeds total concentration for field-filtered metals sample. Metallic contaminants may have been introduced to dissolved sample during field filtration.

WLWB = Wek'èezhii Land and Water Board; SNP = Surveillance Network Program; $CaCO_3$ = calcium carbonate; µS/cm = microsiemens per centimetre; mg/L = milligrams per litre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorus per litre; % = percent; °C = degrees Celsius; < = less than; - = no Water Licence limit.

Reference:
WLWB (Wek'èezhii Land and Water Board). 2023.Type A Water Licence W2021L2-0004. Issued 13 January 2023.

Table B-2: Surveillance Network Program Sample Results at Lardass Lake Compared to Water Quality Objectives, September 10, 2024

Parameter	Unit	Guidelines:			Station	
		For the Protection of Aquatic Life		Wildlife Health (Livestock)	SNP 5-4	SNP 5-5[a]
		Acute	Chronic			
Field Measured Parameters						
pH	unitless	-	**6.5 - 9.0**	-	7.7	7.3
Specific conductivity	µS/cm	-	-	-	160	181
Temperature	°C	-	-	-	14	12
Dissolved oxygen	mg/L	-	**6.5**	-	13	8.3
Dissolved oxygen	%	-	-	-	121	80
Conventional Parameters						
pH	unitless	-	6.5 - 9.0	-	7.8	7.9
Specific conductivity	µS/cm	-	-	-	171	168
Hardness, as $CaCO_3$	mg/L	-	-	-	72	79
Total alkalinity, as $CaCO_3$	mg/L				51	62
Total suspended solids	mg/L	-	-	-	6.9	4.7
Total dissolved solids (calculated)	mg/L	-	-	3000	117	117
Dissolved organic carbon	mg/L	-	-	-	23	21
Major Ions						
Calcium	mg/L	-	-	**1,000**	19	23
Chloride	mg/L	640	**120**	-	1.1	1.3
Fluoride	mg/L	-	0.12	2.0	0.088	0.084
Magnesium	mg/L	-	-	-	5.9	5.4
Potassium	mg/L	-	-	-	1.6	1.6
Sodium	mg/L	-	-	-	3.2	3.1
Sulphate	mg/L	-	-	**1,000**	32	21
Nutrients						
Nitrate	mg-N/L	124	**2.9**	-	<0.005	<0.005
Nitrite	mg-N/L	-	**0.06**	10	<0.001	<0.001
Total ammonia	mg-N/L	-	**1.3 - 3.6**[b]	-	0.025	0.059
Total phosphorus (colourimetric)	mg-P/L	-	-	-	0.012	0.012
Dissolved phosphorus	mg-P/L	-	-	-	<0.05	-
Total Metals						
Aluminum	mg/L	-	**0.1**[c]	5.0	0.061	0.053
Antimony	mg/L	-	-	-	<0.0001	<0.0001
Arsenic	mg/L	-	**0.005**	0.025	0.00032	0.00028
Barium	mg/L	-	-	-	0.010	0.0094
Beryllium	mg/L	-	-	**0.1**	<0.00002	<0.00002
Bismuth	mg/L	-	-	-	<0.00005	<0.00005
Boron	mg/L	29	**1.5**	5.0	0.013	0.012
Cadmium	mg/L	0.0015 - 0.0017[d]	**0.00012 - 0.00013**[d]	0.080	<0.000005	<0.000005
Calcium	mg/L	-	-	-	21	23
Cesium	mg/L	-	-	-	0.000029	0.000031
Chromium	mg/L	-	**0.001**[e]	0.050	<0.0005	<0.0005
Cobalt	mg/L	-	**0.00089 - 0.00092**[f]	1.0	0.00015	0.00015
Copper	mg/L	-	**0.002**[d]	0.50	<0.0005	0.00058
Iron	mg/L	-	**0.3**	-	0.073	0.17
Lead	mg/L	-	**0.0021 - 0.0024**[d]	0.10	<0.00005	<0.00005
Lithium	mg/L	-	-	-	0.0029	0.0025
Magnesium	mg/L	-	-	-	5.0	5.4
Manganese	mg/L	-	-	-	0.092	0.13
Mercury	mg/L	-	**0.000026**	0.0030	<0.000005	<0.000005
Molybdenum	mg/L	-	**0.073**	0.50	0.00011	0.00012
Nickel	mg/L	-	**0.075 - 0.080**[d]	1.0	0.0013	0.0013
Potassium	mg/L	-	-	-	1.6	1.6
Rubidium	mg/L	-	-	-	0.0025	0.0025
Selenium	mg/L	-	**0.001**	0.05	<0.00005	<0.00005
Silicon	mg/L	-	-	-	0.16	1.1
Silver	mg/L	-	**0.00025**	-	<0.00001	<0.00001
Sodium	mg/L	-	-	-	3.0	3.1
Strontium	mg/L	-	-	-	0.049	0.057
Sulphur	mg/L	-	-	-	7.2	7.6
Tellurium	mg/L	-	-	-	<0.0002	<0.0002
Thallium	mg/L	-	**0.0008**	-	<0.00001	<0.00001
Thorium	mg/L	-	-	-	<0.0001	<0.0001
Tin	mg/L	-	-	-	<0.0001	<0.0001
Titanium	mg/L	-	-	-	<0.0003	<0.0003
Tungsten	mg/L	-	-	-	<0.0001	<0.0001
Uranium	mg/L	0.033	**0.015**	0.20	0.00013	0.00020
Vanadium	mg/L	-	0.120[g]	**0.10**	<0.0005	<0.0005

Table B-2: Surveillance Network Program Sample Results at Lardass Lake Compared to Water Quality Objectives, September 10, 2024

Parameter	Unit	Guidelines:			Station	
		For the Protection of Aquatic Life		Wildlife Health (Livestock)	SNP 5-4	SNP 5-5[a]
		Acute	Chronic			
Zinc	mg/L	-	-	50	<0.003	<0.003
Zirconium	mg/L	-	-	-	<0.0002	<0.0004
Dissolved Metals						
Aluminum	mg/L	-	-	-	0.043	-
Antimony	mg/L	-	-	-	<0.0001	-
Arsenic	mg/L	-	-	-	0.00070	-
Barium	mg/L	-	-	-	0.0099	-
Beryllium	mg/L	-	-	-	<0.00002	-
Bismuth	mg/L	-	-	-	<0.00005	-
Boron	mg/L	-	-	-	0.015	-
Cadmium	mg/L	-	-	-	<0.000005	-
Cesium	mg/L	-	-	-	0.000035	-
Chromium	mg/L	-	-	-	<0.0005	-
Cobalt	mg/L	-	-	-	0.00010	-
Copper	mg/L	-	-	-	0.00053	-
Iron	mg/L	-	-	-	0.056	-
Lead	mg/L	-	-	-	0.00011	-
Lithium	mg/L	-	-	-	0.0028	-
Manganese	mg/L	5.0 - 5.4[d]	**0.39 - 0.49[h]**	-	0.036	-
Molybdenum	mg/L	-	-	-	0.00011	-
Nickel	mg/L	-	-	-	0.0011	-
Rubidium	mg/L	-	-	-	0.0025	-
Selenium	mg/L	-	-	-	<0.00005	-
Silicon	mg/L	-	-	-	0.23	-
Silver	mg/L	-	-	-	<0.00001	-
Strontium	mg/L	-	2.5[i]	-	0.052	-
Sulphur	mg/L	-	-	-	8.8	-
Tellurium	mg/L	-	-	-	<0.0002	-
Thallium	mg/L	-	-	-	<0.00001	-
Thorium	mg/L	-	-	-	<0.0001	-
Tin	mg/L	-	-	-	<0.0001	-
Titanium	mg/L	-	-	-	<0.0003	-
Tungsten	mg/L	-	-	-	<0.0001	-
Uranium	mg/L	-	-	-	0.00012	-
Vanadium	mg/L	-		-	<0.0005	-
Zinc	mg/L	0.12 - 0.13[j]	**0.038 - 0.056[j]**	-	<0.001	-
Zirconium	mg/L	-	-	-	<0.0003	-

Notes:

Bolded values are water quality objectives as outlined in the Indin Lake Gold Project Water Management Plan Version 1.1 (Nighthawk 2024).

a) Water quality objectives are proposed to apply at SNP 5-4 only (Nighthawk 2024), but guidelines and screening have been applied to both SNP 5-4 and SNP 5-5 for context.

b) The ammonia guideline range shown is pH and temperature dependent. The guideline that results in the minimum ammonia guideline (1.3 mg-N/L) is based on the combination of field pH (7.7) and water temperature (14°C).

c) Guideline is pH dependent. The guideline shown is based on the field pH observed in the dataset (7.3 and 7.7).

d) Guideline is hardness dependent. The guideline range shown is based on the hardness observed in the dataset (72 to 79 mg/L). The guideline is calculated based on the individual hardness value for each sample.

e) Guideline is for chromium VI.

f) Federal environmental quality guideline for cobalt is hardness dependent (ECCC 2017). The guideline range shown is based on the hardness range observed in the dataset (72 to 79 mg/L).

g) Federal environmental quality guideline for vanadium (ECCC 2016).

h) The chronic dissolved manganese guideline is pH and hardness dependent. The guideline range shown is based on the range of field pH (7.3 and 7.7) and hardness (72 and 79 mg/L) observed in the dataset.

i) Federal environmental quality guideline for strontium (ECCC 2020).

j) The acute and chronic dissolved zinc guidelines are pH (chronic only), hardness, and DOC dependent (CCME 1999). The minimum acute and chronic zinc guidelines (0.12 and 0.038 mg/L, respectively) are based on the combination of field pH (7.7, chronic only), hardness (72 mg/L), and DOC (23 mg/L).

SNP = Surveillance Network Program; µS/cm = microsiemens per centimetre; °C = degrees Celsius; mg/L = milligrams per litre; % = percent; $CaCO_3$ = calcium carbonate; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorus per litre; < = less than; - = no guideline or no data available; DOC = dissolved organic carbon.

Reference:

CCME (Canadian Council of Ministers of the Environment). 1999. Canadian Environmental Quality Guidelines 1999, with updates to 2020. Winnipeg, MB. Accessed October 2022.

ECCC (Environment and Climate Change Canada). 2016. Federal Environmental Quality Guidelines – Vanadium. Available at: https://www.ec.gc.ca/ese-ees/48D3A655-0F43-4BCD-905D-631B1402B61A/FEQG_Vanadium_EN.pdf.

ECCC. 2017. Federal Environmental Quality Guidelines – Cobalt. Available at: https://www.ec.gc.ca/ese-ees/92F47C5D-24F5-4601-AEC0-390514B3ED75/FEQG%20Cobalt%20Final%20EN.pdf.

ECCC. 2020. Federal Environmental Quality Guidelines - Strontium. Available at: https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/federal-environmental-quality-guidelines-strontium.html.

Nighthawk (Nighthawk Gold Corp.). 2024 (in preparation). Indin Lake Gold Project Water Management Plan Version 1.1.

Table B-3: Surveillance Network Program Sample Results for Stations Around the Rock Piles, September 10, 2024

Parameter	Unit	Stations				
		SNP 5-8	SNP 5-9	SNP 5-11	SNP 5-12	SNP 5-13
Field Measured Parameters						
pH	unitless	7.0	7.3	7.3	7.1	6.1
Specific conductivity	µS/cm	257	645	689	578	564
Temperature	°C	3.5	9.8	11	12	11
Dissolved oxygen	mg/L	3.7	9.2	11	10	9.5
Dissolved oxygen	%	29	35	102	99	91
Conventional Parameters						
pH	unitless	7.9	8.0	7.7	7.6	7.5
Specific conductivity	µS/cm	295	719	776	646	625
Hardness, as $CaCO_3$	mg/L	137	370	395	315	309
Total alkalinity, as $CaCO_3$	mg/L	78	109	38	34	33
Total suspended solids	mg/L	2.0	3.6	5.4	3.2	5.0
Total dissolved solids (calculated)	mg/L	182	459	536	427	416
Major Ions						
Calcium	mg/L	39	99	100	79	76
Chloride	mg/L	6.0	6.8	5.5	4.4	4.3
Fluoride	mg/L	0.11	0.15	0.26	0.25	0.26
Magnesium	mg/L	9.6	30	35	29	29
Potassium	mg/L	3.0	4.9	5.8	5.0	5.0
Sodium	mg/L	5.0	9.4	8.2	7.3	7.5
Sulphate	mg/L	62	241	351	273	264
Nutrients						
Nitrate	mg-N/L	0.025	<0.025	0.039	<0.005	<0.005
Nitrite	mg-N/L	<0.001	<0.005	<0.005	<0.001	<0.001
Total ammonia	mg-N/L	0.0082	0.013	0.040	0.017	0.021
Total phosphorus (colourimetric)	mg-P/L	0.0075	0.017	0.0090	0.0076	0.0087
Total Metals						
Aluminum	mg/L	0.023	0.010	0.047	0.029	0.020
Antimony	mg/L	<0.0001	0.00055	<0.0001	<0.0001	<0.0001
Arsenic	mg/L	0.00046	0.00059	0.00066	0.00060	0.00068
Barium	mg/L	0.019	0.039	0.019	0.018	0.020
Beryllium	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Bismuth	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron	mg/L	0.025	0.053	0.083	0.072	0.072
Cadmium	mg/L	0.000035	<0.000005	0.000024	0.000011	0.0000075
Cesium	mg/L	0.00026	0.00030	0.00068	0.00095	0.0011
Chromium	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	mg/L	0.00043	0.00048	0.0027	0.0012	0.00084
Copper	mg/L	0.0025	0.0013	0.0012	0.00086	0.00084
Iron	mg/L	0.45	0.80	1.6	1.2	1.4
Lead	mg/L	0.00028	<0.00005	0.00024	0.000085	0.000092
Lithium	mg/L	0.0049	0.018	0.031	0.027	0.026
Manganese	mg/L	0.064	0.097	0.27	0.14	0.099
Molybdenum	mg/L	0.0013	0.000061	0.000058	<0.00005	<0.00005
Nickel	mg/L	0.0056	0.0086	0.028	0.016	0.014
Rubidium	mg/L	0.0035	0.0099	0.013	0.010	0.010
Selenium	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	0.000051
Silicon	mg/L	3.7	0.77	1.8	2.8	3.2
Silver	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Strontium	mg/L	0.093	0.27	0.28	0.23	0.23
Sulphur	mg/L	22	94	134	105	102
Tellurium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Thorium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	mg/L	0.00035	<0.0003	<0.0009	<0.0003	<0.0003
Tungsten	mg/L	0.00043	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	0.0026	0.00040	0.00014	0.000073	0.000063
Vanadium	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc	mg/L	<0.003	<0.003	0.0059	<0.003	<0.003
Zirconium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Notes:

SNP = Surveillance Network Program; µS/cm = microsiemens per centimetre; °C = degrees Celsius; % = percent; mg/L = milligrams per litre; $CaCO_3$ = calcium carbonate; < = less than; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorus per litre.

APPENDIX C

Laboratory Certificate of Analysis

CERTIFICATE OF ANALYSIS

Work Order	: **YL2401456**	Page	: 1 of 14
Client	: **WSP Canada Inc.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Saad Pasha	Account Manager	: Oliver Gregg
Address	: 2800, 700 - 2nd Street SW Calgary AB Canada T2P 2W2	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: 403.512.6580	Telephone	: 1 867 445 7143
Project	: Damoti Lake SNP	Date Samples Received	: 11-Sep-2024 10:58
PO	: 2024CA215454/1000.1001	Date Analysis Commenced	: 15-Sep-2024
C-O-C number	: ----	Issue Date	: 20-Sep-2024 12:43
Sampler	: Sarah Beattie		
Site	: Damoti Lake		
Quote number	: YL24-GOLD100-002		
No. of samples received	: 11		
No. of samples analysed	: 11		

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*
Erin Sanchez		Metals, Burnaby, British Columbia
Kate Dimitrova	Supervisor - Inorganic	Inorganics, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Inorganics, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia

General Comments

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

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

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

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

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances

LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
pH units	pH units

<: less than.

>: greater than.

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

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	*Description*
DLDS	*Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.*
DLM	*Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).*
DTMF	*Dissolved concentration exceeds total for field-filtered metals sample. Metallic contaminants may have been introduced to dissolved sample during field filtration.*

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	10-Sep-2024 14:00	10-Sep-2024 14:30	10-Sep-2024 13:25	10-Sep-2024 11:35	10-Sep-2024 12:00
						YL2401456-001	YL2401456-002	YL2401456-003	YL2401456-004	YL2401456-005
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		171	168	370	295	719
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		72.3	----	188	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.50	mg/L		72.2	79.3	191	137	370
pH	----	E108/VA	0.10	pH units		7.80	7.87	8.10	7.91	8.00
Solids, total dissolved [TDS], calculated	----	EC103.B/VA	1.0	mg/L		117	117	218	182	459
Solids, total suspended [TSS]	----	E160-L/VA	1.0	mg/L		6.9	4.7	3.9	2.0	3.6
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		50.5	61.9	159	78.2	109
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0247	0.0586	0.0131	0.0082	0.0125
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.250 DLDS
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		1.06	1.28	3.73	5.99	6.80
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.088	0.084	0.207	0.106	0.149
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		<0.0050	<0.0050	<0.0050	0.0250	<0.0250 DLDS
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0050 DLDS
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0124	0.0120	0.0381	0.0075	0.0168
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		31.9	21.4	35.2	61.8	241
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		22.5	20.7	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0614	0.0529	0.0720	0.0232	0.0102
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	0.00055
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00032	0.00028	0.00100	0.00046	0.00059
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0103	0.00937	0.0139	0.0194	0.0391
Beryllium, total	7440-41-7	E420/VA	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.013	0.012	0.034	0.025	0.053
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	<0.0000050	0.0000097	0.0000353	<0.0000050
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		20.6	22.9	47.0	39.0	98.6

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	10-Sep-2024 14:00	10-Sep-2024 14:30	10-Sep-2024 13:25	10-Sep-2024 11:35	10-Sep-2024 12:00
						YL2401456-001	YL2401456-002	YL2401456-003	YL2401456-004	YL2401456-005
						Result	Result	Result	Result	Result
Total Metals										
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000029	0.000031	0.000701	0.000264	0.000299
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	0.00074	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		0.00015	0.00015	0.00128	0.00043	0.00048
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		<0.00050	0.00058	0.00153	0.00251	0.00130
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.073	0.174	0.660	0.450	0.804
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	0.000088	0.000281	<0.000050
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0029	0.0025	0.0174	0.0049	0.0177
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		5.04	5.37	17.8	9.60	30.2
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0921	0.126	0.270	0.0638	0.0968
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000108	0.000122	0.000073	0.00126	0.000061
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		0.00126	0.00127	0.00977	0.00560	0.00860
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.58	1.64	3.75	3.03	4.90
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00253	0.00246	0.00846	0.00346	0.00993
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	0.000078	<0.000050	<0.000050
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		0.16	1.08	2.88	3.73	0.77
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		3.02	3.10	6.46	5.00	9.42
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0486	0.0572	0.140	0.0927	0.266
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		7.21	7.63	13.6	22.0	93.5
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<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	<0.000010
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00030 DLM	<0.00010	<0.00010
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00030	<0.00030	0.00169	0.00035	<0.00030
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	0.00043	<0.00010
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000132	0.000204	0.000426	0.00263	0.000396
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	10-Sep-2024 14:00	10-Sep-2024 14:30	10-Sep-2024 13:25	10-Sep-2024 11:35	10-Sep-2024 12:00
						YL2401456-001	YL2401456-002	YL2401456-003	YL2401456-004	YL2401456-005
						Result	Result	Result	Result	Result
Total Metals										
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00040 DLM	<0.00060 DLM	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0434	----	0.0608	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	----	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00070 DTMF	----	0.00122	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00990	----	0.0121	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000020	mg/L		<0.000020	----	<0.000020	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	----	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.015	----	0.034	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000050	----	0.0000078	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		19.2	----	43.8	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000035	----	0.000775	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	----	0.00071	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		0.00010	----	0.00101	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00053	----	0.00173	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.056	----	0.361	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		0.000109 DTMF	----	0.000131	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0028	----	0.0162	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		5.92	----	19.0	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0356	----	0.320	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.000114	----	0.000053	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		0.00111	----	0.00846	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	----	0.319 DTMF	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.58	----	5.01	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00252	----	0.0120 DTMF	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	----	0.000091	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		0.225	----	2.84	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	----	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		3.19	----	6.56	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0516	----	0.128	----	----

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-4	SNP 5-5	SNP 5-6	SNP 5-8	SNP 5-9
					Client sampling date / time	10-Sep-2024 14:00	10-Sep-2024 14:30	10-Sep-2024 13:25	10-Sep-2024 11:35	10-Sep-2024 12:00
						YL2401456-001	YL2401456-002	YL2401456-003	YL2401456-004	YL2401456-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		8.84	----	13.5	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	----	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	----	<0.000010	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	----	0.00017	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	----	<0.00010	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	----	0.00128	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	----	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000118	----	0.000283	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	----	<0.00050	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		<0.0010	----	0.0034	----	----
Zirconium, dissolved	7440-67-7	E421/VA	0.00030	mg/L		<0.00030	----	0.00052	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	----	Field	----	----

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

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

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6D	SNP 5-8-FB
					Client sampling date / time	10-Sep-2024 12:15	10-Sep-2024 12:30	10-Sep-2024 11:15	10-Sep-2024 13:30	10-Sep-2024 11:30
						YL2401456-006	YL2401456-007	YL2401456-008	YL2401456-009	YL2401456-010
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm		776	646	625	371	<2.0
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L		----	----	----	182	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.50	mg/L		395	315	309	194	<0.50
pH	----	E108/VA	0.10	pH units		7.65	7.57	7.53	8.12	5.62
Solids, total dissolved [TDS], calculated	----	EC103.B/VA	1.0	mg/L		536	427	416	218	<1.0
Solids, total suspended [TSS]	----	E160-L/VA	1.0	mg/L		5.4	3.2	5.0	5.6	<1.0
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		38.4	33.9	33.4	158	<2.0
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0403	0.0168	0.0208	0.0126	<0.0050
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.250 DLDS	<0.050	<0.050	<0.050	<0.050
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		5.52	4.35	4.30	3.64	<0.50
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.256	0.252	0.256	0.195	<0.020
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0393	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0050 DLDS	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0090	0.0076	0.0087	0.0279	<0.0020
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		351	273	264	34.0	<0.30
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0468	0.0293	0.0202	0.0705	<0.0030
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00066	0.00060	0.00068	0.00096	<0.00010
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0192	0.0183	0.0198	0.0138	<0.00010
Beryllium, total	7440-41-7	E420/VA	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.083	0.072	0.072	0.036	<0.010
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000244	0.0000113	0.0000075	0.0000079	<0.0000050
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		100	78.8	76.3	49.0	<0.050
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000682	0.000947	0.00107	0.000675	<0.000010
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	0.00075	<0.00050

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6D	SNP 5-8-FB
					Client sampling date / time	10-Sep-2024 12:15	10-Sep-2024 12:30	10-Sep-2024 11:15	10-Sep-2024 13:30	10-Sep-2024 11:30
						YL2401456-006	YL2401456-007	YL2401456-008	YL2401456-009	YL2401456-010
						Result	Result	Result	Result	Result
Total Metals										
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		0.00270	0.00120	0.00084	0.00112	<0.00010
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00123	0.00086	0.00084	0.00158	<0.00050
Iron, total	7439-89-6	E420/VA	0.010	mg/L		1.59	1.24	1.41	0.592	<0.010
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		0.000236	0.000085	0.000092	0.000072	<0.000050
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0306	0.0269	0.0264	0.0181	<0.0010
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		35.2	28.7	28.8	17.4	<0.0050
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.270	0.141	0.0985	0.239	<0.00010
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000058	<0.000050	<0.000050	0.000064	<0.000050
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		0.0280	0.0163	0.0137	0.00939	<0.00050
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		5.77	4.95	4.99	3.72	<0.050
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.0128	0.0102	0.0101	0.00830	<0.00020
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	0.000051	0.000083	<0.000050
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		1.81	2.79	3.21	2.93	<0.10
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		8.15	7.32	7.48	6.50	<0.050
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.284	0.227	0.228	0.139	<0.00020
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		134	105	102	13.7	<0.50
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<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	<0.000010
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00020 DLM	<0.00010
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00090 DLM	<0.00030	<0.00030	0.00167	<0.00030
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000140	0.000073	0.000063	0.000414	<0.000010
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0059	<0.0030	<0.0030	<0.0030	<0.0030
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00060 DLM	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		----	----	----	0.0625	----

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6D	SNP 5-8-FB
					Client sampling date / time	10-Sep-2024 12:15	10-Sep-2024 12:30	10-Sep-2024 11:15	10-Sep-2024 13:30	10-Sep-2024 11:30
						YL2401456-006	YL2401456-007	YL2401456-008	YL2401456-009	YL2401456-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		----	----	----	<0.00010	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		----	----	----	0.00133 DTMF	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		----	----	----	0.0122	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000020	mg/L		----	----	----	<0.000020	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		----	----	----	<0.000050	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		----	----	----	0.032	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		----	----	----	0.0000092	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		----	----	----	42.0	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		----	----	----	0.000782	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		----	----	----	0.00075	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		----	----	----	0.00103	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		----	----	----	0.00181	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		----	----	----	0.350	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		----	----	----	0.000153	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		----	----	----	0.0156	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		----	----	----	18.7	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		----	----	----	0.322	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		----	----	----	0.000059	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		----	----	----	0.00863	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		----	----	----	0.296 DTMF	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		----	----	----	5.15 DTMF	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		----	----	----	0.0124 DTMF	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		----	----	----	0.000068	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		----	----	----	2.78	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		----	----	----	<0.000010	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		----	----	----	6.40	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		----	----	----	0.127	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		----	----	----	12.8	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		----	----	----	<0.00020	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		----	----	----	<0.000010	----

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SNP 5-11	SNP 5-12	SNP 5-13	SNP 5-6D	SNP 5-8-FB
					Client sampling date / time	10-Sep-2024 12:15	10-Sep-2024 12:30	10-Sep-2024 11:15	10-Sep-2024 13:30	10-Sep-2024 11:30
						YL2401456-006	YL2401456-007	YL2401456-008	YL2401456-009	YL2401456-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		----	----	----	0.00017	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		----	----	----	<0.00010	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		----	----	----	0.00110	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		----	----	----	<0.00010	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		----	----	----	0.000279	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		----	----	----	<0.00050	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		----	----	----	0.0035	----
Zirconium, dissolved	7440-67-7	E421/VA	0.00030	mg/L		----	----	----	0.00052	----
Dissolved metals filtration location	----	EP421/VA	-	-		----	----	----	Field	----

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

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

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Travel Blank	----	----	----	----
					Client sampling date / time	10-Sep-2024 15:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401456-011	--------	--------	--------	--------	
					Result	----	----	----	----	
Physical Tests										
Conductivity	----	E100/VA	2.0	µS/cm	<2.0	----	----	----	----	
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L	<0.50	----	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.50	mg/L	<0.50	----	----	----	----	
pH	----	E108/VA	0.10	pH units	5.60	----	----	----	----	
Solids, total dissolved [TDS], calculated	----	EC103.B/VA	1.0	mg/L	<1.0	----	----	----	----	
Solids, total suspended [TSS]	----	E160-L/VA	1.0	mg/L	<1.0	----	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	<2.0	----	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	<0.0050	----	----	----	----	
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050	----	----	----	----	
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	<0.50	----	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	<0.020	----	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	<0.0050	----	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010	----	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	<0.0020	----	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	<0.30	----	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	<0.50	----	----	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	<0.0030	----	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Beryllium, total	7440-41-7	E420/VA	0.000020	mg/L	<0.000020	----	----	----	----	
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----	
Boron, total	7440-42-8	E420/VA	0.010	mg/L	<0.010	----	----	----	----	
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	<0.050	----	----	----	----	

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Travel Blank	----	----	----	----
					Client sampling date / time	10-Sep-2024 15:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401456-011	--------	--------	--------	--------
						Result	----	----	----	----
Total Metals										
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		<0.010	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		<0.0050	----	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		<0.050	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		<0.10	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		<0.050	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		<0.50	----	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Travel Blank	----	----	----	----
					Client sampling date / time	10-Sep-2024 15:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401456-011	--------	--------	--------	--------	
					Result	----	----	----	----	
Total Metals										
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	<0.0010	----	----	----	----	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Beryllium, dissolved	7440-41-7	E421/VA	0.000020	mg/L	<0.000020	----	----	----	----	
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----	
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L	<0.010	----	----	----	----	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	<0.050	----	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----	
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	<0.0010	----	----	----	----	
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	<0.0050	----	----	----	----	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----	
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L	<0.050	----	----	----	----	
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	<0.050	----	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	<0.000050	----	----	----	----	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	<0.050	----	----	----	----	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	<0.050	----	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Travel Blank	----	----	----	----
					Client sampling date / time	10-Sep-2024 15:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		YL2401456-011	--------	--------	--------	--------
						Result	----	----	----	----
Dissolved Metals										
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		<0.50	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		<0.0010	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/VA	0.00030	mg/L		<0.00030	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	----	----	----	----

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	: **YL2401456**	Page	: 1 of 25
Client	: **WSP Canada Inc.**	Laboratory	: ALS Environmental - Yellowknife
Contact	: Saad Pasha	Account Manager	: Oliver Gregg
Address	: 2800, 700 - 2nd Street SW Calgary AB Canada T2P 2W2	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 403.512.6580	Telephone	: 1 867 445 7143
Project	: Damoti Lake SNP	Date Samples Received	: 11-Sep-2024 10:58
PO	: 2024CA215454/1000.1001	Issue Date	: 20-Sep-2024 12:40
C-O-C number	: ----		
Sampler	: Sarah Beattie		
Site	: Damoti Lake		
Quote number	: YL24-GOLD100-002		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-11	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-12	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-13	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-4	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-5	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-6	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SNP 5-6D	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SNP 5-8	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SNP 5-8-FB	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SNP 5-9	E298	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (lab preserved)										
Travel Blank	E298	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	16-Sep-2024	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-11	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-12	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-13	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-4	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-5	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-6	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-6D	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-8	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-8-FB	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SNP 5-9	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
Travel Blank	E235.Br-L	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-11	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-12	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SNP 5-13	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-4	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-5	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-6	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-6D	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-8	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-8-FB	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SNP 5-9	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE Travel Blank	E235.Cl	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-11	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-12	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-13	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-4	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-5	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-6	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-6D	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-8	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-8-FB	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SNP 5-9	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
Travel Blank	E235.F	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-11	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-12	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-13	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-4	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-5	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-6	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-6D	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-8	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-8-FB	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SNP 5-9	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
Travel Blank	E235.NO3-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-11	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-12	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-13	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-4	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-5	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SNP 5-6	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	3 days	5 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-6D	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	✗ EHT	15-Sep-2024	3 days	5 days	✗ EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-8	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	✗ EHT	15-Sep-2024	3 days	5 days	✗ EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-8-FB	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	✗ EHT	15-Sep-2024	3 days	5 days	✗ EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SNP 5-9	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	✗ EHT	15-Sep-2024	3 days	5 days	✗ EHT
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE Travel Blank	E235.NO2-L	10-Sep-2024	15-Sep-2024	3 days	5 days	✗ EHT	15-Sep-2024	3 days	5 days	✗ EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-11	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-12	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-13	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-4	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-5	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-6	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-6D	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-8	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-8-FB	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SNP 5-9	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE Travel Blank	E235.SO4	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	15-Sep-2024	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-4	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-5	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-11	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-12	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-13	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-6	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-6D	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-8	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-8-FB	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SNP 5-9	E372-U	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	17-Sep-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (lab preserved) Travel Blank	E372-U	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	17-Sep-2024	28 days	1 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
SNP 5-4	E421	10-Sep-2024	17-Sep-2024	180 days	7 days	✓	17-Sep-2024	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
SNP 5-6	E421	10-Sep-2024	17-Sep-2024	180 days	7 days	✓	17-Sep-2024	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
SNP 5-6D	E421	10-Sep-2024	17-Sep-2024	180 days	7 days	✓	17-Sep-2024	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
Travel Blank	E421	10-Sep-2024	17-Sep-2024	180 days	7 days	✓	17-Sep-2024	180 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
SNP 5-4	E358-L	10-Sep-2024	16-Sep-2024	28 days	6 days	✓	16-Sep-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
SNP 5-5	E358-L	10-Sep-2024	16-Sep-2024	28 days	6 days	✓	16-Sep-2024	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (lab preserved)										
Travel Blank	E358-L	10-Sep-2024	15-Sep-2024	3 days	5 days	× EHT	15-Sep-2024	28 days	0 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SNP 5-11	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SNP 5-12	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-13	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-4	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-5	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-6	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-6D	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-8	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-8-FB	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE SNP 5-9	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE Travel Blank	E290	10-Sep-2024	15-Sep-2024	14 days	5 days	✓	16-Sep-2024	14 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE SNP 5-11	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-12	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-13	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-4	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-5	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-6	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-6D	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-8	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE SNP 5-8-FB	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE SNP 5-9	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE Travel Blank	E100	10-Sep-2024	15-Sep-2024	28 days	5 days	✓	16-Sep-2024	28 days	6 days	✓
Physical Tests : pH by Meter										
HDPE SNP 5-5	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	120 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	147 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE Travel Blank	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	120 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	147 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-4	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	121 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	148 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-6	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	121 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	148 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-6D	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	121 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	148 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-12	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	122 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	149 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE SNP 5-11	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	122 hrs	× EHTR-FM	16-Sep-2024	0.25 hrs	150 hrs	× EHTR-FM

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter										
HDPE										
SNP 5-8	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	123 hrs	✗ EHTR-FM	16-Sep-2024	0.25 hrs	150 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE										
SNP 5-8-FB	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	123 hrs	✗ EHTR-FM	16-Sep-2024	0.25 hrs	150 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE										
SNP 5-9	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	123 hrs	✗ EHTR-FM	16-Sep-2024	0.25 hrs	150 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE										
SNP 5-13	E108	10-Sep-2024	15-Sep-2024	0.25 hrs	123 hrs	✗ EHTR-FM	16-Sep-2024	0.25 hrs	151 hrs	✗ EHTR-FM
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-4	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-5	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-6	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-6D	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	6 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
Travel Blank	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-11	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-12	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-13	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-8	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-8-FB	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB]										
SNP 5-9	E160-L	10-Sep-2024	----	----	----		17-Sep-2024	7 days	7 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SNP 5-4	E508	10-Sep-2024	20-Sep-2024	28 days	10 days	✓	20-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SNP 5-5	E508	10-Sep-2024	20-Sep-2024	28 days	10 days	✓	20-Sep-2024	28 days	10 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved)										
Travel Blank	E508	10-Sep-2024	20-Sep-2024	28 days	10 days	✓	20-Sep-2024	28 days	10 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-11	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-12	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-13	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-4	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-5	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-6	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-6D	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-8	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-8-FB	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SNP 5-9	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
Travel Blank	E420	10-Sep-2024	18-Sep-2024	180 days	8 days	✓	19-Sep-2024	180 days	9 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1652648	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	1652609	2	30	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1652643	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1652642	1	20	5.0	5.0	✓
Conductivity in Water	E100	1652649	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1653466	2	17	11.7	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1652605	2	23	8.7	5.0	✓
Fluoride in Water by IC	E235.F	1652641	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1652644	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1652645	1	20	5.0	5.0	✓
pH by Meter	E108	1652647	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1652646	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1662438	2	40	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1653796	1	19	5.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1652608	2	30	6.6	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1652648	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	1652609	2	30	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1652643	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1652642	1	20	5.0	5.0	✓
Conductivity in Water	E100	1652649	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1653466	1	17	5.8	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1652605	2	23	8.7	5.0	✓
Fluoride in Water by IC	E235.F	1652641	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1652644	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1652645	1	20	5.0	5.0	✓
pH by Meter	E108	1652647	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1652646	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1662438	2	40	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1653796	1	19	5.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1652608	2	30	6.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1654692	1	19	5.2	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1652648	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	1652609	2	30	6.6	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Method Blanks (MB) - Continued							
Bromide in Water by IC (Low Level)	E235.Br-L	1652643	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1652642	1	20	5.0	5.0	✓
Conductivity in Water	E100	1652649	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1653466	2	17	11.7	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1652605	2	23	8.7	5.0	✓
Fluoride in Water by IC	E235.F	1652641	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1652644	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1652645	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1652646	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1662438	2	40	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1653796	1	19	5.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1652608	2	30	6.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1654692	1	19	5.2	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1652609	2	30	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1652643	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1652642	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1653466	2	17	11.7	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1652605	2	23	8.7	5.0	✓
Fluoride in Water by IC	E235.F	1652641	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1652644	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1652645	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1652646	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1662438	2	40	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1653796	1	19	5.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1652608	2	30	6.6	5.0	✓

Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Vancouver	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry (Low Level)	E160-L ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - 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 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 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Vancouver	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	“Hardness (as CaCO3), dissolved” is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. “Total Hardness” refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	“Hardness (as CaCO3), from total Ca/Mg” is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. “Total Hardness” refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TDS in Water (Calculation) from Total Metals	EC103.B ALS Environmental - Vancouver	Water	APHA 1030E (mod)	Total Dissolved Solids is calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Total Metals species are used. Minor ions are included where data is present. Samples with particulate are not appropriate for this calculation. This calculation is typically used for drinking waters or potable waters with a turbidity <1NTU

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.

QUALITY CONTROL REPORT

Work Order	: **YL2401456**	Page	: 1 of 17
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Saad Pasha	Account Manager	: Oliver Gregg
Address	: 2800, 700 - 2nd Street SW Calgary AB Canada T2P 2W2	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: 403.512.6580	Telephone	: 1 867 445 7143
Project	: Damoti Lake SNP	Date Samples Received	: 11-Sep-2024 10:58
PO	: 2024CA215454/1000.1001	Date Analysis Commenced	: 15-Sep-2024
C-O-C number	: ----	Issue Date	: 20-Sep-2024 12:36
Sampler	: Sarah Beattie		
Site	: Damoti Lake		
Quote number	: YL24-GOLD100-002		
No. of samples received	: 11		
No. of samples analysed	: 11		

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*
Erin Sanchez		Vancouver Metals, Burnaby, British Columbia
Kate Dimitrova	Supervisor - Inorganic	Vancouver Inorganics, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Vancouver Inorganics, Burnaby, British Columbia
Owen Cheng		Vancouver Metals, 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: 1652647)											
VA24C4010-003	Anonymous	pH	----	E108	0.10	pH units	5.66	5.65	0.177%	4%	----
Physical Tests (QC Lot: 1652648)											
VA24C4010-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1652649)											
VA24C4010-003	Anonymous	Conductivity	----	E100	2.0	µS/cm	<2.0	<2.0	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652608)											
KS2403731-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.129	0.127	1.60%	20%	----
Anions and Nutrients (QC Lot: 1652609)											
KS2403731-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0067	0.0069	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652632)											
YL2401456-001	SNP 5-4	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0124	0.0129	0.0005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652633)											
YL2401456-001	SNP 5-4	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0247	0.0247	0.00004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652641)											
VA24C4010-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.251	0.248	1.42%	20%	----
Anions and Nutrients (QC Lot: 1652642)											
VA24C4010-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	5.45	5.39	1.13%	20%	----
Anions and Nutrients (QC Lot: 1652643)											
VA24C4010-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652644)											
VA24C4010-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652645)											
VA24C4010-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0063	0.0062	0.00006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1652646)											
VA24C4010-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	4.12	4.03	2.17%	20%	----
Organic / Inorganic Carbon (QC Lot: 1652605)											
KS2403731-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.44	1.80	0.36	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1653058)											
VA24C3191-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	15.9	16.6	3.72%	20%	----
Total Metals (QC Lot: 1653796)											

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: 1653796) - continued											
FJ2402737-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.156	0.175	11.3%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00017	0.00017	0.000003	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00040	0.00040	0.000005	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.124	0.120	3.22%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	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	0.040	0.041	0.0005	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000755	0.0000749	0.897%	20%	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	148	146	1.65%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000067	0.000071	0.000005	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00024	0.00024	0.000002	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00100	0.00102	0.00002	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.326	0.334	2.37%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000198	0.000214	0.000016	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0327	0.0318	2.67%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	57.3	54.3	5.44%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0132	0.0130	0.910%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000512	0.000576	11.6%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00359	0.00359	0.000007	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.39	1.38	1.01%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00118	0.00125	0.00007	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.00174	0.00172	1.25%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	2.40	2.37	1.36%	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	10.4	10.2	2.29%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.189	0.182	3.92%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	151	146	3.37%	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	0.000010	0.000010	0.0000003	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00180	mg/L	<0.00180	<0.00180	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1653796) - continued											
FJ2402737-001	Anonymous	Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00214	0.00212	0.505%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00115	0.00121	0.00006	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0046	0.0048	0.0002	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: 1662438)											
FJ2402787-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Total Metals (QC Lot: 1662439)											
YL2401456-011	Travel Blank	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1653466)											
VA24C3828-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0075	0.0069	0.0006	Diff <2x LOR	----
VA24C3828-001	Anonymous	Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00110	0.00110	0.242%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00203	0.00208	2.17%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00805	0.00789	1.94%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.051	0.050	0.002	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000086	0.0000093	0.0000007	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	279	275	1.59%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000268	0.000266	0.510%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00207	0.00207	0.0329%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00074	0.00075	0.00001	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0063	0.0060	0.0003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	78.2	76.6	2.07%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.272	0.268	1.47%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000646	0.000662	2.36%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00213	0.00213	0.000005	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	14.0	13.7	2.45%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.0101	0.0102	0.438%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000083	0.000084	0.0000007	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1653466) - continued											
VA24C3828-001	Anonymous	Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.11	2.10	0.761%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	25.7	25.1	2.54%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.767	0.762	0.657%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	365	362	1.04%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000402	0.000411	2.14%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0090	0.0085	0.0005	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	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: 1652648)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1652649)						
Conductivity	----	E100	1	µS/cm	1.3	----
Physical Tests (QCLot: 1654692)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 1652608)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1652609)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1652632)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1652633)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1652641)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1652642)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1652643)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1652644)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1652645)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1652646)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Organic / Inorganic Carbon (QCLot: 1652605)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 1653058)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 1653796)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1653796) - continued						
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1653796) - continued						
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 1662438)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Total Metals (QCLot: 1662439)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1653466)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	MBRR
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1653466) - continued						
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----

Qualifiers

Qualifier	Description
MBRR	*Initial MB for this submission had positive results for flagged analyte (data not shown). Low level samples were repeated with new QC (2nd MB results shown). High level results (>5x initial MB level) and non-detect results were reported and are defensible*

Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1652647)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1652648)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	102	85.0	115	----
Physical Tests (QCLot: 1652649)									
Conductivity	----	E100	1	µS/cm	147 µS/cm	96.9	90.0	110	----
Physical Tests (QCLot: 1654692)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	86.2	85.0	115	----
Anions and Nutrients (QCLot: 1652608)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	96.2	80.0	120	----
Anions and Nutrients (QCLot: 1652609)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.6	85.0	115	----
Anions and Nutrients (QCLot: 1652632)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	96.3	80.0	120	----
Anions and Nutrients (QCLot: 1652633)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	104	85.0	115	----
Anions and Nutrients (QCLot: 1652641)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 1652642)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1652643)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 1652644)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.6	90.0	110	----
Anions and Nutrients (QCLot: 1652645)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1652646)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Organic / Inorganic Carbon (QCLot: 1652605)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	101	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1653058)									

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 1653058) - continued									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	111	80.0	120	----
Total Metals (QCLot: 1653796)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	99.7	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	103	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	98.4	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	103	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	98.7	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	100	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	98.4	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	97.8	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	104	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.5	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.5	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	98.2	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	97.4	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	96.5	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	98.0	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	91.6	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	103	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	91.2	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	96.2	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	96.2	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	97.0	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1653796) - continued									
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	94.1	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	92.8	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	99.7	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	97.8	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	96.6	80.0	120	----
Total Metals (QCLot: 1662438)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.7	80.0	120	----
Total Metals (QCLot: 1662439)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	98.4	80.0	120	----
Dissolved Metals (QCLot: 1653466)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	104	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	99.6	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	95.3	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	94.6	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	97.1	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	97.6	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.9	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	100.0	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	94.6	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	95.8	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	105	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	97.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	98.5	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1653466) - continued									
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	103	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	90.1	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	99.1	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	105	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	97.4	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	91.0	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	100	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	93.3	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	98.7	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	97.1	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	104	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	96.6	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: 1652608)										
KS2403731-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0492 mg/L	0.05 mg/L	98.4	70.0	130	----
Anions and Nutrients (QCLot: 1652609)										
KS2403731-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0984 mg/L	0.1 mg/L	98.4	75.0	125	----
Anions and Nutrients (QCLot: 1652632)										
YL2401456-002	SNP 5-5	Phosphorus, total	7723-14-0	E372-U	0.0498 mg/L	0.05 mg/L	99.5	70.0	130	----
Anions and Nutrients (QCLot: 1652633)										
YL2401456-002	SNP 5-5	Ammonia, total (as N)	7664-41-7	E298	0.0952 mg/L	0.1 mg/L	95.2	75.0	125	----
Anions and Nutrients (QCLot: 1652641)										
VA24C4010-002	Anonymous	Fluoride	16984-48-8	E235.F	0.984 mg/L	1 mg/L	98.4	75.0	125	----
Anions and Nutrients (QCLot: 1652642)										
VA24C4010-002	Anonymous	Chloride	16887-00-6	E235.Cl	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1652643)										
VA24C4010-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.528 mg/L	0.5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1652644)										
VA24C4010-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.60 mg/L	2.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1652645)										
VA24C4010-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.504 mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1652646)										
VA24C4010-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	104 mg/L	100 mg/L	104	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1652605)										
KS2403731-005	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1653058)										
YL2401456-001	SNP 5-4	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Metals (QCLot: 1653796)										
FJ2402737-002	Anonymous	Aluminum, total	7429-90-5	E420	0.189 mg/L	0.2 mg/L	94.5	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0189 mg/L	0.02 mg/L	94.6	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0366 mg/L	0.04 mg/L	91.5	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00908 mg/L	0.01 mg/L	90.8	70.0	130	----
		Boron, total	7440-42-8	E420	0.108 mg/L	0.1 mg/L	108	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00394 mg/L	0.004 mg/L	98.4	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1653796) - continued										
FJ2402737-002	Anonymous	Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00962 mg/L	0.01 mg/L	96.2	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0397 mg/L	0.04 mg/L	99.3	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0185 mg/L	0.02 mg/L	92.3	70.0	130	----
		Copper, total	7440-50-8	E420	0.0180 mg/L	0.02 mg/L	90.3	70.0	130	----
		Iron, total	7439-89-6	E420	1.89 mg/L	2 mg/L	94.4	70.0	130	----
		Lead, total	7439-92-1	E420	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0941 mg/L	0.1 mg/L	94.1	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0187 mg/L	0.02 mg/L	93.6	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0197 mg/L	0.02 mg/L	98.4	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0365 mg/L	0.04 mg/L	91.2	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.80 mg/L	10 mg/L	98.0	70.0	130	----
		Potassium, total	7440-09-7	E420	4.06 mg/L	4 mg/L	102	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0182 mg/L	0.02 mg/L	90.8	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----
		Silicon, total	7440-21-3	E420	9.22 mg/L	10 mg/L	92.2	70.0	130	----
		Silver, total	7440-22-4	E420	0.00375 mg/L	0.004 mg/L	93.8	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0396 mg/L	0.04 mg/L	98.9	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00359 mg/L	0.004 mg/L	89.7	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Tin, total	7440-31-5	E420	0.0187 mg/L	0.02 mg/L	93.5	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0389 mg/L	0.04 mg/L	97.2	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0180 mg/L	0.02 mg/L	89.8	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00389 mg/L	0.004 mg/L	97.2	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0975 mg/L	0.1 mg/L	97.5	70.0	130	----
		Zinc, total	7440-66-6	E420	0.367 mg/L	0.4 mg/L	91.9	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
Total Metals (QCLot: 1662438)										
FJ2402787-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000880 mg/L	0 mg/L	88.0	70.0	130	----
Total Metals (QCLot: 1662439)										
YL2401475-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000924 mg/L	0 mg/L	92.4	70.0	130	----
Dissolved Metals (QCLot: 1653466)										
VA24C3828-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.382 mg/L	0.4 mg/L	95.5	70.0	130	----
VA24C3828-002	Anonymous	Antimony, dissolved	7440-36-0	E421	0.0380 mg/L	0.04 mg/L	95.0	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0392 mg/L	0.04 mg/L	98.1	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0371 mg/L	0.04 mg/L	92.8	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0704 mg/L	0.08 mg/L	88.0	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0174 mg/L	0.02 mg/L	87.1	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.170 mg/L	0.2 mg/L	84.8	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
Dissolved Metals (QCLot: 1653466) - continued										
VA24C3828-002	Anonymous	Cadmium, dissolved	7440-43-9	E421	ND mg/L	----	ND	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0744 mg/L	0.08 mg/L	93.0	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0371 mg/L	0.04 mg/L	92.9	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0345 mg/L	0.04 mg/L	86.4	70.0	130	----
		Iron, dissolved	7439-89-6	E421	3.64 mg/L	4 mg/L	90.9	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0353 mg/L	0.04 mg/L	88.4	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.174 mg/L	0.2 mg/L	87.2	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0398 mg/L	0.04 mg/L	99.5	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0735 mg/L	0.08 mg/L	91.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	19.7 mg/L	20 mg/L	98.7	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0360 mg/L	0.04 mg/L	90.1	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0779 mg/L	0.08 mg/L	97.4	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	17.2 mg/L	20 mg/L	86.1	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00635 mg/L	0.008 mg/L	79.4	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0817 mg/L	0.08 mg/L	102	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00676 mg/L	0.008 mg/L	84.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0362 mg/L	0.04 mg/L	90.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0381 mg/L	0.04 mg/L	95.2	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0696 mg/L	0.08 mg/L	87.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0364 mg/L	0.04 mg/L	90.9	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00715 mg/L	0.008 mg/L	89.4	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.193 mg/L	0.2 mg/L	96.5	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	ND mg/L	----	ND	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0785 mg/L	0.08 mg/L	98.1	70.0	130	----

CHAIN OF CUSTODY

ALS Laboratory

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
SBeat	Chris Beaverho		
DATE/TIME: 11 Sept 2024	DATE/TIME: Sept 11/24 10:58	DATE/TIME:	DATE/TIME:

CLIENT:	STLLR Gold Corp	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT (List due date):
PROJECT:	Damoti Lake SNP		☐ Non Standard or urgent TAT (List due date):
SITE:	Damoti Lake		

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt	4.1	°C	
Other comments:			

PURCHASE ORDER NO.:		ALS QUOTE NO.:	YL24-GOLD100-002 II
PROJECT MANAGER:	Harleen Kahlon	CONTACT PH:	905-567-4444
SAMPLER:	Sarah Beattie	SAMPLER MOBILE:	867-678-0984
EMAIL REPORTS TO:	saad.pasha@wsp.com, michael.iwanyshyn@wsp.com	EMAIL INVOICE TO:	natasha.elliott@wsp.com
		Job Number:	
		EQUIS Facility Code: 171683648	

SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS (Solid(S) Water(W))		MATRIX:	CONTAINER INFORMATION		ANALYSIS REQUIRED										Additional Information
SAMPLE	Sample identification (This description will appear on the report)	DATE / TIME (dd-mm-yyyy)	MATRIX	TOTAL CONTAINERS	pH, TDS (calculated), specific conductivity, TSS, sulphate (from bottle makred Routine)	Ammonia (bottle maked Nutrients)	Nitrate	Low level total phosphorous (Colourimetric)	Dissolved Organic Carbon (DOC)	Total Metals	Dissolved Metals	Total Mercury (Low Level)			Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	SNP 5-4 14:00	10-09-2024	WS	7	X	X	X	X	X	X	X	X			
	SNP 5-5 14:30	10-09-2024	WS	6	X	X	X	X	X	X		X			
	SNP 5-6 13:25	10-09-2024	WS	5	X	X	X	X		X	X				
	SNP 5-8 11:35	10-09-2024	WS	4	X	X		X		X					
	SNP 5-9 12:00	10-09-2024	WS	4	X	X		X		X					
	SNP 5-11 12:15	10-09-2024	WS	4	X	X		X		X					
	SNP 5-12 12:30	10-09-2024	WS	4	X	X		X		X					
	SNP 5-13 11:15	10-09-2024	WS	4	X	X		X		X					
	SNP 5-6-D 13:30	10-09-2024	WS	5	X	X	X	X		X	X				
	SNP 5-8-FB 11:30	10-09-2024	WS	4	X	X		X		X					
	Travel Blank 15:00	10-09-2024	WS	7	X	X	X	X	X	X	X	X			
		TOTAL													

NO icepack
custody seal
4°C

CHAIN OF CUSTODY

ALS Laboratory

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
S Bent	Chris Beaverho		mt
DATE/TIME: 11 Sept 2024	DATE/TIME: Sept 11/24 10:58	DATE/TIME: 12:10	DATE/TIME: 9/13

CLIENT:	STLLR Gold Corp	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):
PROJECT:	Damoti Lake SNP		☐ Non Standard or urgent TAT (List due date):
SITE:	Damoti Lake		
PURCHASE ORDER NO.:		ALS QUOTE NO.:	YL24-GOLD100-002 II
PROJECT MANAGER:	Harleen Kahlon CONTACT PH: 905-567-4444	Job Number:	
SAMPLER:	Sarah Beattie SAMPLER MOBILE: 867-678-0984	EQUIS Facility Code: 171683648	
EMAIL REPORTS TO:	saad.pasha@wsp.com, michael.iwanyshyn@wsp.com	EMAIL INVOICE TO:	natasha.elliott@wsp.com

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:	4.1 °C		
Other comments:			

SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS (Solid(S) Water(W))		MATRIX:	CONTAINER INFORMATION		ANALYSIS REQUIRED										Additional Information
SAMPLE	Sample Identification (This description will appear on the report)	DATE / TIME (dd-mm-yyyy)	MATRIX	TOTAL CONTAINERS	pH, TDS (calculated), specific conductivity, TSS, sulphate (from bottle marked Routine)	Ammonia (bottle marked Nutrients)	Nitrate	Low level total phosphorous (Colourimetric)	Dissolved Organic Carbon (DOC)	Total Metals	Dissolved Metals	Total Mercury (Low Level)				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	SNP 5-4 14:00	10-09-2024	WS	7	X	X	X	X	X	X	X	X				
	SNP 5-5 14:30	10-09-2024	WS	6	X	X	X	X	X	X		X				
	SNP 5-6 13:25	10-09-2024	WS	5	X	X	X	X		X	X					
	SNP 5-8 11:35	10-09-2024	WS	4	X	X		X		X						
	SNP 5-9 12:00	10-09-2024	WS	4	X	X		X		X						
	SNP 5-11 12:15	10-09-2024	WS	4	X	X		X		X						
	SNP 5-12 12:30	10-09-2024	WS	4	X	X		X		X						
	SNP 5-13 11:15	10-09-2024	WS	4	X	X		X		X						
	SNP 5-6-D 13:30	10-09-2024	WS	5	X	X	X	X		X	X					
	SNP 5-8-FB 11:30	10-09-2024	WS	4	X	X		X		X						
	Travel Blank 15:00	10-09-2024	WS	7	X	X	X	X	X	X	X	X				
			TOTAL													

Environmental Division
Yellowknife
Work Order Reference
YL2401456

Telephone : +1 867 873 5593

APPENDIX D

Quality Assurance and Quality Control

Quality Assurance/Quality Control

D1.0 INTRODUCTION

Key findings of the quality assurance and quality control (QA/QC) review for water quality are summarized below. For water quality, the field QC program collected one duplicate sample, one field blank, and one travel blank on September 10, 2024, alongside the primary Surveillance Network Program (SNP) samples. The assessment of QC sample results was completed using analytical data provided by ALS Canada Ltd. (ALS).

D2.0 WATER QUALITY

D2.1 Parameter List

Parameters required by the Type A Water Licence W2021L2-0004 (WLWB 2023) were analyzed, as requested.

D2.2 Detection Limits

Standard ALS detection limits (DLs) were used when analyzing samples collected during the September 2024 field program.

D2.3 Hold Times

ALS specifies the time between sample collection and analysis for each parameter, which should be met to obtain reliable data. For this program, the 15-minute hold time for pH (APHA 2012) was not met because ALS Canada Ltd. (ALS) cannot process the samples within this time limit. Additionally, the recommended three-day hold time for nitrate and nitrite in all samples, as well as ammonia, dissolved organic carbon, and total phosphorus in the travel blank, was exceeded. Hold times for other parameters were met.

D2.4 Units

Reported units were correct, and no issues were identified during the review of electronic data against the final certificate of analysis provided by ALS.

D2.5 Qualifiers

The ALS internal data quality report identified the following qualifiers during analysis:

- The detection limit was raised, and dilution was required due to high dissolved solids in samples at SNP 5-9 and SNP 5-11 for bromide, nitrite, and nitrate (SNP 5-9 only).
- The detection limit was adjusted due to sample matrix effects for total titanium in the sample at SNP 5-11 and for total thorium and zirconium in the duplicate sample at SNP 5-6.
- Dissolved metals concentrations exceeded total metals concentrations for:
  - arsenic in the primary sample at SNP 5-4 and the duplicate at SNP 5-6
  - phosphorus and rubidium in the primary sample at SNP 5-6 and the duplicate at SNP 5-6
  - lead in the primary sample at SNP 5-4
  - potassium in the duplicate at SNP 5-6

D2.6 Total versus Dissolved Metal Concentrations

Dissolved metal concentrations in water samples were compared to corresponding total metal concentrations. Dissolved and total concentrations were considered notable if the dissolved concentration was more than 20% higher than the total concentration. For samples collected in September 2024, dissolved concentrations were generally within 20% of total concentrations, except those identified in Section D2.5.

D2.7 Duplicate Sample Results

A duplicate water sample was collected at SNP 5-6 to assess variability during sample collection, handling, and analysis.

The relative percent difference (RPD) was used to determine the variability between the primary and duplicate samples and was calculated using the following formula:

$$RPD = ABS\left(\frac{(field\ sample\ concentration - duplicate\ sample\ concentration)}{average\ concentration}\right)\ x\ 100$$

where ABS = absolute value.

Values reported below the DLs were included in the calculations at half the applicable DL. The RPD was not calculated in cases where the concentration in both samples was less than five times the DL (i.e., within the range of analytical uncertainty).

The variability in parameter concentrations between primary and duplicate samples was considered notable if:

- the parameter concentration in at least one sample was greater than five times the DL
- the RPD was greater than 20%

These criteria are consistent with those used by ALS for internal QC procedures (Dang 2015, pers. comm.) and account for potential analytical uncertainty when concentrations approach DLs (Weiner 2000). Variability between the field and duplicate samples was rated as follows:

- **low** if less than 10% of the parameters included in the duplicate analysis were notably different from one another
- **moderate** if 10 to 30% of the parameters included in the duplicate analysis were notably different from one another
- **high** if more than 30% of the parameters included in the duplicate or split sample analysis were notably different from one another

The results of the comparison between the SNP 5-6 primary and duplicate samples are summarized in Table D-1. The concentrations of total suspended solids and total phosphorus had an RPD greater than 20% in the samples collected at SNP 5-6. Data re-checks were requested from the laboratory, and the results were confirmed. Overall, the variability between the primary and duplicate samples was rated as low; less than 10% of the parameters included in the analysis differed notably.

Table D-1: Duplicate Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	SNP 5-6		Relative Percent Difference
			Sample	Duplicate	
Conventional Parameters					
pH[(a)]	unitless	0.1	8.1	8.1	5%
Specific conductivity	µS/cm	2	370	371	0%
Hardness, as $CaCO_3$	mg/L	0.5	188	182	3%
Total alkalinity, as $CaCO_3$	mg/L	2	159	158	1%
Total suspended solids	mg/L	1	3.9	5.6	**36%**
Total dissolved solids (calculated)	mg/L	1	218	218	0%
Major Ions					
Calcium	mg/L	0.05	44	42	4%
Chloride	mg/L	0.5	3.7	3.6	2%
Fluoride	mg/L	0.02	0.21	0.20	6%
Magnesium	mg/L	0.005	19	18.7	2%
Potassium	mg/L	0.05	5.0	5.2	3%
Sodium	mg/L	0.05	6.6	6.4	2%
Sulphate	mg/L	0.3	35	34	3%
Nutrients					
Nitrate	mg-N/L	0.005	<0.005	<0.005	-
Nitrite	mg-N/L	0.001	<0.001	<0.001	-
Total ammonia	mg-N/L	0.005	0.013	0.013	-
Total phosphorus (colourimetric)	mg-P/L	0.002	0.038	0.028	**31%**
Dissolved phosphorus	mg-P/L	0.05	0.32	0.30	7%
Total Metals					
Aluminum	mg/L	0.003	0.072	0.071	2%
Antimony	mg/L	0.0001	<0.0001	<0.0001	-
Arsenic	mg/L	0.0001	0.001	0.00096	4%
Barium	mg/L	0.0001	0.014	0.014	1%
Beryllium	mg/L	0.00002	<0.00002	<0.00002	-
Bismuth	mg/L	0.00005	<0.00005	<0.00005	-
Boron	mg/L	0.01	0.034	0.036	-
Cadmium	mg/L	0.000005	0.0000097	0.0000079	-
Calcium	mg/L	0.05	47	49	4%
Cesium	mg/L	0.00001	0.00070	0.00068	4%
Chromium	mg/L	0.0005	0.00074	0.00075	-
Cobalt	mg/L	0.0001	0.0013	0.0011	13%
Copper	mg/L	0.0005	0.0015	0.0016	-
Iron	mg/L	0.01	0.66	0.59	11%
Lead	mg/L	0.00005	0.000088	0.000072	-
Lithium	mg/L	0.001	0.017	0.018	4%
Magnesium	mg/L	0.005	18	17	2%

Table D-1: Duplicate Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	SNP 5-6		Relative Percent Difference
			Sample	Duplicate	
Manganese	mg/L	0.0001	0.27	0.24	12%
Mercury	mg/L	0.0000005	-	-	-
Molybdenum	mg/L	0.00005	0.000073	0.000064	-
Nickel	mg/L	0.0005	0.0098	0.0094	4%
Potassium	mg/L	0.05	3.8	3.7	1%
Rubidium	mg/L	0.0002	0.0085	0.0083	2%
Selenium	mg/L	0.00005	0.000078	0.000083	-
Silicon	mg/L	0.1	2.9	2.9	2%
Silver	mg/L	0.00001	<0.00001	<0.00001	-
Sodium	mg/L	0.05	6.5	6.5	1%
Strontium	mg/L	0.0002	0.14	0.14	1%
Sulphur	mg/L	0.5	14	14	1%
Tellurium	mg/L	0.0002	<0.0002	<0.0002	-
Thallium	mg/L	0.00001	<0.00001	<0.00001	-
Thorium	mg/L	0.0002 – 0.0003[(b)]	<0.0003	<0.0002	-
Tin	mg/L	0.0001	<0.0001	<0.0001	-
Titanium	mg/L	0.0003	0.0017	0.0017	1%
Tungsten	mg/L	0.0001	<0.0001	<0.0001	-
Uranium	mg/L	0.00001	0.00043	0.00041	3%
Vanadium	mg/L	0.0005	<0.0005	<0.0005	-
Zinc	mg/L	0.003	<0.003	<0.003	-
Zirconium	mg/L	0.0006	<0.0006	<0.0006	-
Dissolved Metals					
Aluminum	mg/L	0.001	0.061	0.063	3%
Antimony	mg/L	0.0001	<0.0001	<0.0001	-
Arsenic	mg/L	0.0001	0.0012	0.0013	9%
Barium	mg/L	0.0001	0.012	0.012	1%
Beryllium	mg/L	0.00002	<0.00002	<0.00002	-
Bismuth	mg/L	0.00005	<0.00005	<0.00005	-
Boron	mg/L	0.01	0.034	0.032	-
Cadmium	mg/L	0.000005	0.0000078	0.0000092	-
Cesium	mg/L	0.00001	0.00078	0.00078	1%
Chromium	mg/L	0.0005	0.00071	0.00075	-
Cobalt	mg/L	0.0001	0.0010	0.0010	2%
Copper	mg/L	0.0002	0.0017	0.0018	5%
Iron	mg/L	0.01	0.36	0.35	3%
Lead	mg/L	0.00005	0.00013	0.00015	-
Lithium	mg/L	0.001	0.016	0.016	4%
Manganese	mg/L	0.0001	0.32	0.32	1%

Table D-1: Duplicate Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	SNP 5-6		Relative Percent Difference
			Sample	Duplicate	
Molybdenum	mg/L	0.00005	0.000053	0.000059	-
Nickel	mg/L	0.0005	0.0085	0.0086	2%
Rubidium	mg/L	0.0002	0.012	0.012	3%
Selenium	mg/L	0.00005	0.000091	0.000068	-
Silicon	mg/L	0.05	2.8	2.8	2%
Silver	mg/L	0.00001	<0.00001	<0.00001	-
Strontium	mg/L	0.0002	0.13	0.13	1%
Sulphur	mg/L	0.5	14	13	5%
Tellurium	mg/L	0.0002	<0.0002	<0.0002	-
Thallium	mg/L	0.00001	<0.00001	<0.00001	-
Thorium	mg/L	0.0001	0.00017	0.00017	-
Tin	mg/L	0.0001	<0.0001	<0.0001	-
Titanium	mg/L	0.0003	0.0013	0.0011	-
Tungsten	mg/L	0.0001	<0.0001	<0.0001	-
Uranium	mg/L	0.00001	0.00028	0.00028	1%
Vanadium	mg/L	0.0005	<0.0005	<0.0005	-
Zinc	mg/L	0.001	0.0034	0.0035	-
Zirconium	mg/L	0.0003	0.00052	0.00052	-

Notes:

Bolded values indicate relative percent difference is greater than 20%.

The relative percent difference is calculated for duplicate samples using the following formula: RPD = (absolute value (difference in concentration between field sample and duplicate sample) / average concentration) x 100%.

a) pH values were converted to hydrogen ion concentrations prior to calculating the relative percent difference.

b) Detection limit adjusted during laboratory analysis due to sample matrix effects (e.g. chemical interference, colour, turbidity).

SNP = Surveillance Network Program; < = less than; $CaCO_3$ = calcium carbonate; mg/L = milligrams per litre; µS/cm = microsiemens per centimetre; % = percent; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorous per litre; - = the relative percent difference was not calculated because the concentration in both samples was less than five times the detection limit.

D2.8 Field Blank Results

A field blank was collected at SNP 5-8 during the September 10, 2024, sampling event, with results summarized in Table D-2. Concentrations of all parameters were less than applicable DLs in the field blank, indicating a low potential for contamination during sampling.

Table D-2: Field Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Field Blank (SNP 5-8)
Conventional Parameters			
pH	unitless	0.1	5.6
Specific conductivity	µS/cm	2	<2
Total dissolved solids (calculated)	mg/L	1	<1
Total suspended solids	mg/L	1	<1

Table D-2: Field Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Field Blank (SNP 5-8)
Major Ions			
Calcium	mg/L	0.05	<0.05
Chloride	mg/L	0.5	<0.5
Fluoride	mg/L	0.02	<0.02
Magnesium	mg/L	0.005	<0.005
Potassium	mg/L	0.05	<0.05
Sodium	mg/L	0.05	<0.05
Sulphate	mg/L	0.3	<0.3
Nutrients			
Nitrate as N	mg-N/L	0.005	<0.005
Nitrite as N	mg-N/L	0.001	<0.001
Total ammonia	mg-N/L	0.005	<0.005
Total phosphorus (colourimetric)	mg-P/L	0.002	<0.002
Total Metals			
Aluminum	mg/L	0.003	<0.003
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Calcium	mg/L	0.05	<0.05
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005
Cobalt	mg/L	0.0001	<0.0001
Copper	mg/L	0.0005	<0.0005
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Magnesium	mg/L	0.005	<0.005
Manganese	mg/L	0.0001	<0.0001
Mercury	mg/L	0.0000005	-
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Potassium	mg/L	0.05	<0.05
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.1	<0.1
Silver	mg/L	0.00001	<0.00001

Table D-2: Field Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Field Blank (SNP 5-8)
Sodium	mg/L	0.05	<0.05
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.003	<0.003
Zirconium	mg/L	0.0002	<0.0002

Notes:

< = less than; mg/L = milligrams per litre; µS/cm = microsiemens per centimetre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorous per litre.

D2.9 Travel Blank

A travel blank was prepared by the analytical laboratory and accompanied the field team during travel to/from the site and sampling activities. Results for the travel blank sample are summarized in Table D-3. Parameter concentrations were less than five times the applicable DLs, indicating a low potential for contamination during sample handling, transport, and storage.

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Travel Blank
Conventional Parameters			
pH	unitless	0.1	5.5
Specific conductivity	µS/cm	2	<2
Total dissolved solids (calculated)	mg/L	1	<1
Total suspended solids	mg/L	1	<1
Dissolved organic carbon	mg/L	0.5	<0.5
Major Ions			
Calcium	mg/L	0.05	<0.05
Chloride	mg/L	0.5	<0.5
Fluoride	mg/L	0.02	<0.02
Magnesium	mg/L	0.005	<0.005
Potassium	mg/L	0.05	<0.05
Sodium	mg/L	0.05	<0.05
Sulphate	mg/L	0.3	<0.3

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Travel Blank
Nutrients			
Nitrate	mg-N/L	0.005	<0.005
Nitrite	mg-N/L	0.001	<0.001
Total ammonia	mg-N/L	0.005	<0.005
Total phosphorus (colourimetric)	mg-P/L	0.002	<0.002
Dissolved phosphorus	mg-P/L	0.05	<0.05
Total Metals			
Aluminum	mg/L	0.003	<0.003
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Calcium	mg/L	0.05	<0.05
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005
Cobalt	mg/L	0.0001	<0.0001
Copper	mg/L	0.0005	<0.0005
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Magnesium	mg/L	0.005	<0.005
Manganese	mg/L	0.0001	<0.0001
Mercury	mg/L	0.0000005	<0.0000005
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Potassium	mg/L	0.05	<0.05
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.1	<0.1
Silver	mg/L	0.00001	<0.00001
Sodium	mg/L	0.05	<0.05
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Travel Blank
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.003	<0.003
Zirconium	mg/L	0.0002	<0.0002
Dissolved Metals			
Aluminum	mg/L	0.001	<0.001
Antimony	mg/L	0.0001	<0.0001
Arsenic	mg/L	0.0001	<0.0001
Barium	mg/L	0.0001	<0.0001
Beryllium	mg/L	0.00002	<0.00002
Bismuth	mg/L	0.00005	<0.00005
Boron	mg/L	0.01	<0.01
Cadmium	mg/L	0.000005	<0.000005
Cesium	mg/L	0.00001	<0.00001
Chromium	mg/L	0.0005	<0.0005
Cobalt	mg/L	0.0001	<0.0001
Copper	mg/L	0.0002	<0.0002
Iron	mg/L	0.01	<0.01
Lead	mg/L	0.00005	<0.00005
Lithium	mg/L	0.001	<0.001
Manganese	mg/L	0.0001	<0.0001
Molybdenum	mg/L	0.00005	<0.00005
Nickel	mg/L	0.0005	<0.0005
Rubidium	mg/L	0.0002	<0.0002
Selenium	mg/L	0.00005	<0.00005
Silicon	mg/L	0.05	<0.05
Silver	mg/L	0.00001	<0.00001
Strontium	mg/L	0.0002	<0.0002
Sulphur	mg/L	0.5	<0.5
Tellurium	mg/L	0.0002	<0.0002
Thallium	mg/L	0.00001	<0.00001
Thorium	mg/L	0.0001	<0.0001

Table D-3: Travel Blank Results for the Surveillance Network Program at Damoti Lake, September 10, 2024

Parameter	Unit	Detection Limit	Travel Blank
Tin	mg/L	0.0001	<0.0001
Titanium	mg/L	0.0003	<0.0003
Tungsten	mg/L	0.0001	<0.0001
Uranium	mg/L	0.00001	<0.00001
Vanadium	mg/L	0.0005	<0.0005
Zinc	mg/L	0.001	<0.001
Zirconium	mg/L	0.0003	<0.0003

Notes:

< = less than; mg/L = milligrams per litre; µS/cm = microsiemens per centimetre; mg-N/L = milligrams of nitrogen per litre; mg-P/L = milligrams of phosphorous per litre.

D3.0 SUMMARY

The QA/QC assessment of the data collected during the September 10, 2024 sampling event indicated limited potential for contamination during sampling, handling, or transport. Duplicate sample results indicate that intrastation variability was low (i.e., sampling precision was high). Overall, the data are considered adequate to address the program's objectives.

D4.0 REFERENCES

APHA (American Public Health Association). 2012. Standard Methods for the Examination of Water and Wastewater. 22nd Edition, with updates to 2015. Washington, D.C.

Dang C. 2015. ALS Laboratory Group, Environmental Division. Personal Communication at ALS Vancouver, February 11, 2015.

Weiner ER. 2000. Applications of Environmental Chemistry: A Practical Guide for Environmental Professionals. Lewis Publishers, Boca Raton, FL. 288 pp.

WLWB (Wek'èezhìı Land and Water Board). 2023. Type A Water Licence W2021L2-0004. Issued January 13, 2023.

wsp.com