



## IDENTIFICATION

Department	Position Title	
Environment and Climate Change	Laboratory Assistant	
Position Number	Community	Division/Region
23-14263	Yellowknife	Water Monitoring and Stewardship/HQ

## PURPOSE OF THE POSITION

The Laboratory Assistant supports the Client Services Lead with sample reception and to ensure the timely preparation of water, wastewater and sediment samples for analysis, and prepare client supplies for shipment within the Taiga Environmental Laboratory (TEL) in accordance with the criteria and standards required to maintain continued certification with the Canadian Association for Laboratory Accreditation (CALA).

## SCOPE

Located in Yellowknife and reporting to the Client Services Lead, the Laboratory Assistant is responsible for receiving a wide variety of environmental sample types and preparing those samples for analysis. The Laboratory Assistant supports the Client Services Lead with sample reception, sample entry into the laboratory database, shipping supplies to clients and communicating with clients. The Laboratory Assistant will also be cross trained in other sections as required for the effective operation of the TEL.

The Department of Environment and Climate Change (ECC) works to promote and support the sustainable use and development of natural resources and to protect, conserve and enhance the NWT environment for the social and economic benefit of all residents.

The Water Monitoring and Stewardship Division bears the primary roles and responsibilities related to water-related research and monitoring, providing advice to co-management partners, water quality and quantity data analysis and interpretation, and water stewardship and planning. The Division, in cooperation with Environment and Climate Change Canada (ECCC) and other federal and territorial departments, is responsible for collecting and interpreting information about water quantity and quality in the NWT. The Division works with its water partners on a collaborative approach to water stewardship and planning in the NWT,



including transboundary water management agreements.

TEL is the only full-service environmental analytical laboratory in northern Canada. TEL performs a wide range of microbiological, organic and inorganic chemical analysis on water (fresh water, groundwater, drinking water, industrial effluents, and sewage) and soil/sediment samples. Significantly, TEL is accredited by CALA, and the scope of accreditation includes 248 individual parameters in four distinct sections: Inorganic, Organic, Trace Metals, and Microbiology. In addition to standard services, a variety of special services are also offered, including rush sample services, scientific training, QA/QC plans for regulatory permits, and public education.

TEL provides environmental testing services each year to the following clients:

- internal Government of the Northwest Territories (GNWT) departments including Environment and Climate Change (ECC), Health and Social Services (HSS), and Municipal and Community Affairs (MACA).
- federal government agencies, including Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and Environment and Climate Change Canada (ECCC).
- Indigenous governments and community/municipal governments.
- industry (e.g., mines), consultants, and other local businesses; and
- researchers from academic institutions working in the north.

TEL performs over 40,000 tests a year; analytical results provided by TEL are used by its clients to:

- ensure the safety of drinking water in all NWT communities.
- evaluate trends in environmental contaminant levels in fresh water from across the NWT.
- track pathogen levels (e.g., SARS-CoV-2) in wastewater to inform public health actions.
- ensure regulatory compliance of communities and government with the *Public Health Act* and *Water Supply System Regulations*; and
- ensure regulatory compliance of communities, remediation projects, and industries with the conditions of their water licenses under the *NWT Waters Act* and *Mackenzie Valley Resources Management Act*.

The Laboratory Assistant will be designated as an Analyst under the *NWT Waters Act* to certify and prepare legal samples. This may require the incumbent to testify in court.

## **RESPONSIBILITIES**

### **1. Prepares samples for chemical analysis for water and soil using established methods**



- Prepares samples for analysis using techniques such as decanting, filtering, subsampling, grinding, sieving, autoclaving either manually or on specific equipment as per test requirement.
  - Organizes and prioritizes samples according to hold time and due dates to ensure workflow is maintained in a timely manner to meet turnaround time.
  - Distributes samples to appropriate areas for analysis.
  - Follows quality control protocols.
  - Works with section staff to ensure QA/QC and turnaround times are met.
  - Maintains work area in a safe, clean, and orderly manner ensuring the principles of Workplace Hazardous Materials Information System (WHMIS) are adhered to.
  - Maintains preparation bottle inventory and equipment in section.
- 2. Contributes and assists sample reception**
- Receives client samples and ensures sample integrity is fit for analysis.
  - Identifies deficiencies of samples on paperwork to advise client.
  - Maintains inventory of supplies and advises Client Services Lead when an order is required.
  - Assists with picking up and dropping off coolers and supplies as needed.
- 3. Prepares and sends supplies to clients as needed**
- Follows regulations of Transportation of Dangerous Goods (TDG) when preparing shipments to clients via air.
  - Assists in fulfilling client supply orders for pickup and shipment.
  - Recording and maintaining records of quantity and lot numbers of supplies sent to clients.
  - Maintains inventory of shipping supplies (coolers, ice packs, labels, waybills).
- 4. Discards samples as outlined in laboratory procedure.**
- Follows Workplace Hazardous Materials Information System principles to collect and store chemical waste produced until appropriate final disposal is available.
  - Neutralizes waste acid before disposal.
- 5. Assists with logging samples into a Laboratory Information Management System**
- Ensures all client sample information is transcribed accurately into database system for use for final reporting and invoicing.
  - Ensures all testing needs and pricing are correct, as per any client testing agreements.
- 6. Provides support for other sections of the lab on an as-needed basis to ensure standards or rush turnaround times are met during the peak summer season or when there are staff shortages**



- Participates in cross-training opportunities to assist with the analysis of inorganic, trace metals, microbiology, molecular biology and/or organic samples.
- Analyzes samples or provides support to technologists in other sections of the lab at the direction of the Section Lead.

## **WORKING CONDITIONS**

### **Physical Demands**

The position is required to stand for long periods when performing lab work (i.e., up to 7.5 hours per day with standard breaks), typically four to five days per week or more when overtime is required. On average, the incumbent will be either standing or walking for 80% of each working day. There is also a demand to move and/or lift heavy coolers, and carts daily. The position requires repetitive motion such as pouring, decanting and filtering daily.

### **Environmental Conditions**

The work is performed in the laboratory and office environments. There is constant exposure to dust, noise and vibrations from freezers, fans, lab instruments and equipment, and daily exposure to substances that require special handling (e.g., applying knowledge of WHMIS) including noxious odors, toxic and corrosive chemicals (including known carcinogens), pathogens (human and animal excrement) and various forms of radiation.

Due to the work environment, protective clothing (e.g., lab coats, safety eye wear, gloves) and proper use of protective equipment (e.g., fume hood) are always required for work in the laboratory. Some sections of the laboratory are not air-conditioned and, because of the presence of running laboratory equipment, can reach temperatures of up to 28°C between the months of April and October.

### **Sensory Demands**

The work requires visual acuity as well as precise manual dexterity and hand-eye coordination to prepare samples for testing. The preparation of samples also requires the ability to make the appropriate motor responses at the appropriate time and with speed to maximize efficiency.

Visual acuity and tactile sensitivity are needed to assess very subtle sample conditions based on overall visual appearance (colour, shade, intensity, clarity), and temperature.

Sensory demands occur approximately 75% of the time.



### **Mental Demands**

The position is subject to tight timelines, fast work pace, and competing priorities, with seasonal increases in volume of work, particularly May to October, when the lab receives at least 80% of its annual sample load. During this time, staff are frequently required to work overtime (evenings and weekends) to meet seasonal demands. Work is continually interrupted depending on client and laboratory technologist's needs.

There is a requirement to maintain constant mental vigilance with respect to safety protocols around corrosive, damaging toxins and pathogens.

### **KNOWLEDGE, SKILLS AND ABILITIES**

- Knowledge of laboratory quality assurance and quality control practices.
- Knowledge of the use and care of laboratory preparation equipment.
- Knowledge in safe handling of concentrated acids and bases, chemical preservatives and bio-hazardous materials.
- Knowledge of and ability to comply with the Canada Labour Code safety requirements, the *NWT Safety Act*, the *NWT Occupational Health and Safety Regulations*, and Workplace Hazardous Materials Information Systems to ensure a safe working environment.
- Knowledge of International Standards Organization and Canadian Association for Laboratory Accreditation guidelines, standards and quality assurance/quality control principles.
- Ability to organize and prepare environmental samples according to set procedures.
- Ability to solve problems through independent conceptual thinking.
- Ability to work cooperatively as a team member.
- Interpersonal skills to effectively communicate both verbally and in writing.
- Organizational and time management skills, including the ability to plan, coordinate, prioritize activities, and meet deadlines.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

### **Typically, the above qualifications would be attained by**

A diploma from a recognized environmental or chemical laboratory technology program or from a relevant field of science such as chemistry, biology or environmental science and one year of relevant experience.

Equivalent combinations of education and experience will be considered.

### **ADDITIONAL REQUIREMENTS**

**Position Security** (check one)



No criminal records check required



- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check

**French language** (check one if applicable)

- French required (must identify required level below)

Level required for this Designated Position is:

ORAL EXPRESSION AND COMPREHENSION

Basic (B)  Intermediate (I)  Advanced (A)

READING COMPREHENSION:

Basic (B)  Intermediate (I)  Advanced (A)

WRITING SKILLS:

Basic (B)  Intermediate (I)  Advanced (A)

- French preferred

**Indigenous language:** Select language

- Required
- Preferred