



IDENTIFICATION

Department	Position Title	
Infrastructure	Stationary Engineer	
Position Number	Community	Division/Region
33-2308	Inuvik	Facilities/Beaufort Delta

PURPOSE OF THE POSITION

As part of the Facilities Management Division of the Beaufort Delta Region of the Department of Infrastructure, the Stationary Engineer is responsible for the safe, effective, and efficient operation, repair, and maintenance of plumbing, heating, ventilation, and all other mechanical equipment in the Department's owned and operated facilities in the Sahtu Region in accordance with Government of Northwest Territories (GNWT) acts and regulations, National and Municipal Codes, and departmental policies and procedures.

SCOPE

This position reports to the Maintenance Coordinator – Inuvik and provides operational services in plumbing, heating, ventilating, and all other mechanical systems in Inuvik and frequent site visits to other communities in the Beaufort Delta and Sahtu regions.

The scope of activities undertaken includes:

- Operations of building heating and mechanical equipment;
- Monitoring and maintaining indoor air quality and comfort;
- Adjusting and using computerized Direct Digital Control (DDC) systems to control heat and ventilation;
- Complete preventative maintenance tasks and repair orders on mechanical, electrical and plumbing systems;
- Working on-call and overtime as well as traveling frequently throughout the Sahtu region.

The Stationary Engineer works in sensitive and high security environments such as schools, hospitals and Royal Canadian Mounted Police (RCMP) facilities. Within the scope of service this position carries a high degree of direct responsibility for the safety, security, and comfort of building occupants.

RESPONSIBILITIES

1. Ensure satisfactory operation and monitor the performance of plumbing, heating, ventilation and mechanical systems in owned/ operated buildings by:

- Conducting regular inspections of all components of the systems, as provided by the Maintenance Management System (MMS) Building Services Standards, and recording all critical operating data in the Operating Log and MMS as required.
- Identifying and diagnosing problems and potential problems with buildings, equipment, and mechanical systems.
- Managing and operating building power plants in accordance with *GNWT Boilers and Pressure Vessels Act* and Regulations which includes combustion analysis, boilers testing and addition of chemicals to prevent corrosion on boilers and equipment.
- Checking motors and pumps for continued reliable operation (fan belts, pulleys, drive gears, etc. for early signs of wear).
- Conducting on-going system adjustments through changes in systems controls and responding to changes in ambient temperatures or occupancy levels.
- Ensuring that work completed in health program buildings comply with CSA Z317 and CSA 8002 infection control protocols.
- Reporting the outcome of inspection, initiating required maintenance and recording details on work orders.

2. Service boilers, heat exchangers, ventilation systems and water supply systems, and ensure safe and efficient operation. Conduct or coordinate regular and legislated preventative maintenance tasks on assigned equipment and systems to ensure safe and efficient operation, and longevity of assets by:

- Cleaning fans, ductwork, grills, coils, and filters.
- Servicing Heating, Ventilation and Air Conditioning (HVAC) systems and auxiliary equipment.
- Adjusting chemical balance of hydronic heating systems, specifically parameters such as pH and freezing points, by measurement, analysis and chemical treatment as needed.
- Responding to and stabilizing urgent and/or emergency situations, mitigating failures, conducting failure analysis and coordinating corrective actions.
- Cleaning chemical tanks and High Pressure High Temperature (HPHT) Systems.
- Inspecting and clearing plumbing drains and vent lines.
- Inspecting and adjusting hot water supply systems as required.
- Performing scheduled cleaning and maintenance on air compressors, tanks, air lines, and sensors within pneumatic control systems.

3. Respond to and complete repairs on plumbing, heating, ventilation and domestic water supply systems in owned and operated buildings by:

- Responding to alarm and emergency situations resulting from a shutdown of large and complex heating systems.
- Identifying the control or safety device that has tripped or stopped operation of the system, and isolating the cause of failure or alarm condition.

- Rectifying system condition by replacement of defective components, adjustment of control settings, or repair of damaged components.
- Restarting systems and monitoring for continued operating and testing for avoidance of repeat failures.
- Reconstruct valves after teardown for replacement of leaking seals, packing, or unsatisfactory operation.
- Troubleshooting intermittent failures in heating systems including determining causes of high pressure, low flow or no-flow situations, and completing repairs.
- Removing, rebuilding and replacing defective damper motors, circulating pumps/motors and ventilation blower motors.
- Replacing pneumatic and electrical heating controls.

4. Complete scheduled annual work, stemming from the MMS Standards in owned/operated buildings by:

- Dismantling and retrofitting heat exchangers.
- Dismantling, cleaning, adjusting, and reconstructing boilers.
- Identifying faults within pressure vessels that may create a hazardous condition, and notifying supervisor and/or the Territorial Boiler Inspector.
- Servicing, testing and repairing fire alarm systems at the points of connection to ventilation systems, and where connected to building, audible alarm systems in compliance with National Building Code (NBC) and National Fire Code (NFC).
- Servicing, testing and repairing sprinkler systems, including piping, heads, dry valves, fire and jockey pumps, and other related controls in compliance with NBC and NFC.
- Servicing, testing and repairing fire extinguishers in compliance with NBC and NFC.
- Conducting repairs on piping systems (including water, waste and heating piping systems) when required.

5. Perform other duties such as:

- Repairing commercial kitchen appliances.
- Assisting various trade disciplines with inspections and repairs.
- Maintaining a bench stock of critical components for the systems under control including, pump motors, burner nozzles, control relays, panel breakers, pump couplings, belts, etc.

This position will encounter new technological installs/upgrades to mechanical systems. The ability to learn, operate, maintain, repair and service new systems is required.

WORKING CONDITIONS

Physical Demands

Over 50% of time spent at substantial work such as climbing and/or balancing, stooping, kneeling, crouching and/or crawling, reaching, or handling. The position involves lifting from 10 to 25 Kg on a regular basis and heavier weights from time-to-time. The position involves outside work where temperatures are extreme for several months a year.

Environmental Conditions

This position is substantially exposed to fumes, temperature, toxic chemicals, loud noise, infectious substances and scalding steam over 50% of time while maintaining and servicing buildings and systems. Appropriate Personal Protective Equipment (PPE) is required to be used in these situations.

Sensory Demands

Over 50% of this position involves intense listening and observational skills in the diagnosis of equipment problems; hand/eye coordination to make repairs and replace parts, and touching/sensing in making repairs that are obscured from vision.

Mental Demands

The position causes a disruption of lifestyle when the incumbent is on 24 hour standby rotation, occurring every third week, for a continuous period of 168 hours. Additional hours in standby rotation occur to ensure departmental coverage.

Travel to small isolated communities is required and takes place a minimum of twelve times per year and lasts 3 to 4 days per trip. Accommodation in small communities can lack typical hotel amenities and can add to the stress of travelling in small aircrafts and /or over rough winter roads to reach the intended destination.

Further mental demands are placed on the incumbent who, within the scope of service, carries a high degree of direct responsibility for the safety, security, and comfort of building occupants and is expected to manage client irritabilities and expectations.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of large boiler systems, ventilation systems and pneumatic and electrical controls.
- Knowledge of building automation systems and controls.
- Knowledge of hydronic heating systems and chemical measurement, analysis and treatment.
- Knowledge and ability to manage and operate building power plants in accordance with *GNWT Boilers and Pressure Vessels Act* and Regulations.
- Ability to maintain accurate records and to enter critical operating data into relevant maintenance management systems.
- Ability to identify and diagnose problems and potential problems with buildings, equipment and mechanical systems.
- Ability to respond to and stabilize urgent and/ or emergency situations, troubleshoot intermittent failures, conduct failure analysis and coordinate corrective actions.
- Ability, knowledge and skills to work in a computer-based environment that includes word processing, spreadsheet and email programs (such as Microsoft Word, Excel and Outlook), as well as a variety of web-based software systems required to operate in the government environment.
- Professionally commit to the safety, security and comfort of building occupants.

Typically, the above qualifications would be attained by:

A 4th Class Stationary Engineer Certificate preferred (5th Class Certification may be considered) and two years of experience with operation, maintenance, troubleshooting and repair of large boiler systems, ventilation systems, and pneumatic and electrical controls. The incumbent must possess a Class 5 Driver's license.

One year of experience with repair of commercial kitchen appliances, commercial freezer and refrigeration systems would be an asset.

An equivalent combination of education and experience may be considered.

ADDITIONAL REQUIREMENTS

Position Security

- 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 applies)

- 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

Aboriginal language: Choose a language

- Required
- Preferred