



IDENTIFICATION

Department	Position Title	
Infrastructure	Stationary Engineer	
Position Number	Community	Division/Region
33-17067	Norman Wells	Sahtu Region

PURPOSE OF THE POSITION

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

Located in Norman Wells, the Stationary Engineer reports to the Maintenance Coordinator and provides operational services in plumbing, heating, ventilating, and all other mechanical systems in the Sahtu region.

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;
- Completing 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.



The incumbent is on 24-hour standby rotation, occurring every third week, for a continuous period of 168 hours. Additional hours in standby rotation may occur to ensure departmental coverage.

RESPONSIBILITIES

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

- Conduct regular inspections of all components of the systems, as provided by the Maintenance Management System (MMS) Building Services Standards, and record all critical operating data in the Operating Log and MMS as required.
- Identify and diagnose problems and potential problems with buildings, equipment, and mechanical systems.
- Manage and operate 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.
- Check motors and pumps for continued reliable operation (fan belts, pulleys, drive gears, etc. for early signs of wear).
- Conduct on-going system adjustments through changes in systems controls and respond to changes in ambient temperatures or occupancy levels.
- Ensure that work completed in health program buildings comply with CSA Z317 and CSA 8002 infection control protocols.
- Report the outcome of inspection, initiating required maintenance and recording details on work orders.

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

- Clean fans, ductwork, grills, coils, and filters.
- Service Heating, Ventilation and Air Conditioning (HVAC) systems and auxiliary equipment.
- Adjust chemical balance of hydronic heating systems, specifically parameters such as pH and freezing points, by measurement, analysis and chemical treatment as needed.
- Respond to and stabilize urgent and/or emergency situations, mitigating failures, conduct failure analysis and coordinate corrective actions.
- Clean chemical tanks and High Pressure High Temperature (HPHT) Systems.
- Inspect and clear plumbing drains and vent lines.
- Inspect and adjust hot water supply systems as required.
- Perform 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.**
 - Respond to alarm and emergency situations resulting from a shutdown of large and complex heating systems.
 - Identify the control or safety device that has tripped or stopped operation of the system and isolate the cause of failure or alarm condition.
 - Rectify system condition by replacement of defective components, adjustment of control settings, or repair of damaged components.
 - Restart systems and monitor for continued operating and test 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.
 - Remove, rebuild and replace defective damper motors, circulating pumps / motors and ventilation blower motors.
 - Replace pneumatic and electrical heating controls.

- 4. Complete scheduled annual work, stemming from the MMS Standards in owned/operated buildings.**
 - Dismantle and retrofit heat exchangers.
 - Dismantle, clean, adjust, and reconstruct boilers.
 - Identify faults within pressure vessels that may create a hazardous condition and notify supervisor and/or the Territorial Boiler Inspector.
 - Service, test and repair 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).
 - Service, test and repair sprinkler systems, including piping, heads, dry valves, fire and jockey pumps, and other related controls in compliance with NBC and NFC.
 - Service, test and repair fire extinguishers in compliance with NBC and NFC.
 - Conduct repairs on piping systems (including water, waste and heating piping systems) when required.

- 5. Perform other duties as determined by the Maintenance Coordinator.**
 - Repair commercial kitchen appliances.
 - Assist various trade disciplines with inspections and repairs.
 - Maintain a bench stock of critical components for the systems under control including, pump motors, burner nozzles, control relays, panel breakers, pump couplings, belts.



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

Travel to small, isolated communities is required and takes place a minimum of 12 times per year and lasts three to four days per trip. Accommodation in small communities can lack typical hotel amenities and travel will include small aircrafts and /or over rough winter roads to reach the intended destination.

Within the scope of service, the incumbent may carry a high degree of direct responsibility for the safety, security, and comfort of building occupants and will be required 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 professionally commit to the safety, security and comfort of building occupants.
- 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.
- Ability to learn, operate, maintain, repair and service new systems as technological installs/upgrades to mechanical systems occur.
- 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 5th Class Certification and two years of experience with operation, maintenance, troubleshooting and repair of large boiler systems, ventilation systems, and pneumatic and electrical controls.

Equivalent combinations of education and experience will be considered.

ADDITIONAL REQUIREMENTS

The incumbent must possess a Class 5 Driver's license.

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 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