



IDENTIFICATION

Department	Position Title	
Infrastructure	Stationary Engineer Trainee	
Position Number	Community	Division/Region
33-12826	Hay River	Facilities/South Slave

PURPOSE OF THE POSITION

The Stationary Engineer Trainee assists in the operation, maintenance and repair of the plumbing, heating, ventilating and domestic water supply systems in Government of the Northwest Territories (GNWT) owned and operated buildings that fulfill work experience requirements towards certification as a 5th Class Stationary Engineer.

SCOPE

This position is located in Hay River and reports to the Facility & Maintenance Coordinator. It assists in the provision of operational services on plumbing, heating, ventilating and domestic water supply systems in all GNWT owned and operated buildings in the Hay River Area to ensure safe and satisfactory operation.

The position will further assist in annual inspections, boiler teardowns, and responses to plumbing, heating, and ventilation repair requests in all GNWT owned and operated buildings in the region. The position will also assist all Department tradespeople in the maintenance and repairs of all GNWT owned assets in the Hay River area.

Inspection, maintenance and operation processes must be completed in accordance with the *Boilers and Pressure Vessels Act* and Regulations. The position will also be required to assist Department tradespeople in the maintenance and repair of GNWT owned assets in the Hay River area.

This is a position of trust involving work in health centers, schools, and correctional centres. The nature of duties of this position gives the incumbent access to information, equipment and supplies that would not normally be available to staff (e.g. setting up and maintaining security surveillance systems, electronic locking systems, pharmacy systems, etc.).



RESPONSIBILITIES

- 1. Over the course of the training, the incumbent will learn to operate and monitor the performance of plumbing, heating, ventilating and domestic water supply systems in GNWT buildings to ensure satisfactory operation, by:**
 - Conducting regular inspections of all components of the systems, as provided by the Computerized Maintenance Management System (CMMS) Building Services Standards and recording all critical operating data in the operating log, as required.
 - Conducting specific inspections of all boilers, heat exchangers, and hot water heaters.
 - Checking glycol and water levels and temperatures and pressures.
 - Checking the operation of motors and pumps for continued reliable operation (fan belts, pulleys and drive gears for early signs of wear).
 - Conducting any required systems adjustments through changes in system controls, in accordance with findings from the regular inspections, and adjusting systems in response to changes in ambient temperatures or occupancy levels.
 - Conducting frequent combustion analysis of flue gases and adjusting air/oil/natural gasoline ration for peak efficiency.
- 2. Over the course of the training, the incumbent will learn to service the boilers, heat exchangers, ventilating and water supply systems to ensure a safe and efficient operation, by:**
 - Cleaning fans, ductwork, grills, coils and filters.
 - De-scaling humidifiers.
 - Testing and adjusting heating system chemical balance.
 - Calibrating meters and gauges.
 - Cleaning chemical tanks and High-Pressure High Temperature systems.
 - Inspecting and clearing plumbing drain and vent lines.
 - Inspecting and adjusting hot water supply system, as required.
 - Performing scheduled cleaning and maintenance on air compressors, tanks, air lines, and sensors of the pneumatic control systems.
- 3. Over the course of the training, the incumbent will learn to respond to and complete repairs on plumbing, heating, ventilating and domestic water supply systems in GNWT buildings. Inspection, maintenance and operation processes must be in accordance with the Pressure Vessel Ordinance. Work is done by:**
 - Responding to alarm and emergency situations resulting from a shutdown of complex and large 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 system and monitoring for continued operation, and testing for avoidance of repeat failure.



- Reconstruction of valves after tear-down for replacement of leaking seals, packing, or unsatisfactory operation.
- Trouble-shooting intermittent failures in the heating system, to determine the cause of high pressure, low flow, or no-flow situations, and effect repairs to faulty components.
- Removing, rebuilding and replacing defective damper motors, circulating pumps and motors, ventilating blower motors.
- Replacing pneumatic and electrical heating controls.

4. Over the course of the training, the incumbent will learn to complete scheduled annual work, stemming from the MMS Standards in specific GNWT buildings by:

- Tearing down and retrofitting heat exchangers.
- Tearing down, cleaning, adjusting, and reconstructing boilers.
- Identifying faults within pressure vessels that may create a hazardous condition and notifying the Territorial Boiler Inspector.
- Informing the Chief Operating Engineer or the Facility & Maintenance Coordinator that changes to the fire alarm system are required.
- Repairing sprinkler systems, including piping, heads, dry valves, fire and jockey pumps, and other related controls.

5. Over the course of the training, the incumbent will learn to perform other duties, such as:

- Repairing commercial kitchen appliances.
- Repairing commercial refrigeration and freezer plants.
- Maintaining a bench stock of critical components for the systems under control, such as pump motors, burner nozzles, control relays, panel breakers, pump couplings, etc.
- Assist Department tradespeople in the repair and maintenance of GNWT owned buildings in Fort Smith and in other communities as required.

WORKING CONDITIONS

Physical Demands

Operates hand and power tools and diagnostic equipment – 2 hours per day;
Occasionally lifts and moves heavy objects – 1 hour per day.

Frequently works in closed quarters – 2 hours per day.

Use safety equipment and clothing, such as goggles, masks, gloves, coveralls, and safety boots, in moderate to extreme weather conditions. Other special equipment may be required as well – 6 hours per day.

Environmental Conditions

Exposure to chemical odors – 1 hour per day.

Seasonal work in extreme cold or heat conditions – approximately 2 hours per day.

Work in sooty, dirty conditions - 1 hour per day.

Work with natural gas-fired appliances and boilers - 2 hours per day.



Work with asbestos – 1 hour per month.

Sensory Demands

Exposure to chemical odors and high noise levels – approximately 2 hours per day.

Mental Demands

Responds to emergencies at all hours and in any weather conditions.

KNOWLEDGE, SKILLS AND ABILITIES

- Ability to maintain accurate records.
- Ability to use a computer.
- Ability to undertake self-study twice a week for half days, in the Power Engineering Computer Managed Learning (CML) modules with NAIT, SAIT, or another approved technical institution.
- 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:

Completion of Grade 10 Science, English and Math.

Equivalent combinations of education and experience will be considered.

ADDITIONAL REQUIREMENTS

A Class 5 Driver's License.

Continued employment as a trainee is conditional upon successful completion of the required hours of experience, coursework and exams for each level in the Power Engineering Computer Managed Learning (CML) modules from an Alberta-based technological institute (e.g. NAIT).



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