

REGULATOR MECHANIC

SUMMARY/PURPOSE

To perform skilled work related to the installation, maintenance, operation, and repair of regulated pressurized distribution systems and to prepare documentation of this work to be submitted to PHMSA and MNOPS during the annual audit of the gas utility.

This classification has the primary responsibility for maintaining effective pressures either directly or remotely through the water and gas distribution systems. This includes not only maintenance of the devices used, but setting limits and making all necessary adjustments as well as providing safe bypasses to maintain service.

ESSENTIAL DUTIES AND RESPONSIBILITIES (other duties may be assigned)

1. Monitor, adjust, troubleshoot, repair, and operate equipment to maintain the proper odorization of gas distributed through the system.
2. Build, install, adjust, maintain, and repair gas and water distribution system regulators, reliefs, pressure reducers, and pressure transmitters.
3. Diagnose the cause of distribution and transmission system equipment and control malfunctions.
4. Clean, repair, rebuild, test and calibrate water and gas pressure regulators, reliefs, reducers, computerized pressure transducers, and related equipment.
5. Build and install temporary bypass systems to maintain gas or water services during a scheduled testing, installation, maintenance, or repair.
6. Ventilate and pump manholes, vaults or other confined spaces and monitor oxygen, H₂S, and levels of those or any other hazardous gases in confined spaces.
7. Maintain at all times a safe work environment.
8. Train subordinates in correct and safe operating procedures.
9. Guide assigned personnel in the execution of work with the regulated pressurized distribution system.

JOB REQUIREMENTS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skills and abilities required.

Education & Experience Requirements

1. Completion of the City of Duluth Water & Gas Maintenance or Utility Operator apprenticeship program, or
2. Three years of full-time experience installing, repairing, and calibrating and adjusting gas and/or water distribution system regulators and reliefs.

License Requirements

1. Possession of a valid Minnesota Driver's license or equivalent.
2. Acquire and maintain OQ (Operator Qualification) certification as required by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) within six months of appointment.

Knowledge Requirements

1. Extensive knowledge of the methods, equipment and materials used in high-pressure plumbing, pipe fitting, and related trades as they apply to water and gas distribution.
2. Knowledge of construction work methods and procedures related to maintenance and repair of water and gas distribution systems.
3. Knowledge of the use, operation and maintenance of pumps and compressors.

4. Knowledge of the use, operation and maintenance of threading and tapping tools and machines.
5. Knowledge of the use, operation and maintenance of fittings, valves and regulators and reliefs.
6. Extensive knowledge of applicable safety precautions and safe work methods.
7. Extensive knowledge of OSHA, PHMSA, MNOPS, and all applicable rules, laws, and regulations.
8. Knowledge of the use of computers and associated application software.
9. Knowledge of engineering blue print drawings and/or schematics and electrical schematics.
10. Knowledge of troubleshooting, diagnosing, repairing, plumbing, electrical, of electronic and mechanical equipment related to the SCADA system, to include electronically controlled valves and gas regulation equipment.
11. Knowledge of micro-computer and programmable logic controller operation.
12. Knowledge of mercaptan.
13. Knowledge of math sufficient to calculate pressure, volume, flow, and related calculations based on principles such as Boyle's Law, the Ideal Gas Law, etc.

Skill Requirements

1. Skill in diagnosing and repairing water and gas regulated system problems.
2. Skill in the use of hand and power tools.

Ability Requirements

1. Ability to drive a service truck and operate motorized equipment such as a snowblower to access regulator stations.
2. Ability to establish and maintain relationships with supervisors, co-workers, contractors and the public.
3. Ability to diagnose and repair regulator and relief stations
4. Ability to instruct personnel in safe operating procedures.
5. Ability to attend work on a regular basis.

Physical Ability Requirements

1. Ability to work outside year-round.
2. Ability to work in damp and confined spaces.
3. Ability to occasionally stoop to perform service tasks.
4. Ability to occasionally lift, carry and position tools and equipment weighing up to 50 pounds individually, and up to 100 pounds with assistance.

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