

Regulator Mechanic

SUMMARY/PURPOSE

This classification has the primary responsibility for maintaining effective pressures either directly or remotely through the water and gas distribution systems and to perform skilled work related to the installation, maintenance, operation, and repair of regulated pressurized distribution systems.

SUPERVISION RECEIVED

The supervisor makes assignments by defining objectives, priorities, and deadlines and assists incumbents with unusual situations which do not have clear precedents. Incumbents plan and carry out the successive steps and handle problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices in the occupation

SUPERVISION GIVEN

Does not have direct supervisory responsibility but does have significant oversight of employees or projects that require delegation and direction over the work of others.

ESSENTIAL DUTIES AND RESPONSIBILITIES

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. Troubleshoot, diagnose, repair, and maintain hot water bath heaters and catalytic heating units.
4. Diagnose the cause of distribution and transmission system equipment and control malfunctions.
5. Monitor and record Mercaptan levels at all town border stations.
6. Clean, repair, rebuild, test, and calibrate water and gas pressure regulators, reliefs, reducers, computerized pressure transducers, and related equipment.
7. Build and install temporary bypass systems to maintain gas or water services during a scheduled testing, installation, maintenance, or repair.
8. 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.
9. Perform regulator inspections and maintain inspection forms.
10. Perform leak detection for all natural gas related equipment.
11. Maintain at all times a safe work environment.
12. Train subordinates in correct and safe operating procedures.
13. Maintain proper inventory of materials and parts necessary to operate and maintain the gas distribution system.
14. Guide assigned personnel in the execution of work with the regulated pressurized distribution system.
15. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
16. Coordinate with various City departments, other government agencies, and community groups to develop methods of sharing resources, minimizing duplication, and simplifying procedures.
17. Provide training on new or modified procedures and policies to all affected parties.
18. Coordinate and perform gas distribution functions and programs for the City.
19. In collaboration with the supervisor, organize and direct the work activities of assigned team, and determine work priorities, assignments, and work schedules.
20. Provide input on decisions regarding the hiring processes and onboarding procedures of personnel.
21. Establish and maintain positive working relationship with the supervisor and employees by maintaining two-way communication, producing consistent results, advocating for the team when appropriate, and offering expertise to improve processes, systems, and the organization.
22. Other duties may be assigned.

JOB REQUIREMENTS

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

1. Education & Experience Requirements
 - A. A minimum of three (3) years of related education and/or full-time, verifiable professional experience to include installing, repairing, and calibrating and adjusting gas and/or water distribution system regulators and reliefs as a primary responsibility; OR completion of the City of Duluth Water & Gas Maintenance or Utility Operator apprenticeship.
2. License Requirements
 - A. Possess and maintain a valid Minnesota Class D driver's license or privilege.
 - B. 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 (6) months of appointment.
3. Knowledge Requirements
 - A. 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.
 - B. Knowledge of construction work methods and procedures related to maintenance and repair of water and gas distribution systems.
 - C. Knowledge of the use, operation, and maintenance of pumps and compressors.
 - D. Knowledge of the use, operation, and maintenance of threading and tapping tools and machines.
 - E. Knowledge of the use, operation and maintenance of fittings, valves and regulators and reliefs.
 - F. Extensive knowledge of applicable safety precautions and safe work methods.
 - G. Extensive knowledge of OSHA, PHMSA, MNOPS, and all applicable rules, laws, and regulations.
 - H. Knowledge of the use of computers and associated application software.
 - I. Knowledge of engineering blueprint drawings and/or schematics and electrical schematics.
 - J. 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.
 - K. Knowledge of micro-computer and programmable logic controller operation.
 - L. Knowledge of mercaptan.
 - M. 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.
 - N. Knowledge of problem-solving and conflict-resolution techniques.
 - O. Knowledge of applicable safety requirements.
 - P. Knowledge of, or the ability to learn, City policies and procedures.
 - Q. Knowledge of federal, state, and local laws, statutes, regulations, codes, and standards related to the area of responsibility.
 - R. Knowledge of effective leadership and personnel practices.
4. Skill Requirements
 - A. Skill in diagnosing and repairing water and gas regulated system problems.
 - B. Skill in the use of hand and power tools.
 - C. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, and modern office equipment.
 - D. Skill in managing one's own time and the time of others.
 - E. Skill in completing assignments accurately and with attention to detail.
 - F. Skill in mediation and dispute resolution.
 - G. Skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

5. Ability Requirements

- A. Ability to drive a service truck and operate motorized equipment, such as a snowblower, to access regulator stations.
- B. Ability to diagnose and repair regulator and relief stations.
- C. Ability to instruct personnel in safe operating procedures.
- D. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
- E. Ability to communicate and interact effectively with members of the public.
- F. Ability to communicate effectively both orally and in writing.
- G. Ability to recognize, analyze, and solve a variety of problems.
- H. Ability to organize and prioritize work while meeting multiple deadlines.
- I. Ability to handle difficult and stressful situations with professional composure.
- J. Ability to work successfully as a member of a team and independently with minimal supervision.
- K. Ability to train and lead others.
- L. Ability to interpret and apply laws, contracts, regulations, policies, and procedures.
- M. Ability to enforce safety rules and regulations.
- N. Ability to maintain confidential information.
- O. Ability to demonstrate dependability, responsibility, and consistency in job performance.
- P. Ability to attend work as scheduled and/or required.
- Q. Ability to be scheduled for standby duty.

Physical Demands

The work requires considerable and strenuous physical exertion such as frequent climbing of tall ladders, lifting heavy objects over 50 pounds, crouching or crawling in restricted areas.

Work Environment

The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress requiring a range of safety and other precautions (e.g., working at great heights under extreme outdoor weather conditions, or in similar situations in which conditions cannot be controlled).

HR: LD	Union: Basic	EEOC: Skilled Craft Workers	CSB: 07/17/2023	Class No: 4207
WC: 7502	Pay: 31	EEOF: Utilities/Transportation	CC:	Resolution:

REGULATOR MECHANIC

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, and to perform skilled work related to the installation, maintenance, operation, and repair of regulated pressurized distribution systems.

SUPERVISION RECEIVED

The supervisor sets the overall objectives and resources available. The incumbent and supervisor, in consultation, develop the deadlines, projects, and work to be done.

SUPERVISION GIVEN

Does not have direct supervisory responsibility but does have significant oversight of employees and input regarding performance on a regular basis.

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. Troubleshoot, diagnose, repair, and maintain hot water bath heaters and catalytic heating units.
- ~~3-4.~~ Diagnose the cause of distribution and transmission system equipment and control malfunctions.
5. Monitor and record Mercaptan levels at all town border stations.
- ~~4-6.~~ Clean, repair, rebuild, test, and calibrate water and gas pressure regulators, reliefs, reducers, computerized pressure transducers, and related equipment.
- ~~5-7.~~ Build and install temporary bypass systems to maintain gas or water services during a scheduled testing, installation, maintenance, or repair.
- ~~6-8.~~ 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.
9. Perform regulator inspections and maintain inspection forms.
10. Perform leak detection for all natural gas related equipment.
- ~~7-11.~~ Maintain at all times a safe work environment.
12. Train subordinates in correct and safe operating procedures.
- ~~8-13.~~ Maintain proper inventory of materials and parts necessary to operate and maintain the gas distribution system.
- ~~9-14.~~ Guide assigned personnel in the execution of work with the regulated pressurized distribution system.
15. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
16. Coordinate with various City departments, other government agencies, and community groups to develop methods of sharing resources, minimizing duplication, and simplifying procedures.
17. Provide training on new or modified procedures and policies to all affected parties.
18. Coordinate and perform gas distribution functions and programs for the City.

19. In collaboration with the supervisor, organize and direct the work activities of assigned team, and determine work priorities, assignments, and work schedules.
20. Provide input on decisions regarding the hiring processes and onboarding procedures of personnel.
21. Establish and maintain positive working relationship with the supervisor and employees by maintaining two-way communication, producing consistent results, advocating for the team when appropriate, and offering expertise to improve processes, systems, and the organization.
22. Other duties may be assigned.

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.

1. Education & Experience Requirements

1. ~~Completion of a minimum of the City of Duluth Water & Gas Maintenance or Utility Operator apprenticeship program, or~~
 - 2-A. ~~Three~~three (3) years of related education and/or full-time, verifiable professional experience to include installing, repairing, and calibrating and adjusting gas and/or water distribution system regulators and reliefs as a primary responsibility; OR completion of the City of Duluth Water & Gas Maintenance or Utility Operator apprenticeship.

2. License Requirements

- 1-A. ~~Possession of~~Possess and maintain a valid Minnesota ~~Driver's~~Class D driver's license or equivalent privilege.
- 2-B. 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 (6) months of appointment.

3. Knowledge Requirements

- 1-A. 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-B. Knowledge of construction work methods and procedures related to maintenance and repair of water and gas distribution systems.
- 3-C. Knowledge of the use, operation, and maintenance of pumps and compressors.
- 4-D. Knowledge of the use, operation, and maintenance of threading and tapping tools and machines.
- 5-E. Knowledge of the use, operation and maintenance of fittings, valves and regulators and reliefs.
- 6-F. Extensive knowledge of applicable safety precautions and safe work methods.
- 7-G. Extensive knowledge of OSHA, PHMSA, MNOPS, and all applicable rules, laws, and regulations.
- 8-H. Knowledge of the use of computers and associated application software.
- 9-I. Knowledge of engineering ~~blue print~~blueprint drawings and/or schematics and electrical schematics.
- 10-J. 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-K. Knowledge of micro-computer and programmable logic controller operation.
- 12-L. Knowledge of mercaptan.
- 13-M. Knowledge of math sufficient to calculate pressure, volume, flow, and related calculations based on principles such as ~~Boyle's~~Boyle's Law, the Ideal Gas Law, etc.
- N. Knowledge of problem-solving and conflict-resolution techniques.
- O. Knowledge of applicable safety requirements.
- P. Knowledge of, or the ability to learn, City policies and procedures.

- Q. Knowledge of federal, state, and local laws, statutes, regulations, codes, and standards related to the area of responsibility.
- R. Knowledge of effective leadership and personnel practices.

4. Skill Requirements

- 1.A. Skill in diagnosing and repairing water and gas regulated system problems.
- 2.B. Skill in the use of hand and power tools.
- C. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, and modern office equipment.
- D. Skill in managing one's own time and the time of others.
- E. Skill in completing assignments accurately and with attention to detail.
- F. Skill in mediation and dispute resolution.
- G. Skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

5. Ability Requirements

- 1.A. 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.B. Ability to diagnose and repair regulator and relief stations.
- 4.C. Ability to instruct personnel in safe operating procedures.
- D. Ability to attend work on a regular basis. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
- E. Ability to communicate and interact effectively with members of the public.
- F. Ability to communicate effectively both orally and in writing.
- ~~5.A.~~

Physical Ability Requirements

- 1.G. Ability to work outside year-round. recognize, analyze, and solve a variety of problems.
- 2.H. Ability to organize and prioritize work in damp and confined spaces while meeting multiple deadlines.
- 3.I. Ability to occasionally stoop to perform service tasks. handle difficult and stressful situations with professional composure.
- J. Ability to work successfully as a member of a team and independently with minimal supervision.
- K. Ability to train and lead others.
- L. Ability to interpret and apply laws, contracts, regulations, policies, and procedures.
- M. Ability to enforce safety rules and regulations.
- N. Ability to maintain confidential information.
- O. Ability to demonstrate dependability, responsibility, and consistency in job performance.
- P. Ability to attend work as scheduled and/or required.
- Q. Ability to be scheduled for standby duty.

Physical occasionally lift, carry and position tools and equipment weighing up to Demands

- 4. The work requires considerable and strenuous physical exertion such as frequent climbing of tall ladders, lifting heavy objects over 50 pounds individually, and up to 100 pounds with assistance, crouching or crawling in restricted areas.

Work Environment

The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress requiring a range of safety and other precautions (e.g., working at great heights under extreme outdoor weather conditions, or in similar situations in which conditions cannot be controlled).

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WC: 7502	Pay: 30	EEOF: Utilities/Transportation	CC: 20130325	Resolution: 13-0134R