

TREATMENT PLANT INSTRUMENTATION TECHNICIAN

Definition:

Under general supervision, installs, maintains, calibrates and repairs electronic, mechanical and other metering, recording and control instrumentation and communication and telemetering systems related to water treatment and distribution systems.

Distinguishing Characteristics:

This is a specialist position that performs independently with significant consequence of error and a need for extreme accuracy and thoroughness. Incumbents frequently climb, stoop, kneel, crouch, reach, stand and walk in performances of the duties. The duties require frequent application of finger dexterity, grasping, feeling, and balancing, plus the ability to focus vision under twelve inches as well as over twenty feet, distinguish colors and shades of colors and depth perception. Must operate a motor vehicle frequently and work in a variety of conditions both inside and outside in inclement weather. May lift in excess of fifty pounds on an occasional basis.

Examples of Duties:

- installs, maintains, calibrates, repairs and tests a variety of recording, control, telemetry sampling and metering devices;
- installation of new equipment by outside contractors, monitor the service turbidity meters, adjust pressure switches, repair and maintain chlorinator controls and telemetry equipment;
- analyze electrical circuitry and take effective repair actions;
- make periodic inspections of metering control instruments and devices diagnosing potential or existing problems;
- cleans, lubricates, calibrates and adjusts a variety of equipment related to water treatment plant operations;
- layout, install, align and place in service new instrumentation, control or metering devices;
- reads and interprets wiring diagrams, mechanical drawings, technical manual and specifications;
- estimates labor and material costs on projects;
- ensures proper safety precautions and methods are followed;
- trains maintenance and operations staff on the proper use and operation of instrumentation and controls;
- maintains accurate records;
- make oral and written reports;
- documents and draws circuits as installed;
- program systems as required and performs related duties as required.

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Qualifications:

Knowledge of:

- electrical and electronic circuits;
- principles and methods of maintaining testing, repairing, adjusting and calibrating instrumentation used in water treatment and distribution facilities;
- telemetry systems and computers;
- safe work practices;
- process related electrical equipment;
- computer operation;
- maintenance and repair of electrical circuits and control relays;
- technical math;
- principles and methods of water treatment plant operation;
- training principles.

Ability to:

- diagnose mechanical, electrical, electronic and other systems and malfunctions in instrumentation and telemetering systems;
- understand and interpret electrical schematics, blueprints, plans and wiring diagrams, manuals and specifications;
- use and care for testing and repair equipment;
- estimate labor and material costs;
- maintain records;
- make oral and written reports;
- establish and maintain effective working relations with others;
- document installations and modification information on equipment and circuits;
- follow oral and written directions.

Education/Experience:

Sufficient education, training and experience to demonstrate the knowledge, skills and abilities listed above. These would normally be acquired by completion of high school and a recognized apprenticeship program in the electrical/instrumentation field or completion of the requirements for an Associate degree in electronics or a related field. In addition, two years of experience in instrument installation, maintenance and repair or an equivalent combination of education, training and experience.

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License/Certificates:

Must possess and maintain a valid California driver's license with an acceptable driving record. Possession of a Water Treatment Certificate, Grade II is preferred.