

Title: Water Plant Instrument/Control Technician II
PG: 45
Status: Civil Service
Position Reports to: Designated Supervisor
Department: Water Utilities

Class Code: 3097
Date: 09/08

GENERAL DESCRIPTION OF CLASS:

This is skilled technical work, at the journeyman level, in the maintenance, trouble shooting and repair of water plant instrumentation and computer components. Work involves performing routine, skilled, and technical installation, repairs, calibration, and cleaning of all plant instrumentation and computer control systems components. Independent judgment regarding maintenance, control and use of test equipment is required. Task assignments require technical competence to the degree of performing actual work with minimal supervision.

ESSENTIAL FUNCTIONS:

1. Performs the installation, adjustment, calibration, maintenance, and repairs of a variety of electromechanical, electrical, mechanical, digital computer and electronic components of plant instrumentation and control.
2. Repairs printed circuit boards and associated equipment; constructs special devices as required.
3. Performs preventive maintenance programs and engages in preventive maintenance routines. This includes the ability to perform preventive maintenance on very complex equipment using state of the art technologies and record keeping.
4. Completes maintenance work orders, reports and records.
5. Compiles data for special plant operation and efficiency studies.
6. Coordinates the compilation of inventory and requisition of supplies.
7. Assists plant mechanic and electrician in maintenance and repair of all plant operating equipment.
8. Assists computer programmer with computer hardware installation and repair.
9. Reads, designs and interpret blueprints, schematic's, piping and instrument diagrams and performs print corrections by revising drawing or makes new drawings for submission to be drafted.
10. Ability to interpret hydraulic, piping, tubing, ANSI symbol tables for fluid, electrical and flow symbols on electrical schematics, ladder schematics and flow diagrams being essential to perform troubleshooting and repairs as needed.
11. Perform process loop tuning, DCS systems and other instrument and control systems and processes.
12. Maintains detailed work reports, spreadsheets, graphs, plots, database's on computer based software (Maximo, MS Word, MS Access, and MS Excel). Maintains a basic understanding of spread sheet programming and associated software to compile and manipulate data for reports and charts.
13. Required to install and repair of plastic, stainless steel and copper tubing that include tube fittings, piping sizes, hangers, and tube tracks.
14. The knowledge and ability to use very precise test equipment and maintain calibration records for the instrumentation as well as the test equipment used.
15. Extensive knowledge of digital and analog transducers, pressure, flow, load cells, feeders, and scales.
16. Knowledge and ability to use microprocessor/computer data loggers, hard drives, and tape storage devices to perform backups and record keeping.
17. Will be required to make critical decisions without supervision with proper procedures of equipment running or shutting down in a safe and proper manner.

ADDITIONAL RESPONSIBILITIES:

1. Will be trained, assigned and shall be an active participant in the departments "Emergency Response Team."

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2. Performs related work as required.

KNOWLEDGE, SKILLS, & ABILITIES:

1. Extensive knowledge of the installation, operation, and repair of electromechanical, electrical, mechanical and digital computer instrumentation.
2. Extensive knowledge of occupational, operation, terminology, hazards and safety precautions for common instruments and controls.
3. Ability to coordinate and perform equipment repairs with plant operations, supervisors, subordinates, and vendors.
4. Ability to make independent judgments on the maintenance and repair of plant instrumentation and computer equipment to meet operational needs as well as assisting in upgrading installed systems.
5. Ability to compose and write complete accurate reports in a clear and concise manner, and demonstrate communication skills, interpret varied instrumentation and engineering diagrams, specifications, and schematics, including the ability to understand and carry out directions.
6. Ability to work with all PC based computer programs and produce data into reports and charts.
7. Extensive skills in the operation of electric/electronic test equipment such as DC power supplies, milliamp and millivolt calibrators, multimeters, and signal sources, as well as standard tools.
8. Extensive knowledge of the symbols and standard practices used in the preparation of process and instrument flow diagrams and the ability to use technical libraries to determine state-of-the-art methods for instrument selection, application, maintenance, trouble-shooting and problem analysis.
9. Extensive knowledge of the general structure and functional role of microprocessors and maintenance philosophies for unit, board and component level trouble-shooting.
10. Extensive knowledge of the characters and major components of computer data collection systems for water production.

WORKING ENVIRONMENT/CONDITIONS:

Requires medium work that involves climbing stairs, walking or standing some of the time, exerting up to 50 pounds of force on a recurring basis, and routine keyboard operations.

The job risks exposure to electrical shock, chemicals, wet/humid conditions, heights, adverse weather conditions, confined spaces, pollen, dusts, fumes, noxious odors, vibration, extreme noise levels, moving machinery, and bright/dim light.

The job requires normal visual acuity, and field of vision, hearing, speaking, color perception, sense of smell, depth perception, and texture perception.

QUALIFICATIONS (EDUCATION, TRAINING AND EXPERIENCE):

1. High school diploma or its equivalent.
2. Two (2) years of experience as a Water Plant Instrument /Control Technician I or two (2) years experience in a similar position of instrumentation and control.
3. Two (2) years technical training in instrumentation or computer maintenance.
4. An equivalent combination of education and experience that is determined to be directly related to the foregoing specific requirements may be substituted.

SPECIAL REQUIREMENTS:

1. State of Florida Class "C" water plant operator certification is preferred.
2. Must possess and maintain a valid state of Florida driver's license.
3. Must possess and maintain a valid telephone number.

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4. Performs emergency repairs on the water instrumentation and control system after normal working hours; subject to working overtime and participating in stand-by duty.
5. Required to pass and maintain qualifications for:
 - a. Respiratory Protection Physical
 - b. Pulmonary Function
 - c. Qualitative and Quantitative Fit Test(s), which requires "no facial hair which interferes"
6. May be required to work overtime, or alternate hours, as necessary for the efficient operation of the department. Position may be designated as Mission Critical by Department Director .