



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

INSTRUMENTATION AND CONTROL TECHNICIAN III

Group-Section: Water System Operations Group	FLSA Status: Non-Exempt Bargaining Unit: AFSCME	Salary Grade: 44 Job #: XA18
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JOB SUMMARY

This is the journey level position performing Instrumentation and Control Technician III job duties.

DISTINGUISHING CHARACTERISTICS

Positions at this level are fully competent and apply the full range of specialized skills and job knowledge in area of specialization; adapts procedures, operations, techniques, tools, materials, and/or equipment to meet needs of area of specialization. Uses judgment in interpreting and adapting guidelines such as policies, regulations, precedents, and work directions for application to specific cases or problems. The decision regarding what needs to be done depends upon the analysis of the subject, phase, or issues involved in each assignment, and the chosen course of action may have to be selected from many alternatives. The work involves treating a variety of conventional problems, questions, or situations in conformance with established criteria.

OVERSIGHT

Supervision Received: The supervisor makes assignments by defining objectives, priorities, and deadlines; and assists the employee with unusual situations that do not have clear precedents. The employee plans and carries out the successive steps and handles problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices in the occupation. Completed work is usually evaluated for technical soundness, appropriateness, and conformity to policy and requirements. The methods used in arriving at the end results are not usually reviewed in detail.

Supervision Given: May act as a lead. May coordinate and review work assignments of employees performing the same general work as the lead on a day-to-day basis. Responsibilities may involve solving problems and providing instructions on work procedures.

JOB DUTIES

1. Installs, tests, maintains, troubleshoots, configures, and repairs instrumentation, electronic equipment, control systems, and automation systems. Configures and uses various protocols over network and serial communications.
2. Plans, installs, and configures copper and fiber optic networks; maintains switches, modems, routers, and frame relay access devices.
3. Installs, maintains, and repairs computer peripherals, data loggers, security systems, and uninterruptable power supplies. Installs, maintains, and troubleshoots video conferencing and monitoring equipment.
4. Installs, troubleshoots, maintains, field tests, and adjusts Supervisory Control and Data Acquisition components including remote terminal units and programmable logic controllers.

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5. Installs, calibrates, maintains, and repairs water quality and process control instrumentation including flow meters.
6. Installs, calibrates, and maintains automatic meter reading equipment.
7. Prepares as-built drawings.
8. Conducts technical investigations and studies and analyzes results.
9. May participate on a project team.
10. Performs other related Instrumentation and Control Technician job duties as required.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience: High school diploma or general education development test (GED), and completion of 40 semester units from an accredited college, university, vocational, or military school and four years of relevant experience; or two years experience as an Instrumentation and Control Technician II.

Required Knowledge of: Fundamentals of electronics; mechanical principles; water treatment processes; chemical feed and disinfection systems; Supervisory Control And Data Acquisition system, communication networks and protocols; Programmable Logic Controllers; voice and data communication system; audio and video equipment; fiber optic technology; conveyance and distribution systems; pumping and power generation systems; radio base remote monitoring and control technology; mechanical, pneumatic, and hydraulic systems; safety practices and procedures; applicable federal, state, and local laws, codes, and regulations; and current office technology and equipment.

Required Skills and Abilities to: Prepare, read and interpret plans, piping and instrumentation diagrams, blueprints, technical manuals, electrical and electronic schematics; troubleshoot; perform applicable mathematic calculations; build electronic circuitries; use applicable software applications and operating systems; calculate applicable chemical formulas; understand and comply with Metropolitan policies and standards for workplace health and safety; manage time; use various electronic testing equipment; use independent judgment and exercise discretion; problem solve; prioritize and multi-task; communicate clearly and concisely, both verbally and in writing; establish and maintain effective working relationships with those contacted in the course of work; work independently and in a team environment; and operate current office equipment including computers and supporting applications.

CERTIFICATES, LICENSES, AND REGISTRATION REQUIREMENTS

Employees in this position may be required to obtain and maintain the following certifications, licensing, and registrations:

Certificates

- Forklift
- Manlift
- Instrumentation Society of America Certified Control Systems Technician Level I

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Licenses

- Valid California Class C Driver License that allows you to drive in the course of your employment

Registrations

- None

PHYSICAL DEMANDS, WORK ENVIRONMENT, AND VISION REQUIREMENTS

The physical demands and work environment characteristics described here are representative of those that must be met or may be encountered by an employee to successfully perform the job duties of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the job duties.

Physical Demands: The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as personal computers and record boxes. The work may require specific, but common, physical characteristics and abilities such as above-average agility and dexterity.

Work Environment: The work involves moderate risks or discomforts that require special safety precautions, e.g., working around moving parts, carts, or machines, or irritant chemicals; etc. Employees may be required to use protective clothing or gear such as masks, gowns, coats, boots, goggles, gloves, or shields.

Vision Requirements: Color vision (ability to identify and distinguish colors)

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