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**Position: Electrical Instrumentation Technician / Electrical Instrumentation Technician Senior**

**Reports to:** Water Operations Supervisor

### **Basic Function**

Under general supervision, performs a variety of skilled electrical and instrumentation work for the operations, maintenance and construction of the potable and non-potable water systems. Also performs a variety of routine tasks related to water distribution and treatment. Specific duties may be assigned only when the incumbent has obtained certain certification(s) as described in the minimum qualifications section below.

### **Supervision**

Reports to the Water Operations Supervisor; may receive direction and general supervision from the Operations Manager.

### **Distinguishing Characteristic**

Electrical Instrumentation Technician is the entry level position in the Electrical Instrumentation Technician series. At this level, incumbents perform routine electrical and instrumentation work and other duties as assigned under direct supervision. The Technician is distinguished from the next higher level of the Technician Senior by the latter serving as a journey level classification and performing more complex and specialized tasks while exercising broader discretion and independent judgement.

Electrical Instrumentation Technician Senior is the full journey level position in the Electrical Instrumentation Technician series. At this level, incumbents perform complex and specialized electrical and instrumentation work under general supervision. The Technician Senior is distinguished from the Technician classification by the requirement for a higher level of certifications and experience with water systems.

### **Typical Duties:**

The duties listed below are representative of the Electrical Instrumentation Technician series with more specialized tasks performed by the Technician Senior classification.

Install, test, calibrate, and maintain electrical systems and equipment such as electrical motors, motor control centers (high, medium and low voltage), panel boards, generators and transfer switches, automatic safety controls; various electric controls used in water production and

distribution systems; troubleshoot and repair high, medium, and low voltage electrical equipment and systems; operate, maintain, and repair SCADA control equipment; wire facilities or equipment for service; prepare reports and maintain records, such as preventive maintenance tests and repairs; operate a variety of test equipment; read and interpret blueprints, schematics, and construction design drawings; order and maintain inventory control of parts and materials.

Operate, inspect, maintain, repair water treatment facilities including wells, chlorinators, chemical feed equipment, pressure filters, recording and measuring devices; report unusual operating conditions and major repair needs; maintain and repair water distribution facilities including water mains, service lines and meters, valves, asphalt and concrete surfaces; booster pumps, pressure regulating and sustaining valves, water storage tanks, take water samples and perform analytical and bacteriological tests as required; record readings and maintain other pertinent data; keep facilities clean and in order.

Respond to inquiries, investigate and resolve customer complaints and coordinates work with other District staff; plan and prepare jobs from verbal and written instructions and specifications; oversee electrical safety training programs and implement electrical safety rules, regulations, and procedures.

#### Electrical Instrumentation Technician Senior

Install, program and troubleshoot special equipment such as Remote Terminal Units, Programmable Logic Controllers, Soft Starts and Variable Frequency Drives; design and build electronic and electrical system components; coordinate and supervise the electrical and system control work of contractors and vendors; provide direction to small crews in electrical and instrumentation maintenance work assignments.

#### **Minimum Qualifications**

##### **Knowledge**

Theory and practice of electrical design, installation, repair, maintenance, testing and troubleshooting of high, medium, and low voltage systems, generators, electrical motors, SCADA systems, electronic and electro-mechanical systems. Safety regulations and aspects of electrical and water utility field work

##### **Abilities**

Safely perform a variety of electrical and water systems tasks. Follow oral and written instructions; read and interpret schematics and drawings. Record and maintain thorough and accurate

records. Use computer hardware and software applications related to work assignments. Effectively organize assigned tasks and work assignments. Recognize unusual or dangerous operating conditions and make sound judgments within established guidelines. Perform mathematical calculations. Communicate effectively and act in a courteous manner with public and staff.

### **Education and Experience**

Any combination that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and skills would be:

Technician:

Experience: Two years of experience performing electrician responsibilities in an industrial, manufacturing, utility, and/or large commercial setting.

Technician Senior:

Experience: Four years of experience performing electrician responsibilities in an industrial, manufacturing, utility, and/or large commercial setting, including a minimum of two years at the journey level.

Education: Completion of high school or its equivalent. Additional related education may be substituted for experience or experience may be substituted for education.

### **Physical Demands**

This position requires sufficient strength and stamina to perform heavy physical labor and must be able to sit, stand, walk on level unlevel or slippery surfaces, stoop, crouch, squat, bend, turn, twist, kneel, grasp, push, pull, reach and climb ladders in the performance of daily duties. The ability to lift, carry and push tools, equipment and supplies weighing up to 60 pounds while wearing personal protective equipment is also required. In addition, it requires vision, hearing, balance, and hand eye coordination appropriate to perform maintenance and repair work and to operate power tools and heavy equipment.

### **Working Environment**

Work takes place outdoors in a variety of weather conditions, including wet, heat and cold and may include exposure to dust, dirt, chemicals, fumes and other contaminants, noise producing tools and equipment, machinery with moving parts, around moving equipment and vehicle traffic. Some work may take place below ground, overhead, in confined spaces or on ladders.

### **License or Certification**

Electrical Instrumentation Technician must obtain a Grade I Water Treatment Operator (T1) and Grade 2 Water Distribution Operator (D2) Certification issued by the California Water Resources

Control Board within 18 months from the date of hire. Must possess a valid California Driver License and have a clean driving record.

Electrical Instrumentation Technician Senior must possess a Grade II Water Treatment Operator (T2) and a Grade II Water Distribution (D2) issued by the California Water Resources Control Board and an Electrical and Instrumentation Technologist Grade 2 issued by the California Water Environment Association.

**Other Requirements**

Must be available for shift work, on-call assignment and call-back work; must be willing to wear a uniform and must reside within a 30-minute response time by the end of probationary period.

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