

# **CALLEGUAS MUNICIPAL WATER DISTRICT JOB DESCRIPTION**

**Job Title: SENIOR CONTROLS TECHNICIAN**

**Division: Operations and Maintenance**

**Position Type: Full Time**

**Reports To: Control System Supervisor**

**FLSA Status: Non-Exempt**

**Revision Date: January 2006**

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## **POSITION SUMMARY**

Working individually or as a member of a crew, this advanced journeyman position performs skilled electrical or control work in the Control Systems division. Position requires DOHS Water Distribution Operator Grade 1 and Water Treatment Operator Grade 1 certificates; a proficient knowledge in electrical and control theory; the abilities to work unsupervised and effectively communicate; and display initiative, versatility and innovation in solving complex problems and complicated work assignments. Typical duties include the installation, maintenance, repair, calibration and testing on a variety of process control interfaces, programmable logic controllers, metering and monitoring equipment used in water distribution, water treatment and power generation; testing and documentation of wiring, motors and electrical switchgear; maintenance of backup power systems; the maintenance and monitoring of cathodic protection systems; the documentation of monthly water sales; and the programming and troubleshooting of PLC ladder logic.

## **ESSENTIAL DUTIES AND RESPONSIBILITIES**

To perform this job successfully, an individual must be able to perform each essential duty satisfactory. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties and responsibilities.

- Required to perform installation, testing, evaluation, modification, calibration, maintenance and repair of instrumentation, and telemetry equipment and systems throughout the District.
- Performs troubleshooting, diagnostic analysis, and fault isolation of a variety of electrical, electronic and electro-mechanical equipment and systems, including MCCs, motors, transformers, etc.
- Performs preventative, emergency and overhaul maintenance of transmitters, receivers, modems, transducers, regulators, controllers, meters, recorders and ancillary equipment.
- Performs calibration of data gathering and control equipment to ensure performance accuracy.
- Installs controls and monitoring equipment, and applies control theory in the use of controllers, relays and other electrical and electronic components in electrical and mechanical applications.

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- Repairs and installs cables and wiring in conduits and raceways.
- Uses CAD and other software based programs to design and modify as built drawings.
- Performs measurements, tests and evaluations to verify performance of electrical and electro-mechanical systems utilizing direct and alternating current, both single and three phase.
- Must have a cursory understanding of PLC and Supervisory Control and Data Acquisition (SCADA) system logic and software and be able to interface with the systems trouble shooting problems.
- Be able to perform measurements with electronic test equipment, including signal generators, oscilloscopes, function generators and electronic counters.
- Familiar with the maintenance adjustment and replacement of mechanical equipment/parts for water treatment, storage, pumping, pressure control and power generation.
- Be responsible for their own safety and the safety of coworkers by recognizing hazards and potentially hazardous situations, and having an awareness of safe practices on the job site.
- Performs other work, as assigned

## **SUPERVISOR RESPONSIBILITIES**

This position does not include supervisory responsibilities.

## **QUALIFICATIONS**

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, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

### Education and Experience

A high school diploma or general education degree (GED) or a minimum of two years related experience and/or training or equivalent combination of education and experience in the installation and maintenance of electrical equipment, instrumentation or control systems using equipment; such as, programmable logic controllers, power supplies, modems, transmitters, receivers, multiplexers and radio communications. Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Should have the ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

### Skills and Abilities

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, procedure manuals and blue prints. The Senior Controls Technician should be able to write routine reports and internal memoranda, plus be able to communicate effectively with employees and customers. Must have knowledge of safety requirements for working around heavy and power equipment, construction sites, high voltages, and in confined spaces. The position requires the individual to apply common sense understanding in carrying out instructions furnished in written, oral, or diagram form and be able to solve day-to-day problems, which may occur in stressful environments. Must have a thorough knowledge of electrical control, digital and analog electronic theory, and circuit analysis. In addition the

individual must have a full range of electrical and computer programming skills and be familiar with water hydraulics and pneumatics and be skilled in the use of precision measurement devices.

### **EQUIPMENT TO BE USED**

The Senior Controls Technician must demonstrate an ability to perform maintenance and measurements with tools and test equipment; such as, multimeters (VOM), meggers, power heads, electric benders and various other power and hand-tools. Must also be able to use radio and telephones to communicate, and office equipment; such as, computer terminals and printers.

The physical demands described are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to stand; walk; use hands to finger, handle, or feel; reach with hands and arms; and talk or hear. The employee frequently is required to climb stairs and ladders or balance and is occasionally required to sit; stoop, kneel, crouch, or crawl; and taste or smell. Senior Controls Technicians must be able to regularly lift and/or move up to 10 pounds, frequently lift and/or move up to 25 pounds, and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus. Personal protective equipment provided by the employer is regularly required to be worn. The employee must have the ability to be able to wear and operate a half and full face air purifying respirator.

### **WORK ENVIRONMENT**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The Senior Controls Technician is normally required to work in an outdoor environment, which frequently consists of hillsides and uneven terrain and exposure to allergens. In addition the employee may work in the industrial environment of the water treatment plant, well fields, pipelines, support-structures, and construction sites, confined space environments and is frequently exposed to moving mechanical parts. The employee is occasionally exposed to interior wet and/or humid conditions; high, precarious places; fumes or airborne particles; toxic or caustic chemicals; risk of electrical shock; vibration and moving mechanical parts. The noise level in the work environment is occasionally loud. The employee is a designated Emergency Services Worker and is occasionally called upon to work overtime or odd schedules.

### **SPECIAL REQUIREMENTS**

The individual must possess a current California Operators license and have a good driving record. A driving record provided by the Department of Motor Vehicles showing less than two

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(2) points assessed within the last 36 months and/or no serious or multiple traffic violations or accidents or failure to appear notices within the last 36 months.

The applicant will agree to submit to and pass the District's pre-employment, post-offer medical examination including drug and alcohol screening performed by a physician chosen by the District. The applicant will agree to authorize background reference checking with past employers and personal references.

The Senior Controls Technician must also possess or obtain a State of California Department of Health Services water distribution operator Grade 1 certificate and water treatment operator Grade 1 certificate within 18 months of hire or assignment.