

## **CONTROL SYSTEMS TECHNICIAN**

### Definition:

Under supervision, installs, maintains, programs, tests and adjusts telemetry equipment, SCADA equipment, programmable logic controllers and other electronic control and telemetry equipment and related software and performs related duties as required.

### Distinguishing Characteristics:

This is a journey level class engaged in the installation and maintenance of a variety of electronic equipment. The incumbents are expected to work with little direct supervision. It is distinguished from other maintenance occupations by the specialization in electronics, networks, personal computers, and related software, control mechanisms, telemetry and other telecommunications apparatus. The duties require travel to various remote sites in Placer County, work in all types of weather, traversing uneven ground, the need to distinguish between colors, fine finger dexterity in manipulating small objects and regular walking, stooping, bending, lifting (approximately 50 lbs. occasionally), and carrying. May occasionally work on a ladder or mechanical lift. Must regularly operate a motor vehicle.

### Examples of Duties:

- install, test, calibrate, diagnose, troubleshoot, program and maintain SCADA equipment;
- install, maintain and troubleshoot pump control equipment, programmable controllers, networks and related electronic equipment and wiring;
- install, test and maintain various electronic measuring and control equipment in treatment plants, pumps, pressure stations, distribution systems, canals, and streams;
- diagnose and troubleshoot SCADA equipment and programs;
- analyze equipment, network and software functions and operations and take appropriate actions;
- develop operational and maintenance protocols;
- install, test and maintain a variety of computer and telemetry equipment including radio and microwave transmission equipment;
- may install and maintain telephone equipment and systems and other data transmission related systems or equipment;
- maintain and repair UPS and other equipment related to SCADA systems;
- train others on new equipment or programs;
- review project drawings, specifications and as-built drawings;
- maintain accurate and complete records;

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- may develop specifications or aid in the purchase, testing, installation and maintenance of radio equipment and other electronic testing, measuring, communication or monitoring equipment;
- performs other related duties as required.

### Qualifications:

### Knowledge of:

- analog and digital telemetering systems;
- SCADA equipment and programs;
- federal regulations pertaining to the operation and maintenance of microwave and radio transmitters;
- safety regulations and procedures related to working with electronic equipment;
- operating principles of programmable electronic control equipment, computer equipment, electronic test equipment, measuring and monitoring devices used in water treatment plants, distribution systems, pumps, pressure regulation and water flow regulation;
- various electronic test equipment, programs and protocols used in control devices.

### Ability to:

- work effectively with operations, engineering, maintenance, construction and office personnel;
- work effectively with little direct supervision;
- analyze problems with electronic control, measuring and communication equipment and programs and take effective action to repair, maintain and modify such equipment and programs;
- comprehend and effectively work from complex electrical and electronic drawings and specifications;
- interpret and follow instructions in oral, written, diagrammatic or schedule form;
- read, interpret and follow documents such as safety rules, operating and maintenance instructions and procedure manuals;
- analyze systems and program problems and develop and implement effective and efficient solutions;
- write clear and concise reports;
- keep accurate and complete records of work requested and performed and procedures and protocols followed;
- use hand tools and electronic test equipment to locate and repair malfunctions;

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- establish and maintain effective and cooperative working relationships;
- program and maintain SCADA systems.

### Education/Experience:

Sufficient education, training and experience to demonstrate the knowledge, skills and abilities listed above. These would normally be acquired by completion of the requirements for graduation from high school and two years of supplemental training in electronic equipment maintenance and troubleshooting and three years of experience in the maintenance of electronic control equipment similar to the SCADA equipment used in water and wastewater applications (Allen-Bradley PLC's and Intellusion software preferred) or an equivalent combination of education, training and experience.

### License/Certificates:

Must possess and maintain a valid California driver's license with an acceptable driving record.