



TECHNICIAN

*Class specifications are intended to present a descriptive list of the range of duties performed by Employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DESCRIPTION

Install, field test, maintain, and troubleshoot a wide variety of electronic, electrical, electro-mechanical equipment, intercommunication systems and devices; to assist in maintenance and repair work on water and/or irrigation systems, pumps, and associated equipment located in Tri-Dam power plants, dams and related facilities; and perform other duties as assigned.

DISTINGUISHING CHARACTERISTICS

This is a journey level classification. The incumbent in this classification also installs, tests and maintains communication equipment, protection systems, security network, and PLC's for the hydro-electric production facilities. The incumbent also assists in the installation, maintenance, and major overhauls of mechanical and electrical equipment in hydroelectric plants, dams, and related facilities. The incumbent in this classification may be called after hours for emergency repair work.

REPORTS TO Operations and Maintenance Manager

EXAMPLES OF DUTIES

- Installs, tests, calibrates repairs and maintains microwave and radio equipment including microwave terminals, base band equipment, mobile radios, SCADA systems, electronic surveillance equipment, and telemetry associated with hydro plant operations.
- Tests and repairs equipment such as generators, rotors, and stators.
- Installs, repairs, and calibrates protective relays, electrical and electronic circuitry and devices, instrumentation and controls, and related equipment. Operates and maintains communication, and monitoring equipment at powerhouses, hydroelectric monitoring stations, and reservoir level monitoring stations.
- Designs modifies and new circuitry and systems.
- Drafts blueprints and diagrams, and updates existing ones to reflect modifications and "as built" conditions.
- Calculates capacitance, resistance, and impedance.
- Performs hardware design and fabrication on electronic equipment. Determines and/or purchases parts and equipment.
- Designs, installs, and maintains electronic surveillance equipment.
- Maintains reports, files, and records.
- Perform housekeeping duties to keep work area clean and safe.
- May provide orientation to new staff.

TYPICAL PHYSICAL REQUIREMENTS

Frequently stand and walk or crouch on narrow, slippery, and erratically moving surfaces, including various stairs, ramps, fixed ladders, and movable ladders; stoop, kneel, bend to pick up or move objects; physical ability to lift and carry objects weighing up to 50 pounds; normal manual dexterity and eye-hand coordination; corrected hearing and vision to normal range; and verbal communication.

TYPICAL WORKING CONDITIONS

Work is performed both in shop and outdoor environments; exposure to varying temperatures; exposure to smoke, gasses, dust, and chemicals; working around high voltage electrical current and moving machinery parts; contact with staff and the public.

DESIRABLE QUALIFICATIONS

Knowledge of:

- Operates all test-equipment related to servicing of generators, related control equipment, radio, microwave, security and irrigation systems.
- Principles of electricity, electronics, circuitry, and radio and microwaves.
- Methods, materials, tools, and equipment used in radio communication equipment installation, repair and maintenance including two-way and microwave, SCADA systems, electronic surveillance equipment, fiber optic systems and protective type circuitry and devices.
- Federal Communications commission requirements and restrictions on the operation, maintenance, and setting of radio and microwave frequencies and equipment.
- Installation, repair, maintenance, and calibration of telemetering equipment, protective relays, instrumentation, and controls.
- Measuring, monitoring, and calibration devices used in communications, electrical, electronic, relay, control, instrumentation troubleshooting, and calibration.
- Electrical clearances, protection from live voltage and related safe working practices in power plant repair.
- Principles and practices of hydroelectric plant operations.
- Safe work practices and Federal and State safety regulations.
- Applicable provisions of electrical codes.

Ability to:

- Skillfully perform electrical and electronic troubleshooting, repair and maintenance.
- Perform bi-annual station battery bank compliance testing.
- Read and interpret technical repair manuals, blueprints, and schematic diagrams.
- Install, troubleshoot, repair, and maintain communications components and systems.

Tri-Dam Project

Technician

- Design modifications to communications, electrical, electronic surveillance, and related equipment.
- Draft blueprints and diagrams.
- Skillfully use a variety of hand and power tools.
- Prepare clear, concise, and accurate records of reports.
- Establish and maintain cooperative working relationships.
- Work under stress and in emergencies.
- Prepare clear, concise, and accurate records of reports.
- Perform basic computer skills using Microsoft Office, RSLogix 5000, Hyperterm, Teraterm, .ACD files, ACSELERATOR QuickSet and RTAC.

EDUCATION TRAINING AND EXPERIENCE

At least a high school diploma or general equivalency degree and the ability to communicate clearly verbally and in writing with American English is required.

Any combination of training and experience, which would likely provide the required knowledge and abilities, is qualifying. A typical way to obtain the required knowledge and abilities would be:

Three years of responsible journey-level electrical, or industrial electronic experience, which included installation, calibration, maintenance, troubleshooting, repair, and modification on electronic systems and related electrical components and sub-systems. Completion of Tri-Dam Projects Power System Technician Apprenticeship or a recognized two-year program in electronics is highly desirable.

SPECIAL REQUIREMENTS

Possession of an appropriate valid and current California Driver's license required to meet the performance requirements of the position.

Must reside within sixty (60) miles of the Strawberry office.