JOB DESCRIPTION

Coachella Valley Water District

Date: June 4, 2013

Electronic Technician Trainee
SRN 22:

Electronic Technician I
SRN 34:

ONE POSITION ONLY, will report to Palm Desert and work at WRP 10

DEPARTMENT: Service
SECTION: Electronics Shop

REPORTING RELATIONSHIP:

Reports to: Electronics Supervisor

Supervises the following positions: Not applicable.

DEFINITION: Under general supervision to perform installation, repair, calibration, and maintenance work on the district's supervisory control and data acquisition (SCADA) system, automatic control systems, radio systems, telephone systems, security systems, flood warning systems, and do related work as required. Familiar with the district's domestic, flood control, irrigation, and sanitation distribution and collection systems.

Electronic Technician Trainee: Is an entry level, closely supervised position.

ESSENTIAL FUNCTIONS:

1. Performs professional installations and calibrations and proficiently repairs and maintains system, equipment, and components including but not limited to local and remote terminal units, programmable logic controllers, variable drives, automatic control circuits, process controllers, liquid level controllers, level and pressure transducers, flow and position transmitters, microwave radios, multiplex and data communications equipment, base and mobile radios, tone and pulse duration transmitters and receivers, security equipment, solar power equipment, flood warning equipment, gas detectors, audio and video equipment, telephone and voice mail equipment, cellular telephone, and underground cable.

2. Systematically troubleshoots system, equipment, and component malfunctions using effect-to-cause reasoning techniques to make timely and effective repairs. Analyzes failures and takes prompt responsible corrective action in striving to minimize service interruptions to co-workers and the district's customers and takes the necessary measures to keep potential damage to a minimum.

3. Effectively utilizes test equipment including but not limited to analog multimeters, digital multimeters, oscilloscopes, frequency selective level meters, frequency counters, oscillators, cable locators, communications and spectrum monitors, wattmeters, logic probes and pulser, component testers, pressure calibrators, telemetry monitors, PLC programmers, portable test units and personal computers.

4. Reads and understands schematics, wiring diagrams and technical manuals.

5. Understands and adheres to the rules and regulations of the Federal Communications Commission regarding the operation and maintenance of radio transmitters and receivers.

6. Consistently practices good preventive maintenance measures to minimize failures and maintain reliable operation of systems, equipment, and components.
ESSENTIAL FUNCTIONS (Cont.):

7. Accurately calculates and edits database constants for the levels, pressures, gate positions, valve positions, pump status and other equipment and site alarms monitored by the SCADA system to display and archive accurate information.

8. Proficiently operates the SCADA system consoles to adjust flows, water levels and pressures for the domestic, flood control, irrigation, and sanitation distribution and collection systems by remotely operating gates, pumps, and valves to test and maintain reliable SCADA system operation.

9. Provides good customer service to co-workers and the district’s outside customers. Tactfully and courteously deals with the customers to help resolve problems in a satisfactory and timely manner while paying attention to details and using time productively.

10. Communicates effectively with others both orally and in writing. Attempts to understand before judging or making decisions. Coordinates all work being performed with the control operators and others that may be affected by it. Accurately accounts for all labor and equipment usage on time cards and mileage forms. Develops and maintains preventive maintenance schedules.

11. Safely and effectively uses hand tools and power tools including but not limited to hammers, screwdrivers, wrenches, drive sockets, saws, tuning tools, soldering irons, drills, stud guns, and rotary hammers.

MINIMUM QUALIFICATIONS:

License or Certificates: Valid California Operators license issued by the State Department of Motor Vehicles. Department of Motor Vehicles driving record may influence employment or classification.

AND

Electronic Technician Trainee: Must become certified by FCC endorsed program or testing facility within 18 months of appointment. Failure to become certified may influence employment or classification.

OR

Electronic Technician I: Possession of a valid Technician Certificate issued through a program endorsed by the Federal Communications Commission or a FCC license.

Electronic Technician Trainee Experience: Any combination of training and experience, which would likely provide the required knowledge and abilities, is qualifying. A typical way to obtain this knowledge and abilities would be to successfully complete four college level classes in electronics or have one-year experience in the electronics repair field.

Electronic Technician I Experience: Any combination of training and experience, which would likely provide the required knowledge and abilities, is qualifying. A typical way to obtain this knowledge and abilities would be to have two years experience in the electronics repair field.

Knowledge of: -MS-DOS and Windows operating systems
-Basic mechanical principals
-Analog and digital troubleshooting
MINIMUM QUALIFICATIONS (Cont.):

Knowledge (Cont.):
- Effective and reliable soldering practices
- Properties of electricity (alternating current, direct current, circuit theory)
- Electronics theory (electronics principles, measurements, and components)
- Electronic fundamentals (DC and AC electronics, semiconductors, circuits)
- Advanced electronics (impedance, gain, amplifiers, regulators, oscillators, PL circuits)
- Digital electronics (logic circuits, digital integrated circuits, memory devices)
- Test equipment (voltmeter, ammeter, ohmmeter, frequency counter, oscilloscope)

In addition Electronic Technician I should have knowledge of:
- Electronic communications (TV, radio, FAX, modem, multiplex, data)
- Radio theory (transmitters, receivers, antennas, radio wave propagation)
- Microprocessor principles (D to A, A to D converters)
- Microprocessor troubleshooting
- Measurement instrumentation and process control

Abilities:
- Perform maintenance, repairs and installations on SCADA systems, automatic control systems, radio systems, telephone systems, security systems, and flood warning systems
- Troubleshoot and analyze problems and take appropriate corrective action to effectively and efficiently make repairs
- Operate a variety of electronic equipment and tools in a safe manner
- Comprehend and comply with FCC rules and regulations
- Communicate effectively with others
- Perform mathematical calculations
- Maintain accurate records and reports
- Reads and accurately interprets schematics and wiring diagrams

Education: Possession of a High School diploma or G.E.D.

PHYSICAL REQUIREMENTS:

1. Drives District vehicle to job sites, sometimes over rough terrain. Uses two-way radio to communicate. Driving: Moderate to heavy.
2. Will work in extreme weather conditions including heat and rain. May work in areas containing fumes, dust, chemicals, sewage and exhaust.
3. Will climb ladders and 110-foot towers when required.
4. Will work nights, weekends, holidays, and standby when trained and required.

See Human Resources for physical assessment form.