



## **Job Description: Instrumentation/Electrical Technician**

**SALARY RANGE: \$26.00/hr. - \$35.00/hr. DOQ**

**FLSA: Nonexempt**

### **SUMMARY OF POSITION**

Under minimal supervision, perform senior journeyman level electrical diagnostics on 600 v-2.5kv motors and motor controls, 2.5kv substation switchgear and electrical distribution systems, installation and or repairs of conduit, tubing and wiring, and lighting systems, performance of routine maintenance, installation and calibration of various types of process control instrumentation equipment. Perform general housekeeping duties and other duties as may be assigned by supervision. Must be able to effectively communicate and speak English.

### **ORGANIZATIONAL RELATIONSHIPS**

1. **Reports to:** Instrumentation / Electrical Supervisor
2. **Directs:** This is a non-supervisory position
3. **Other:** Works integrally with District employees, District customers and contractors.

### **EXAMPLES OF WORK**

Work includes but is not limited to the following:

- Installation and/or maintenance of Instrumentation and /or Electrical control systems.
- Repairs various lighting systems, including building lighting, area lighting, street lights, ballasts, bulbs, capacitors, igniters, contactors, and photo cells.
- Repairs and installs electrical distribution equipment, including but not limited to conduit, conductors, breakers, panel boards, disconnects, transformers, switches and receptacles.
- Performs complex diagnostics, maintenance and repairs on various types of process control systems related to water/wastewater treatment plant facilities.
- Performs diagnostics, maintenance and repairs on 600v-2.5kv motors and motor control systems, using schematics, vibration analysis, multi-meter, amp probe, megohmmeter, and hand tools.
- Preventative maintenance on all electrical equipment for water and wastewater treatment plants and remote locations.
- Field calibration of instrumentation utilizing proper test equipment.
- Fault analysis of PLC based systems of peripheral equipment.
- Understanding of Supervisory Control and Data Acquisition systems.

\* For the purpose of compliance with the Americans With Disabilities Act (ADA)  
*This Job description does not take into account potential reasonable accommodations..*

## **EXAMPLES OF WORK CONT'D**

- Perform calibrations of differential pressure transmitters, pressure transmitters, turbidity transmitters and other analytical devices used in water and wastewater treatment processes.
- Prepares for inclement weather by taking necessary precautions including, but not limited to, checking condition of heat tape, boarding of windows, securing loose equipment and any other related assignments as directed by District Management.
- Develops, prepares and presents recommendations and reports as requested.

## **REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES**

- Demonstrate proficiency in both oral and written communication.
- Knowledge of the laws, theories, rules, and standards pertaining to electrical construction and maintenance.
- Ability to read and interpret blueprints, schematics, diagrams, and control circuits.
- Ability to interpret schematics and drawings of pneumatic loops, hardwire relay logic diagrams, PLC control programs, motor control circuit diagrams, etc.
- Ability to associate circuit symbols with actual components to include solid state electronics (transistors, integrated chips, resistors, capacitors, etc.) and common industrial electrical hardware (relays, contactors, starters, etc.).
- Possess mathematical skills to include basic algebra for calculation of electrical/electronic equations as applicable in water/wastewater treatment.
- Ability to install electrical conduit of the various trade size (PVC, emt, rigid) and instrumentation tubing.
- Ability to analyze problems, identify solutions, project consequences of proposed actions and implement recommendations in support of goals.
- **Ability to meet physical demands that include but are not limited to: lifting up to 50lbs., sitting or standing for extended periods of time and working in inclement weather.**

## **ACCEPTABLE EXPERIENCE AND TRAINING**

Minimum four (4) years of experience with diploma from accredited Technical School, military electrical/electronic training or a minimum ten years field experience in industrial environment, without a degree; or any combination of experience and training that would provide the required skills, knowledge and abilities.

## **CERTIFICATIONS AND LICENSES REQUIRED**

- Minimum Texas Class "C" driver's license with good driving record.

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Applicant Signature

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Superintendent Signature

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Date

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