JOB DESCRIPTION

Senior Electrical Test Technician

Date Prepared: Sept 2015 Class Code: 8053

SUMMARY: Under general supervision, maintains, investigates and performs the more advanced journey repairs to all City-owned electrical substations, natural gas turbine units and water well and booster plant sites in accordance with established policies, procedures, regulations and objectives. Assumes lead responsibility on assigned testing, maintenance and repair work; and to do related work as required.

DISTINGUISHING CHARACTERISTICS: Incumbent in this classification reports to the Utilities Operations Manager or designee. The incumbent works independently to carry out assigned duties, coordinates and schedules with other divisions and contractors to achieve efficient operation of the department, leads and trains Electrical Test Technicians.

ESSENTIAL FUNCTIONS: -- *Essential functions, as defined under the Americans with Disabilities Act, may include any of the following representative duties, knowledge, and skills. This is not a comprehensive listing of all functions and duties performed by incumbents of this class; employees may be assigned duties which are not listed below; reasonable accommodations will be made as required. The job description does not constitute an employment agreement and is subject to change at any time by the employer. Essential duties and responsibilities may include, but are not limited to, the following:*

- Inspects, and maintains protective relays, power transformers, instrument transformers, high voltage circuit breakers (oil, vacuum and gas), substation battery banks, capacitors and disconnects/switches and automatic tap changers.
- Performs AC insulation, excitation, turns ratio, winding resistance and insulation resistance technical testing of transformers as well as contact resistance, open and close timing and all other internal and external testing and inspection of 7, 16 and 66KV circuit breakers.
- Reads blueprints and schematics in connection with installation and wiring of electrical equipment.
- Performs complex relay testing during scheduled maintenance; accepts/commissions testing on new relay installations, control circuits, and newly installed high voltage circuit breakers.
- Works with electrical engineers on the development of system protection upgrades, supervisory control and data acquisition (SCADA) and new relay settings for electrical system revisions.
- Troubleshoots malfunctions of remote control circuits, circuit breaker failures, natural gas turbine unit alarms and issues, water department electrical equipment failures, and electric system operational failures.
- Responds to emergency calls for service during power outages to inspect affected equipment to identify a root cause of failure, repair impacted equipment, protect public and personnel safety and efficiently restore service.
- Performs and coordinates scheduled preventative substation and associated systems maintenance. Retains all substation equipment maintenance records for regulatory and auditing purposes.
- Requests electric system equipment clearances to safely conduct testing on high voltage equipment; acts as a checker for the Electrical Operators as needed during high voltage electrical switching.
- Leads and trains employees on assigned testing work; develops schedules for the routine testing of equipment.
- Adheres to established industry and regulatory guidelines and protocols regarding the proper handling of SF6 gas during the installation, repair and removal of SF6 circuit breakers.

- Promotes a safety conscious work environment by closely following City, State and industry established general, electrical and substation operating procedures, subscribing to industry best practices and complying with regulatory requirements.
- Supports the relationship between the City of Vernon and the general public by demonstrating courteous and cooperative behavior when interacting with visitors and City staff; maintains confidentiality of work-related issues and City information; performs other duties as required or assigned.

MINIMUM QUALIFICATIONS:

Education, Training and Experience Guidelines:

High school diploma or equivalent; AND five years of experience in specialized and technical testing and repair and maintenance of electric substation equipment.

Knowledge of:

- City organization, operations, policies, and procedures.
- Regulatory requirements for the operation, maintenance, and repair of gas, electric and bulk power utilities.
- Principles of electrical and electronic theory, power system operations including power plant operations; fundamentals of alternating current circuits, and electrical safety policies and procedures.
- State and federal environmental protection codes and regulations; Cal OSHA regulations.
- Applicable safety practices for high voltage equipment.
- Common hand and power tools.
- Customer service standards and protocols.

Skill in:

- Monitoring and applying control system principles rationally to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists.
- Interpreting schematics, plans and specifications.
- Testing of microprocessor and electromechanical relays.
- Proficiently and safely working at elevated heights including the appropriate use of fall protection and personal protective equipment.
- Maintaining maintenance and inspection records as required by regulatory agencies.
- Utilizing public relations techniques in responding to inquiries and complaints.
- Working flexible hours or on-call schedule.
- Communicating effectively, both orally and in writing.
- Establishing and maintaining cooperative working relationships with managers, fellow employees, contractors, representatives of other utilities, suppliers and the public.

LICENSE AND CERTIFICATION REQUIREMENTS:

A valid Class C California State Driver's License is required. Additional training/certification may be required.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT:

Work is performed in the field at electrical substations, with exposure to dangerous equipment, extreme weather conditions, hazardous chemicals, high voltage and electrical shock.