

SAN MIGUEL ELECTRIC COOPERATIVE

POSITION: ELECTRICAL TECHNICIAN, CLASS B

SUMMARY

Under direction, the main purposes of this position are to assist the electrical department to troubleshoot, repair, and maintain electrical systems in power centers, motor control centers, 7200V switch gear, 345KV, and 138KV transmission switchyard using schematics, interconnects, and test equipment; and to perform other duties as required.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

- Cleans, repairs, dismantles, adjusts, and tests relays; analyzes test results to identify cause of malfunction; and records related data.
- Connects relay to test equipment and adjusts test equipment controls to simulate operating conditions.
- May periodically inspect and test relays at functioning points.
- Adjusts electrical, thermal, and timing elements.
- Observes ammeters, voltmeters, and related test equipment recording and indicating instruments to determine if electrical equipment performs all functions correctly.
- Tightens bolts, springs, and electrical connections; and adjusts screws to correct malfunctions.
- Notifies plant personnel of necessary equipment downtime requiring changes from normal generating and transmission equipment operation to maintain uninterrupted service.
- Tests and repairs switchboard and equipment circuitry, interpreting wiring diagrams to trace and connect numerous wires carrying current for independent functions.
- Cleans and repairs brushes, commutators, windings, and bearings of generators, motors, and converters.
- Inspects, tests, and maintains transmission and substation electrical equipment, performing such duties as maintaining circuit breakers, transformers, and air switches.
- Inspects and tests equipment to determine resistance and load, and to identify cause of malfunctions or failures.
- Tests insulators and bushings for power leakage by imposing specified voltage on insulation, and calculates insulation loss.
- Repairs or rebuilds oil circuit breakers, transformers, and air switches.
- Inspects switches before testing, repairing, or replacing equipment to prevent power interruption.
- May test and repair related equipment, such as telemetering and supervisor-control devices.
- Repairs and maintains electrical equipment in generating station or power-house.
- Inspects, tests, calibrates, repairs, and maintains electrical systems.
- Updates and writes Process Logic Controller (PLC) programs.
- Maintains cleanliness of work area.
- Performs on-call duty 24/7 for seven-day periods.
- Responds to emergency calls and plant trips.

SUPERVISORY RESPONSIBILITIES

N/A.

REQUIRED EDUCATION/EXPERIENCE

Requires high school graduation, plus five years of industrial electrician experience.

KNOWLEDGE, SKILLS, and ABILITIES

Knowledge of power plant electrical equipment and overall plant operations, electrical tests and procedures, National Electric Code (NEC), Doble testing, and safety practices and procedures. Skilled in conducting effective and confident communications, working with varied personalities, troubleshooting electrical and other equipment and machinery operations, and repairing electrical and other equipment and machinery. Ability to operate electrical testing equipment and interpret test results; operate forklift and man lift; use safety gear and equipment and hand tools; operate and understand Process Logic Controller (PLC) hardware and software; write Process Logic Controller (PLC) programs; operate personal computer in LAN environment, using standard word processing, spreadsheet, and database software; and operate standard office equipment.

CERTIFICATES, LICENSES, REGISTRATIONS

Class C Operator's License.

PHYSICAL DEMANDS - The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Tasks involve the ability to exert heavy physical effort, with emphasis on climbing and balancing, but typically also involving combination of stooping, kneeling, crouching, and crawling; and the lifting, carrying, pushing, and/or pulling of moderately heavy objects and materials. Tasks involve work in confined spaces and high areas. Tasks involve the ability to work in confined spaces, such as but not limited to generators, transformers, breakers, tanks, wire vaults, scrubber modules, boiler, precipitator, vessels, etc. Tasks involve the ability to work in areas of excessive height, such as but not limited to 400-foot stack, 100-foot ball field lights, support structure beams, switchyard structures, manlifts, scrubber module structures, boiler structures, precipitator structures, vessel structures, etc. and to climb to those locations with the necessary tools and safety equipment.

WORK ENVIRONMENT - The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Tasks require the ability to perceive and discriminate sounds and depths, and visual perception and discrimination. Tasks risk exposure to adverse environmental conditions, such as dirt, dust, odors, humidity, temperature and noise extremes, wetness, strong/toxic agents/chemicals, machinery, vibrations, and bright or dim lighting.

San Miguel Electric Cooperative is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, San Miguel Electric Cooperative will provide reasonable accommodations to qualified individuals with disabilities, and encourages both prospective and current employees to discuss potential accommodations with the Human Resources Department.

USDA is an equal opportunity provider, employer, and lender.