

TITLE: ELECTRICAL MECHANIC

ORGANIZATION UNIT: Substations Maintenance and Construction

APPLICABLE TO: All Divisions

DUTIES:

Under indirect and intermittent supervision, to do a full range of electrical and mechanical installation, construction, maintenance and repair work of the most complicated and difficult types on substation and related de-energized and energized apparatus, with only general instructions or detailed drawings to guide; as assigned, to handle orders and to direct the work of one to three other mechanics or lower classifications when working together; when assigned, with responsibility for directing the work of an Apprentice; as required, incidental to or in addition to electrical work, to do a general range of building and substation mechanical equipment installation, maintenance, repair work and painting as assigned, to do skilled work in welding, brazing, light machinist work, concrete placing and finishing, pipe work, sheet metal work, structural steel work or other work on buildings associated with substations; to make electrical tests to locate trouble on equipment or apparatus; incidental thereto, to operate various types of specialized construction equipment and to drive a vehicle carrying tools and supplies; and to do similar and less skilled work as required. In this connection to perform details of work, such as:

Order from Storeroom and supervise assembly of proper tools and materials for the job.

On de-energized equipment check to insure that apparatus to be worked on has been properly isolated and protected before work is started.

On energized equipment take steps to insure that proper safety devices are in use and understood before work starts.

When being assisted by others, perform and direct the performance of the work, and maintain responsibility for quality of workmanship and the correctness of method as directed.

Install, remove, maintain, operate or check the operation of all types of circuit breakers, power transformers, instrument transformers, switchboard panels and associated wiring and devices, disconnect and airbreak switches, motors, D.C. and A.C. generators, rotary converters, frequency changers,

DUTIES: (continued)

synchronous condensers, voltage regulators, batteries, battery chargers, conduits of all sizes, cables, busses, automatic controls and other types of electrical apparatus and accessories.

Construct and install pipe work, substation steel structures, cubicles or cell structures, buildings containing electrical apparatus, concrete forms, concrete for foundations, floors, walks and general purposes and other related mechanical and structural work.

Locate or assist in locating and clearing trouble on all types of electrical or mechanical equipment in substations, make repairs as required and as possible within the scope of the crew available.

Resurface machine commutators and collector rings as assigned.

Attach test leads for testing cables, as directed.

Prepare reports and, if necessary, sketches of the work done, and fill in such forms as are required.

Perform most essential operations in a substation when called upon in an emergency.

SPECIAL RESPONSIBILITIES:

For performing work without disturbing associated apparatus in operation.

For observing and seeing that those temporarily under his direction observe safety instructions issued or applicable.

For proper care and use of equipment employed in the work and for careful and accurate workmanship.

For service continuity to the extent of quickly and accurately repairing damaged apparatus in emergencies and for completing work within scheduled time when working on equipment or circuit out of service through special arrangements.

For special care to prevent and detect errors when working in the absence of supervision.

SPECIAL RESPONSIBILITIES: (continued)

For safety of himself and others in the work area when working on energized circuits, or for seeing that equipment is properly cleared before work is started.

CONTACTS:

With other work groups in the Company.

Infrequently with employees of apparatus manufacturers or with contractors working in substations.

WORKING CONDITIONS:

Exposed to outside weather conditions; subject to fumes from solvents, cleaners and paints, drafts from cooling fans, high temperatures during summer months, and low temperatures in unheated locations during winter months, sometimes sudden changes from one extreme of temperature to the other; occasionally subject to dust while stoning and blowing out rotating machinery. Work at times is cramped and artificial light is frequently necessary.

HAZARDS:

Subject to potential hazards from possible electrical shock, burns or flashes while working on or near energized equipment; to hazards existing from the possible failure of nearby mechanical or electrical equipment, or from any relaxation of the constant care required to observe all required safety rules; to danger from falling while working at elevations above ground; and to the usual hazards encountered in mechanical construction and maintenance work. Occasionally, exposed to fumes of solvents or paints, in confined spaces.

QUALIFICATIONS:

Graduation from high school, or successful completion of a recognized high school equivalency examination.

Satisfactory completion of Apprenticeship Program for Substations Electrical Mechanics or the equivalent.

Demonstrated thorough working knowledge of, and skill in, all phases of electrical wiring, construction and installation and maintenance work.

QUALIFICATIONS: (continued)

Be alert and observant and have ordinary physical strength and able-bodiedness.

Possess and maintain a class "A" Interstate Commercial Driver's License with any endorsements required by law.