



**Code: 5033**

Family: Construction, Maintenance, and Skilled Labor

Service: Operation and Construction

Group: Electrical and Mechanical

Series: Electrical Construction and Maintenance

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## **CLASS TITLE: ELECTRICAL MECHANIC (B)**

### **CHARACTERISTICS OF THE CLASS**

Under supervision, maintains and repairs electrical wiring and equipment in water purification plants, including substations, on an assigned shift, and performs related duties as required

### **ESSENTIAL DUTIES**

- Maintains and takes hourly readings of 2300 and 4160 volt switchgear
- Activates 2300 and 4160 volt equipment
- Maintains 480 volt power lighting circuits and instrumentation
- Checks control batteries and emergency light batteries on a daily basis
- Checks and maintains electrical equipment in heating, ventilating, and air conditioning (HVAC) systems
- Maintains and calibrates analyzer room equipment
- Checks and maintains indicator lamps on control boards and chemical application panels
- Monitors the operations of the emergency generator system and associated tiebreakers
- Overhauls and replaces bearings on motors up to fifty horsepower
- Responds to service calls on electrical and instrument equipment located in water purification plants including substations
- Starts, stops, adjusts, and regulates electrical sequences on wash water pump motors and lowlift pump motors
- Uses hand and power tools, testing equipment, and materials in the maintenance and repair of electrical wiring and equipment
- Prepares work activity reports
- Loads transports and unloads equipment and supplies
- Maintains clean and orderly work areas

**NOTE:** *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

### **MINIMUM QUALIFICATIONS**

#### **Education, Training, and Experience**

- Successful completion of a US Department of Labor registered electrical mechanic apprenticeship training program and journeyman status; or an equivalent combination of education, training, and experience

#### **Licensure, Certification, or Other Qualifications**

- None

### **WORKING CONDITIONS**

- Exposure to outdoor weather conditions
- Exposure to loud noise, fumes or dust, oily or wet environment

- Exposure to hazardous conditions (e.g., electrical machinery)
- Work performed above or below ground level
- Work performed using scaffolds and ladders

**EQUIPMENT**

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Hand tools (e.g., hammer, screwdriver, wrench, pliers)
- Power tools (e.g., cutting and threading machines)
- Testing and monitoring equipment (e.g., ammeters, oscilloscopes)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, vest, pads)
- Measuring tools (e.g., tape measure, ruler, calipers, measuring wheel)
- Ladders

**PHYSICAL REQUIREMENTS**

- Substantial lifting (up to 50 pounds) is required
- Ability to stand and walk for extended or continuous periods of time
- Ability to quickly bend, stretch, twist, or reach out with one's body, arms, and/or legs
- Ability to climb staircases, ladders, and/or step stools
- Ability to operate applicable hand tools, power tools, and equipment
- Ability to tolerate heights while working

**KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS****Knowledge**

Moderate knowledge of:

- \*principles, work methods and techniques of the electrical trade
- \*repair, maintenance, and preventative maintenance procedures applicable to the electrical trade
- \*applicable safety and code standards specific to the electrical trade (e.g., National Electrical Code, OSHA standards)
- \*use of safety equipment and protective gear water purification plant and substation mechanical and electrical systems
- water purification plant and substation mechanical and electrical systems

Some knowledge of:

- \*applicable test instruments and hand and power tools
- \*equipment and materials specific to the electrical trade
- manufacturers' manuals for servicing equipment
- electrical regulations and requirements found in the City of Chicago's building code

Knowledge of applicable City and department policies, procedures, rules, regulations, and ordinances

**Skills**

- \*ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- \*COORDINATION WITH OTHERS - Adjust actions in relation to others' actions
- EQUIPMENT MAINTENANCE - Perform routine maintenance on equipment and determine when and what kind of maintenance is needed
- \*EQUIPMENT SELECTION - Determine the kind of tools and equipment needed to do a job
- \*INSTALLATION - Install equipment, machines, wiring, or programs to meet specifications
- \*OPERATION AND CONTROL - Control operations of equipment or systems
- \*OPERATION MONITORING - Watch gauges, dials, or other indicators to make sure a machine is working properly
- \*REPAIRING - Repair machines or systems using the needed tools
- \*TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it

**Abilities**

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense

**Other Work Requirements**

- INITIATIVE - Demonstrate willingness to take on job challenges
- STAMINA - Demonstrate energy and stamina to accomplish work tasks
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks

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All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

\* May be required at entry.

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City of Chicago  
Department of Human Resources  
(Valtera Corporation)

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