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

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.

City of Chicago
Department of Human Resources
(Valtera Corporation)
Date: August, 2010