

# Water Authority Position Description

## ELECTRICIAN

| Status   | Position Code | Level | Date     |
|----------|---------------|-------|----------|
| APPROVED | ELTR          | B90   | Mar 2017 |

Job descriptions are intended to present a general list of the tasks/duties performed by employees within this job Classification. Job Descriptions are not intended to reflect all duties performed within the job.

### POSITION SUMMARY

PERFORM COMPLEX AND DIFFICULT PREVENTIVE AND CORRECTIVE MAINTENANCE OF THE WATER AUTHORITY'S HIGH AND LOW VOLTAGE ELECTRICAL SYSTEMS AND EQUIPMENT.

### MIN EDUCATION & EXPERIENCE REQ

HIGH SCHOOL DIPLOMA OR GED PLUS TWO YEARS TECHNICAL SCHOOL TRAINING IN ELECTRICAL TRADES OR A RELATED FIELD AND FIVE (5) YEARS OF JOURNEY LEVEL EXPERIENCE WORKING WITH BOTH HIGH AND LOW VOLTAGE INDUSTRIAL SYSTEM INSTALLATION, MAINTENANCE AND REPAIR. COMPLETION OF A STATE OF NEW MEXICO APPROVED APPRENTICESHIP PROGRAM CAN SUBSTITUTE FOR FOUR (4) YEARS EXPERIENCE.

### ADDITIONAL REQUIREMENTS

POSSESSION OF A JOURNEYMAN ELECTRICAL EE-98J LICENSE  
 POSSESSION OF A VALID NEW MEXICO DRIVER'S LICENSE  
 MUST BE ABLE TO PASS RESPIRATORY CLEARANCE EXAM PRIOR TO HIRE AND AT LEAST EVERY THREE YEARS AFTER HIRE. MUST BE ABLE TO PASS RESPIRATOR FIT TEST WITHIN 30 DAYS OF HIRE AND ANNUALLY THEREAFTER. MUST SUBMIT TO OZONE MEDICAL EXAM, AS APPROPRIATE TO THE JOB POSITION, PRIOR TO HIRE AND AT LEAST EVERY THREE YEARS AFTER HIRE.

### SUPERVISION RECEIVED/EXERCISED

RECEIVES DIRECTION FROM ASSIGNED MAINTENANCE SUPERVISOR.

### ESSENTIAL FUNCTIONS

1. RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF UP TO 12470 VOLT, 4160 VOLT AND 480 VOLT DISTRIBUTION SYSTEMS, COMPLEX OR HIGH VOLTAGE ELECTRICAL EQUIPMENT, SYSTEMS AND COMPONENTS TO INCLUDE; TRANSFORMERS, STARTERS, CONTRACTORS, FUSES AND MOTORS, VALVES, CLIMATE CONTROL EQUIPMENT AND RELATED SYSTEMS.
2. UTILIZE ELECTRICAL MAINTENANCE AND REPAIR EQUIPMENT INCLUDING BUT NOT LIMITED TO POWER TOOLS, HYDRAULIC BENDERS, LIFTS, CRANES, AND BUCKET TRUCK.
3. CALCULATE CURRENT LOADS, FUSE SIZES AND OTHER ELECTRICAL REQUIREMENTS TO INSURE PROPER OPERATION OF EQUIPMENT.
4. TROUBLESHOOT AND REPAIR ELECTRICAL EQUIPMENT ASSOCIATED WITH GAS DRIVEN WATER PUMPING WELLS AND BOOSTER PUMP STATIONS, INCLUDING GENERATORS, ENGINE CONTROL CABINETS AND SWITCHES. TERMINATE AND SPLICE HIGH VOLTAGES AT SITE FOR MOTORS AND TRANSFORMERS.
5. MAINTAIN AND REPAIR (4.4 MEGAWATT 4160 VOLT AND 2.2 MEGAWATT 480 VOLT) DISTRIBUTION GENERATORS, INCLUDING MOTOR CONTROLS ENABLING THE EXPORT OF EXCESS ELECTRICITY.
6. MAINTAIN, REPAIR AND INSTALL LIGHTS, RECEPTACLE OUTLETS, SWITCHES AND RELATED ELECTRICAL EQUIPMENT AND SYSTEMS.
7. MAINTAIN ALL ELECTRICAL CONTROL PANELS INCLUDING LIGHTING, DISTRIBUTION, SURGE AND HVAC. MAINTAIN ALL ELECTRICAL HIGH AND LOW VOLTAGE TRANSFORMERS. PERFORM PREVENTIVE MAINTENANCE ON ALL MOTORS, STARTERS, TRANSFORMERS, VALVES, COMPRESSORS AND RELATED ELECTRICAL EQUIPMENT.
8. MAINTAIN HIGH VOLTAGE DISCONNECTS, FUSES, POLE CUT OUTS AND CONDUCTORS. MAINTAIN LOW VOLTAGE RELAYS, TIMERS AND OTHER ELECTRIC DEVICES.
9. TROUBLESHOOT, MAINTAIN AND PROGRAM VARIABLE FREQUENCY DRIVE (VFD) COMPONENTS AND LOGIC INCLUDING STARTERS.
10. REVIEW BLUE PRINTS AND RECOMMEND CHANGES AS NEEDED TO ENSURE THE EFFICIENT AND RELIABLE OPERATION OF ELECTRICAL SYSTEMS.
11. ENSURE ADHERENCE TO SAFE WORK PRACTICES AND PROCEDURES.
12. LOCATE AND MARK UNDERGROUND ELECTRICAL CONDUIT AND CABLE, TRENCH OR DIG FOR UNDERGROUND CONDUIT, PULL WIRE FOR POWER AND CONTROL APPLICATIONS.
13. COORDINATE POWER SHUTOFFS WITH PNM AND OTHER ELECTRICAL CONTRACTORS TO ENSURE NO LOSS OF POWER TO PUBLIC.

#### **SUPPLEMENTAL FUNCTIONS**

1. ATTEND SEMINARS AND TRAINING PROGRAMS.
2. ESTIMATE TIME, MATERIALS AND EQUIPMENT REQUIRED FOR JOBS ASSIGNED. REQUISITION MATERIALS AS REQUIRED.
3. ORDER MATERIALS FROM THE WAREHOUSE OR ELECTRICAL SUPPLIES FOR SPECIFIC JOBS.
4. PERFORM RELATED DUTIES AND RESPONSIBILITIES AS REQUIRED.

### **PREFERRED KNOWLEDGE**

PRINCIPLES, PRACTICES AND THEORIES OF ELECTRICITY  
PRINCIPLES AND THEORIES OF CIRCUITRY  
PRINCIPLES AND PRACTICES OF MOTOR CONTROL CENTERS  
HIGH VOLTAGE TRANSFORMERS, STARTERS AND MOTORS  
FIELD MAINTENANCE METHODS AND TECHNIQUES FOR A WIDE RANGE OF HIGH VOLTAGE EQUIPMENT ELECTRICAL SYSTEMS, CABLES, CIRCUITRY, GENERATORS AND RELATED MATERIALS ELECTRONIC CIRCUIT BOARD/  
METHODS AND TECHNIQUES OF HIGH VOLTAGE ELECTRICAL SYSTEM MAINTENANCE AND REPAIR OPERATIONAL CHARACTERISTICS OF ELECTRICAL MAINTENANCE, REPAIR AND INSTALLATION EQUIPMENT AND TOOLS OCCUPATIONAL HAZARDS AND STANDARD SAFETY PRACTICES PERTINENT FEDERAL, STATE AND LOCAL LAWS, CODES AND REGULATIONS  
PRINCIPLES OF THE INDUSTRIAL RELATIONSHIP TO THE USE OF GENERATORS AS BACK-UP POWER SYSTEMS

### **PREFERRED SKILL/ABILITY**

LEAD, ORGANIZE AND REVIEW THE WORK OF STAFF IN THE AREA OF WORK ASSIGNED  
INDEPENDENTLY PERFORM THE MOST DIFFICULT ELECTRICAL MAINTENANCE AND REPAIR  
INTERPRET, EXPLAIN AND ENFORCE DEPARTMENT POLICIES AND PROCEDURES  
DESIGN AND INSTALL ELECTRICAL SYSTEMS  
EVALUATE ELECTRICAL SYSTEMS  
OPERATE A VARIETY OF ELECTRICAL MAINTENANCE AND REPAIR EQUIPMENT IN A SAFE AND EFFECTIVE MANNER  
PERFORM A VARIETY OF COMPLEX ELECTRICAL SYSTEM AND COMPONENT INSTALLATION  
PERFORM FIELD MAINTENANCE ON A WIDE VARIETY OF ELECTRICAL EQUIPMENT INCLUDING HIGH VOLTAGE PUMP MOTORS  
READ, INTERPRET AND MODIFY BLUE PRINTS AND SCHEMATICS  
TROUBLESHOOT AND REPLACE ELECTRONIC CIRCUIT BOARDS FOR REDUCED VOLTAGE STARTERS AND ACROSS THE LINE STARTERS, WHEN REQUIRED  
ORDER, MAINTAIN AND REQUISITION ALL EQUIPMENT NEEDED FOR ELECTRONICS FUNCTIONS  
CALCULATE CURRENT LOADS, FUSE SIZES AND OTHER ELECTRICAL REQUIREMENTS  
UNDERSTAND AND FOLLOW ORAL AND WRITTEN INSTRUCTIONS  
COMMUNICATE CLEARLY AND CONCISELY, BOTH ORALLY AND IN WRITING  
ESTABLISH AND MAINTAIN EFFECTIVE WORKING RELATIONSHIPS WITH THOSE CONTACTED IN THE COURSE OF WORK

### **WORKING CONDITIONS**

OUTDOOR AND INDOOR ENVIRONMENT; EXPOSURE TO ELECTRICAL AND RADIANT ENERGY, HIGH VOLTAGE UP TO 12,470 VOLTS, NOISE, DUST, GREASE, SMOKE, FUMES, GASES, MOVING OBJECTS/VEHICLES, INCLEMENT WEATHER CONDITIONS; WORK OR INSPECT IN CONFINED SPACES; WORK ON SLIPPERY OR UNEVEN SURFACES; WORK AT HEIGHTS ON SCAFFOLDING AND LADDERS; WORK IN OR WITH WATER, SLUDGE, POLYMERS AND HAZARDOUS CHEMICALS; WORK WITH MACHINERY.

### **PHYSICAL REQUIREMENTS**

MAINTAIN PHYSICAL CONDITION APPROPRIATE TO THE PERFORMANCE OF ASSIGNED DUTIES AND RESPONSIBILITIES SUCH AS; WALKING, STANDING, SITTING, BENDING, STOOPING, KNEELING, CRAWLING FOR PROLONGED PERIODS OF TIME; HEAVY, MODERATE OR LIGHT LIFTING AND CARRYING; PULLING, PUSHING, REACHING ABOVE SHOULDER, BOTH HANDS REQUIRED, USE OF FINGERS, CLIMBING WITH BOTH LEGS AND ARMS; OPERATING MOTORIZED EQUIPMENT AND VEHICLES  
MAINTAIN EFFECTIVE AUDIO-VISUAL DISCRIMINATION AND PERCEPTION NEEDED FOR MAKING OBSERVATIONS, COMMUNICATING WITH OTHERS, READING, WRITING AND OPERATING ASSIGNED EQUIPMENT