



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

## ELECTRICAL SPECIALIST

<b>Group-Section:</b> Water System Operations - Various	<b>FLSA Status:</b> Non-Exempt <b>Bargaining Unit:</b> AFSCME	<b>Classification:</b> Operations and Maintenance Specialist <b>Salary Grade:</b> 48 <b>Job #:</b> T12
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### JOB SUMMARY

This is the advanced journey level position performing Electrical Specialist job duties for the treatment plants and distribution system which includes leading and performing electrical maintenance; planning; quality assurance/quality control; and training.

### DISTINGUISHING CHARACTERISTICS

Positions at this level are recognized as a technical specialist using initiative and resourcefulness in deviating from traditional methods or researching trends and patterns to develop new methods, criteria, or procedures. The Electrical Specialist makes decisions regarding what needs to be done within area of responsibility such as: interpreting data; planning of work including creating, prioritizing, and coordinating work orders; refining the methods and techniques to be used; performing quality control functions such as assessing gaps between job plans and actual practice and improving job plans. The work involves formulating projects; analyzing a variety of unusual conditions, problems, or questions; and assessing maintenance effectiveness. The work product or service may affect the activities or operation of other organizations.

### OVERSIGHT

**Supervision Received:** The supervisor sets the overall objectives and resources available. The employee and supervisor, in consultation, develop the deadlines, projects, and work to be done. At this level, the employee, having developed expertise in the line of work, is responsible for planning and carrying out the assignment; resolving most of the conflicts that arise; coordinating the work with others as necessary; and interpreting procedures on own initiative in terms of established objectives. In some assignments, the employee also determines the approach to be taken and the methodology to be used. The employee keeps the supervisor informed of progress, potentially controversial matters, or far-reaching implications. Completed work is reviewed from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results.

Receives oversight from the Team, Unit, Section, Assistant Group, or Group Manager.

**Supervision Given:** Acts as a lead. Coordinates and reviews work assignments of apprentice through journey-level employees performing work in the same trade on a day-to-day basis. Responsibilities may involve solving problems and providing instructions on work procedures. Provides on-the-job training and development of electrical craft workers through joint tasks, recommending classroom training, hands-on demonstration, and/or assisting in the development and implementation of training programs. Oversees the work tasks of other employees on projects and plant shutdowns.

**JOB DUTIES**

1. Leads, schedules, and coordinates the installation, troubleshooting, maintenance, field testing, and adjustment of electrical equipment and monitors cost expenditures. May create work orders to facilitate these tasks
2. May act as a subject matter expert in regards to technical training and provide recommendations on training for electrical craft workers.
3. Verifies quality of preventive maintenance procedures, predictive maintenance techniques, and corrective equipment repair methods. Interacts with other technical disciplines to improve quality and consistency of maintenance procedures.
4. Assists in the development of predictive maintenance procedures to monitor equipment and ensure early detection of potential equipment problems.
5. Evaluates operating and/or maintenance procedures and recommends revisions to job plans.
6. Diagnoses problems within craft/trade, coordinates special studies or testing with other disciplines, and coordinates and oversees testing performed on critical systems.
7. Assists in development of Capital Investment Plan project proposals by researching and providing recommendations to management.
8. Serves as a subject matter expert to provide feedback on engineering designs, including reviewing plans and specifications of proposed facilities for potential impacts to maintenance or operations. Identifies and recommends modifications to existing systems and equipment.
9. Coordinates between operations, engineering, contractors, and others to facilitate project completion including quality control within their area of responsibility.
10. Researches and provides information for the development, review and modification of operational and maintenance manuals within their area of responsibility.
11. Reviews as-built drawings and makes recommendations as needed; develops sketches and simplified drawings for improvements to systems and components to improve the corrective and preventive maintenance capability; and submits modifications for drawings of record.
12. Assists in the development and review of shutdown plans.
13. Reviews completed work orders within area of responsibility, confirms work is complete, and notifies the manager.
14. Performs and oversees rebuilding of critical components within area of responsibility.
15. Performs other related Electrical job duties as required.

**EMPLOYMENT STANDARDS  
MINIMUM QUALIFICATIONS**

**Education and Experience:**

High school diploma or GED in addition to a minimum of 5 years in an electrical journey-level maintenance position in a Metropolitan Water District treatment plant.

Experience and knowledge at the advanced journey level as demonstrated by practical application of techniques and practices specific to the operation, maintenance, and repair of water treatment plant and potable water delivery systems. Skills necessary include predictive and diagnostic evaluation of complex equipment.

**Required Knowledge of:** Theories and practices of electrical maintenance including testing and troubleshooting methods; maintenance management practices such as the work order system, computerized maintenance management, root-cause failure analysis, and reliability-centered maintenance to repair, modify, and improve equipment; safe work practices and pertinent regulations for operating and maintaining electrical equipment in water treatment plant and distribution systems.

**Required Skills and Abilities to:** Understand and interpret electrical engineering data and complex schematic diagrams necessary to implement predictive, preventive, corrective, and improvement activities; interpret and develop complex instructions, manuals, operating and maintenance procedures and specifications related to the electrical operation of treatment plant and distribution systems; apply methods, practices, and tools to ensure reliable operations for the movement of water, and optimization of equipment demands within established limits and standards; utilize tools and diagnostic equipment to test and monitor equipment condition as well as repair, rebuild, overhaul, install, and replace equipment necessary to meet water treatment and distribution needs; use and maintain tools and equipment; lead and train; and apply and guide others in adhering to safety practices and regulations for operating electrical systems supporting treatment plant and distribution system operations.

**CERTIFICATES, LICENSES and REGISTRATIONS REQUIREMENTS**

Employees in this position may be required to obtain and maintain the following certifications, licensing and registrations:

**Certificates**

- California Department of Public Health Grade T2, Water Treatment Operator Certification
- Forklift Operator Certification
- Manlift Certification
- MWD High Voltage Switching Certification

**Licenses**

- Valid Driver license from state of residency equivalent to a California Class A, B, or C required

**Registrations**

- None

**PHYSICAL DEMANDS/WORK ENVIRONMENT**

The physical demands and work environment characteristics described here are representative of those that must be met or may be encountered by an employee to successfully perform the job duties of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the job duties.

**Expectations of Emergency and Stand-by Service:**

Employees in this position may be required to work off-shift hours and/or stand-by service to address operational needs and emergencies as required. May be required to work extended periods away from the normal reporting location.

**Physical Demands:** Heavy tasks may require lifting and carrying items weighing up to 50 pounds, with intermittent need to lift and carry materials and/or equipment weighing up to 100 pounds with assistance. Frequently requires pushing, pulling, turning and positioning parts, assemblies, equipment and tools weighing as much as 100 pounds with assistance. May be required to lift and move heavy items with the assistance of others and with lifting devices such as jacks, hoists and cranes of varied types and capacities. Physical effort includes frequent walking, stooping, bending, reaching, standing, kneeling and sitting for long periods of time.

**Work Environment:** Work is performed indoors and outdoors under all types of conditions including extreme temperatures, remote locations, open and confined spaces ranging from crawl spaces to sub-structures as well as varied types of terrains. Job tasks frequently require working from heights and functioning from elevated platforms suspended by lifts, hoists, scaffolds and cranes over surfaces from earthen materials to concrete, steel and water. Work frequently is conducted in close proximity to high volume/pressurized water, electrically energized equipment including high voltage systems, and hazardous chemicals including chlorine and strong acids and bases. The work environment often involves exposure to equipment and tools producing high levels of noise, as well as potentially dangerous materials, hazardous chemicals, and machinery that require careful adherence to extensive safety precautions, rules and regulations.

**Vision Requirements:** None