

## **Wastewater Treatment Electrician Task List**

### **Electrical Systems**

1. Designs and installs various electrical systems, including building or industrial wiring, motor control, and/or lighting systems related to wastewater treatment plants, in order to maintain electrical operation of electrical equipment.
2. Installs various generators and transformers, such as medium voltage gas turbine generators and medium and high voltage steam turbine generators, in order to supply voltage to plant electrical equipment.
3. Installs and inspects various equipment, including circuit breakers, meters, conventional controls, electronic control systems, programmable controls, relays, protective devices, motors, motor protection sensors, public address systems and other communications and surveillance systems, logic circuits, and uninterruptible power supplies, in order to maintain effective operation of wastewater treatment electrical systems.
4. Performs preventative maintenance on wastewater treatment electrical equipment, such as electrical motors, ventilation systems, and lighting systems, sufficient to ensure the effective operation of equipment and prevent equipment failure.

### **Equipment/Tool Operation**

5. Utilizes various hand tools, such as pliers, screw drivers, strippers, cutters, and wrenches, in order to effectively repair and install electrical equipment.
6. Operates portable power tools, such as electric drills, saws, wire cutters, crimping tools and benders, in order to correct, repair, or replace electrical equipment.
7. Utilizes electrical instrumentation meters as needed, such as multi-meters, meggers, high potential testers, oscilloscopes, and phase rotation meters, sufficient to test electrical equipment and determine electrical operating condition.
8. Troubleshoots and repairs alternating current (AC) and direct current (DC) electrical equipment, such as motors, generators, electrical circuits or protective devices, in order to ensure that all electrical equipment is working efficiently.
9. Moves and/or places large and/or heavy objects by operating cranes, hoists, and winches or directing others on the use of the equipment with using hand signals and commands in order to ensure the safety of self and others.

### **Reading & Writing**

10. Writes and/or completes various documents, including memos, letters, reports, and standard forms, in order to obtain or provide information.
11. Reads and interprets written material, such as supervisors' instructions, reports on condition of equipment, work orders, or maintenance manuals, in order to apply them to specific situations.

12. Reads wiring diagrams, plans, and schematics in order to effectively understand the design of the electrical equipment and maintain and troubleshoot the electrical equipment.
13. Reads and interprets codes and standards, such as electrical, building, and fire codes, and Cal/OSHA regulations, sufficient to apply them to specific jobs or work situations.
14. Operates a computer by accessing applications, email, intranet and internet in order to effectively use available electronic resources and complete work assignments.

### **Communication**

15. Responds to emergency situations, such as utility outages, odor complaints, or sewer system overflows, in order to gain information and correct the situation.
16. Reports all wastewater facility problems by communicating to operations, logging in plant log book, work reports and communicates to supervisor, either orally or in writing, in order to correct problems as soon as possible.
17. Communicates orally with co-workers and supervisors in order to discuss problems and possible solutions, obtain information, and/or explain procedures and methods of performing tasks.