

City of South San Francisco
Human Resources Department

Plant Electrician II
Class Description

Definition

Under general supervision, performs a variety of semi-skilled and skilled mechanical and electrical duties in the maintenance, installation and repair of water quality control plant equipment, remote pumping and stormwater stations, programmable logic controller (PLC's), supervisory control and data acquisition systems (SCADA), and alarm system communication; and performs related work as required.

Distinguishing Characteristics

This is a journey-level within the Plant Electrician series. Employees within this class are distinguished from the Plant Electrician I by the performance of the full range of duties as assigned. Positions assigned to this class are required to have complete working knowledge of electrical and mechanical maintenance and repair tasks associated with a water quality control plant and are expected to carry out assigned duties and responsibilities with minimal supervision. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

Typical and Important Duties

1. Makes periodic inspections of plant and pump station equipment and facilities to locate and make needed repairs and perform routine maintenance.
2. Installs, services, and maintains a variety of water quality control plant equipment, including overhead wires, overhead cranes, heating, ventilation and air conditioning systems, underground cables, pumps, pipelines, electrical control systems, valves and other types of stationary machinery and apparatus.
3. Repairs electrical equipment, including the rewiring and replacement of defective and worn parts, repairs plant and laboratory appliances.
4. Maintains and repairs motor control centers, automatic control facilities, standby generators, SCADA systems and signal alarms, panel boards and switchgear; automatic safety controls; liquid level controls and indicators, recorders and alarms; electronic and impulse telemetry equipment.
5. Tests and splices wires and cables; wires buildings and equipment panels, makes additions to existing wiring; installs and repairs fluorescent, industrial and general lighting fixtures and connections.
6. Works in confined spaces and at elevated locations.
7. Operates a forklift safely.
8. Maintains accurate records concerning all functions of assigned work and inventory of material associated with assigned work, updates shop drawings, schematics, and wiring diagrams.
9. Trains subordinate personnel.
10. Installs and troubleshoots a variety of plant and station equipment and liquid-level

controllers.

11. Builds and maintains positive working relationships with co-workers, other City employees and the public using principles of good customer service.
12. Performs related duties and responsibilities as assigned.

Job-related Qualifications

Knowledge of:

- Methods, tools, and equipment used in mechanical and electrical maintenance and repair work.
- Operation and maintenance of water quality control plant and related facilities.
- National Electric Code and OSHA regulations.
- Treatment plant instrumentation and controls.
- Local, State and Federal wastewater regulations and requirements.
- High voltage switch gear and safety standards.
- PLC functions.
- Record keeping procedures.
- Occupational hazards and safety practices and procedures related to the work.
- Safety principles, practices, regulations, and procedures related to the work, including OSHA regulations.
- Appropriate emergency response.
- Confined space entry and rescue requirements.
- Computer operations and software.
- Principles and practices of customer service.

Ability to:

- Independently, effectively and safely perform a variety of semi-skilled and skilled tasks in the repair and maintenance of electrical and mechanical maintenance of water quality control plant facilities.
- Detect and take appropriate action to correct mechanical and electrical faults and failures. Perform a wide variety of mechanical and electrical maintenance tasks.
- Work from sketches and blueprints.
- Communicate effectively in writing, orally, and with others to assimilate, understand, and convey information, in a manner consistent with job functions.
- Represent the City, the department, or the organizational unit effectively in contacts with representatives of other agencies, City departments, and the public.
- Make process improvement changes to streamline procedures.
- Understand and carry out oral and written directions. Effectively and safely perform a variety of semi-skilled and skilled tasks.
- Use a variety of hand and power tools, and operate light motorized equipment. Operate a variety of vehicles.
- Use initiative and judgment within established policy and procedural guidelines.
- Work independently; organize own work, set priorities, meet critical deadlines, and follow-

up on assignments with a minimum of direction.

- Establish and maintain cooperative relationships with those contacted in the course of work. Communicate orally and in writing clearly and concisely.
- Work in a safe manner, following City safety practices and procedures.
- Understand and comply with City and departmental rules and regulations; identify, correct, and report safety hazards.
- Administer first aid.
- Understand and comply with City and departmental rules and regulations.
- Maintain confidentiality regarding sensitive information.

Skill in:

- Using tools and instruments properly and safely.
- Operating light power-driven equipment.
- Using personal computers and associated applications, including SCADA software, and preventative maintenance programs.

Experience and Training

Any combination of experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:

Experience:

Two years of experience comparable to a Plant Electrician I with the City of South San Francisco.

Training:

Equivalent to graduation from high school.

Licenses and Certificates

All licenses and certificates must be maintained as a condition of employment.

- Possession of, or ability to obtain, and maintain an appropriate, valid driver's license and a satisfactory driving record and a satisfactory driving record.
- Possession and maintenance of a Grade II Electrical and Instrumentation Technologist Certificate issued by the California Water Environment Association.
- Possession of, or ability to obtain and maintain, a Confined Space Certification by the end of the probationary period.
- Ability to obtain and maintain a Hazardous Materials First Responder Certification by the end of the probationary period.

Special Requirements

Essential duties require the following physical skills and work environment:

Physical Skills:

Able to sit, stand, walk, kneel, crouch, stoop, squat, crawl, twist, and climb stairs and ladders; lift

and carry 75 pounds; perform simple and power grasping, pushing, pulling, and fine manipulation; maintain sustained posture for prolonged periods of time; distinguish among various colors; distinguish various computer generated auditory signals; use common hand tools; vision to read printed materials and a computer screen; hearing and speech to communicate in person and over the telephone; smell to distinguish odors.

Work Environment:

Work in a standard office, shop, or field setting; exposure to cold, heat, noise, outdoors, inclement weather, dust, dirt, vibration, chemicals, traffic, traffic hazards, confining workspace, odors, mechanical hazards, electrical hazards, explosive hazards and bio hazards.

Ability to:

Travel to different sites and locations; drive safely to different sites and locations; maintain a safe driving record; maintain a clean and neat appearance; work shifts including weekends, nights, and holidays; work protracted and irregular hours; respond to a pager; take 24-hour call and stand-by; available for unusual hours in emergencies.

Additional Information:

- Approved: September 2013
- Revised Date: July 1995, July 1997, April 2001, December 2002, June 2003
- Former Titles: Mechanic Electrician – WQCP, Plant Electrician
- Abolished:
- Bargaining Unit: Operating Engineers
- DOT: Yes
- Status: Classified/Non-exempt
- Job Codes: D140