

City of South San Francisco  
Human Resources Department

**Plant Mechanic II**  
Class Description

**Definition**

Under general supervision, performs a variety of semi-skilled and skilled tasks associated with the maintenance and repair of water quality control plant and pumping station equipment, machinery, and facilities; and performs related work as required.

**Distinguishing Characteristics**

This class is a journey level within the Plant Mechanic series. Employees within this class are distinguished from the Plant Mechanic 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 water quality control plant maintenance 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. Inspects, locates, and diagnoses mechanical defects in water quality control plant equipment and facilities.
2. Installs and services a variety of water quality control plant equipment including pumps, pipelines, valves and other types of stationary machinery and equipment.
3. Performs predictive, preventative and emergency maintenance on pumps, motors and related equipment; maintains appropriate records and documentation of repairs.
4. Identifies and mitigates unsafe work environment and maintains safe work practices such as “lockout/tag-out”, confined space entry, and fall protection.
5. Uses mechanic’s tools, welders, plumbing tools, and machinist tools to fabricate, rebuild, strengthen, and maintain various parts and pieces of plant equipment.
6. Researches new products and methods of repair; contacts vendors to determine best methods and configuration of equipment; reviews cost, capacity, and maintenance requirements of equipment.
7. Reads blueprints, schematic drawings; makes redline corrections to as-built and construction drawings.
8. Performs instrumental, electrical and general troubleshooting of engines, pumps, blower compressors, boilers, gear reduces, turntables, filter assemblies, belt filter presses, generators, regulators, and valves.
9. Fabricates, assembles, and installs special structures and equipment as needed.
10. Repairs and replaces pipes, valves, fittings and other related plumbing equipment.
11. Inspects and maintains maintenance shop, service vehicles and tools.
12. Works in confined spaces and at elevated locations.
13. Operates a folk-lift and similar equipment safely.
14. Updates shop drawings and schematics.

15. Makes repairs to electrical equipment, including the rewiring and replacing of defective and worn parts.
16. Loads and unloads delivery vehicles.
17. Builds and maintains positive working relationships with co-workers, other City employees and the public using principles of good customer service.
18. Performs related duties and responsibilities as assigned.

### **Job-related Qualifications**

#### **Knowledge of:**

- Practices of repairing and maintaining electrical and gas motors, engines and pumps and other electrical and mechanical equipment associated with wastewater treatment.
- Methods, tools, equipment, and troubleshooting practices used in mechanical maintenance and repair work.
- Safe use and care of various materials, lubricants, supplies, and tools used in general repair and preventative maintenance work.
- Water quality control plant maintenance, repair, and construction operations.
- Operating principles and procedures of valves, pumps, and motors.
- Record keeping procedures.
- Welding practices.
- Electrical systems and troubleshooting practices.
- Local, State and Federal wastewater regulations and requirements.
- Basic knowledge of wastewater treatment processes.
- Basic mathematics.
- Appropriate emergency response.
- Confined space entry and rescue requirements.
- English usage, spelling, grammar, and punctuation used in report writing.
- Safety principles, practices, regulations, and procedures related to the work, including OSHA regulations.
- Principles and practices of customer service.
- Basic office equipment, methods, procedures, and computer hardware and software.

#### **Ability to:**

- Independently, effectively and safely perform a variety of semi-skilled and skilled tasks in the construction, repair, and maintenance of water quality control plant and pump station facilities.
- Detect and take appropriate action to correct mechanical faults and failures.
- Perform a wide variety of mechanical maintenance work.
- Work from sketches and blueprints.
- Accurately perform basic mathematic calculations.
- Understand and carry out oral and written directions.
- Communicate effectively in writing, orally, and with others to assimilate, understand, and convey information, in a manner consistent with job functions.

- Understand and carry out oral and written directions.
- Make process improvement changes to streamline procedures.
- Safely use and maintain a variety of hand and power tools, and operate light motorized equipment and vehicles.
- Administer CPR and first aid.
- Understand and carry out oral and written directions.
- Observe proper safety precautions and procedures.
- Take a proactive approach to customer service issues.
- Understand and carry out oral and written directions.
- Work in a safe manner, following City safety practices and procedures; safely handle hazardous materials; identify, correct, and report safety hazards; and administer first aid.
- Organize own work, set priorities, meet critical deadlines, and follow-up on assignments with minimal supervision.
- Communicate effectively in writing and orally, and with others to assimilate, understand and convey information, in a manner consistent with job functions.
- Establish and maintain cooperative working relationships with those contacted in the course of work.
- Maintain confidentiality regarding sensitive information.

Skill in:

- Using tools and instruments properly and safely.
- Operating light power-driven equipment
- Driving a truck and forklift safely and competently.
- Performing heavy manual labor.
- Operating a personal computer and a variety of software 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 Mechanic 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.

- Possession and maintenance of a Grade II Mechanical 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.
- Possession of, or ability to obtain and maintain, a Forklift Operator's certification by the end of the probationary period.
- Ability to obtain and maintain CPR/First Aid certification.
- 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, September 2002, January 2003, June 2003
- Former Titles: Plant Mechanic
- Abolished:
- Bargaining Unit: Operating Engineers
- DOT: No
- Status: Classified/Non-exempt
- Job Code: D135