

MECHANICAL TECHNICIAN III

DEFINITION

Under direction, plans, leads, and performs a variety of skilled duties in the preventive and corrective maintenance, inspection, and servicing of mechanical equipment, components, machinery, and facilities associated with the production, pumping, storage, delivery and treatment of potable, agricultural, reclaimed water and wastewater; ensures compliance with general water discharge orders; operates a variety of light and heavy equipment and hand and power tools; and performs related duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from assigned supervisory or management personnel. Exercises technical and functional direction over and provides training to lower-level staff.

CLASS CHARACTERISTICS

This is the advanced journey-level classification in the Mechanical Technician class series. Incumbents work under direction and exercise a high level of discretion and independent judgment in performing the full range of routine to complex preventative and corrective maintenance, inspection, and servicing of mechanical equipment, components, machinery, and facilities used in the operation of water and wastewater treatment. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to deliver work products or services. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the typical functions of the job.

- Plans, leads, and reviews the work of staff responsible for the preventive/predictive maintenance program including the maintenance, troubleshooting, installation, repair, and overhaul of equipment at the District's wells, booster stations, water and wastewater treatment plants, and other District facilities; ensures maximum performance and efficiency of equipment; assists work crews as appropriate.
- Trains assigned employees to ensure competence in the skills and techniques necessary to repair and maintain District's mechanical equipment properly and safely.
- Oversees and performs a variety of skilled duties involved in the inspection, diagnosis, troubleshooting, maintenance, repair, and servicing of field and shop equipment, components, facilities, and machinery used in the operation, production, pumping, storage, delivery, and treatment of potable, agricultural, and reclaimed water and collection and treatment of wastewater.
- Plans, coordinates, performs, and records repair operations, equipment replacement, new equipment installations, and related special projects as directed by supervisor; maintains records, updates as-built drawings, and creates a variety of reports including time, materials, and costs related to the project.
- Responds to emergency alarms, determines cause, and provides corrective action; makes emergency field repairs; supplies emergency generators for power outages.

- Performs corrective maintenance by troubleshooting cause of malfunction using visual inspection and precision measuring and testing instruments, and replacing or repairing broken parts, such as gauges, gaskets, sensors, switches, bearings, valves, pistons, rings, crankshafts, and pumps.
- Understands and directs the proper care and operation of assigned maintenance light and heavy equipment and tools, including service trucks, mobile knuckle crane, dump trucks, forklifts, portable/stationary generators, pressure washers, air compressors, pneumatic, hydraulic, and electric tools and other equipment as assigned; sets up and uses rigging equipment to move pumps, motors, and other heavy parts or equipment; uses diagnostic, analytical, and measurement instrumentation/tools.
- Performs confined space and permit required confined space entry; completes pre-entry checklists and performs atmospheric testing and evaluation of various entry conditions; assists in the calibration and maintenance of confined space atmospheric testing instrumentation and self-contained breathing apparatus units.
- Reads, understands, interprets, and works from blueprints, plans, schematics, diagrams, and maps.
- Maintains accurate, up to date records on all maintenance repair and service activity.
- Responds to public inquiries in a courteous manner; provides information in accordance with District policies.
- Reads, understands, and ensures compliance with the District Safety Manual; attends safety meetings, as required; reports all accidents, violations, or infractions to supervisor.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles of providing functional direction and training.
- Applicable federal, state, and local laws, codes, and ordinances relevant to the area(s) of responsibility.
- Principles, methods, materials, tools, and equipment required for installation, maintenance, diagnoses and repair of domestic, reclaimed, and agricultural water pumps, and operation and maintenance of booster pumping stations and domestic, reclaimed, and agricultural water wells.
- Principles of electronic and industrial electricity as it relates to assigned areas of responsibilities.
- Principles, methods, and techniques of mechanical maintenance, crane operation, rigging, metals identification, and welding.
- Operational characteristics and activities of diverse water, wastewater, and treatment plant systems, maintenance, and repair programs.
- Advanced methods and techniques of performing diagnostic troubleshooting services.
- Principles and practices of record keeping.
- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language to effectively perform the work.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Plan, organize, and coordinate the work of assigned staff.
- Effectively provide staff leadership and work direction.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Direct and perform a variety of tasks involving the installation, construction, maintenance, and repair of mechanical equipment associated with District water, wastewater, and agricultural water systems.
- Inspect, troubleshoot, diagnose, perform predictive, preventative, and/or corrective maintenance, and repair mechanical equipment within municipal water, wastewater, and agricultural systems such as motors, pumps, valves, actuators, and other equipment.
- Operate a variety of maintenance, repair, installation, and electrical testing equipment in a safe and effective manner.
- Read and understand technical manuals, blueprints, electrical diagrams and schematics, shop drawings, and sketches.
- Use various types of welding equipment to effectively repair equipment in the various District water and wastewater systems.
- Use a computerized maintenance management system for scheduling, tracking, and analyzing all work performed on equipment.
- Use SCADA to troubleshoot and identify potential problems within district systems.
- Comply with Cal-OSHA respirator facemask fit test requirements including use of Self-Contained Breathing Apparatus (SCBA).
- Maintain a variety of accurate records.
- Perform accurate mathematical calculations.
- Independently organize work, set priorities, meet critical deadlines and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Effectively use computer systems, software applications relevant to work performed and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

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

Education:

Equivalent to the completion of the twelfth(12th) grade supplemented by college level coursework or trade school training in electrical technology and/or mechanical maintenance or a related field.

Experience:

- Five (5) years of increasingly responsible experience in the maintenance and repair of mechanical equipment used in the distribution, collection, and treatment of water or wastewater systems.

Licenses and Certifications:

- Possession of a California Class B driver's license with air brake and tanker endorsements, to be maintained throughout employment.
- Possession of a valid Grade II Mechanical Technologist Certificate issued by the California Water Environment Association.
- Possession of or ability to obtain a valid Grade III Mechanical Technologist Certificate issued by the California Water Environment Association within twelve (12) months of employment.
- Possession of a valid Water Distribution Operator Grade II (D2) Certificate issued by the California State Water Resources Control Board.
- Possession of a crane operator certification issued by the National Commission for the Certification of Crane Operators.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

ENVIRONMENT

Indoor/outdoor, and wastewater treatment plant environment; travel from site to site; exposure to noise, dust, grease, smoke, fumes, noxious odors, gases, vibrations, electrical energy, radiant energy and all types of weather and temperature conditions; exposure to hazardous traffic conditions; work in or around water and wastewater; work and/or walk on various types of surfaces including slippery or uneven surfaces and rough terrain; work in confined spaces; incumbents may be required to work extended hours including evenings and weekends.

PHYSICAL

- Level Three
- NIDA
- Pulmonary

Incumbents require sufficient mobility to walk, stand, and sit for prolonged periods of time; frequently stoop, bend, kneel, crouch, crawl, climb, reach and twist; push, pull, lift, and/or carry 100lbs, exposure to harsh weather, hazardous chemicals, confined spaces, respirator. Use of large mechanical tools, electrical parts, and frequent exposure to extended periods of noise; operate assigned equipment and vehicles; ability to verbally communicate to exchange information.

VISION

See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

HEARING

Hear in the normal audio range with or without correction.

ADDITIONAL REQUIREMENTS

Must be able to respond within a forty-five (45) minute time period to the District's Corporate Yard while on standby duty; must be able to communicate by telephone for the duration of the on-call shift.