



CITY OF PETALUMA
CLASS SPECIFICATION
Date: 02/25/08
Job Class: 03SRMT

Senior Mechanical Technician

Summary

Lead and perform a variety of skilled and semiskilled tasks pertaining to the installation, maintenance, repair and service of the electrical and mechanical equipment, instruments and structures used within the water system and water recycling plant and pump stations; and provide technical staff support to plant operations.

Class Characteristics

This is the advanced journey level and lead for the mechanical functions. General supervision is provided by the Water Recycling Plant Operations Supervisor. An incumbent maintains and repairs water and water recycling and reuse equipment including, but not limited to: sluice gates, compressors and flights; hydraulic controls; mechanical, structural, and plumbing apparatus; belt, chain, and conveyors; diesel and/or gas engines and related cogeneration equipment; potable water systems; wastewater systems; storm drainage; chemical handling systems; boilers and digester systems; oxygen transfer systems; pumps centrifugal, positive displacement, progressive cavity, chemical metering, axial flow pumps, vertical turbine recycled water, submersible storm water, pump station, chopper type centrifugal; lift stations; valves such as plug, butterfly, motors, and actuators; distributed programmable control logic control system and computerized control systems; and also serves as a lead worker over the Mechanical Technician.

This class can be distinguished from the Mechanical Technician class by its lead worker role and its responsibility for providing technical expertise regarding the most complex maintenance and repair issues, lead work and training of staff in lower classifications as well as planning work using the computerized maintenance management system.

Essential Duties, Skills, and Demands of the Position

The duties, skills and demands described here 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 a disability to perform the essential duties, skills and demands.

Duties:

Lead and perform maintenance and repair duties for the City's water and water recycling plant and related facilities.

Plan, schedule and monitor the work of subordinate staff engaged in water recycling systems maintenance and repair activities; prioritize and distribute assignments; prepare daily work schedules; monitor productivity, efficiency and quality of work performed; provide standard maintenance procedures for operating staff and maintenance staff for routine preventative maintenance procedures; provide input to supervisors and managers regarding assigned staff performance.

Inspect, maintain, troubleshoot, repair and service facilities, machinery and equipment including, but not limited to, pumps, lift stations, valves, motors, engines, compressors and computerized control systems; rebuild and overhaul pumps, pneumatic control systems and ventilation blower units; inspect and calibrate gauges and meters; inspect and test air quality analyzers; perform or make recommendations regarding the most difficult and complex maintenance and repair projects.

Perform complex corrective mechanical 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, plugs, coils, wires, bearings, drive lines, valves, pistons, rings, crankshafts and pumps.

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Perform preventive and predictive maintenance checks and servicing on equipment; develop and monitor maintenance schedules.

Monitor supplies and maintain appropriate inventories; estimate quantities of materials and supplies needed and place orders; recommend and assist with equipment purchases including budget planning for operating and major purchases; oversee the maintenance of time, material, work order and equipment use records.

Rebuild equipment by disassembling, cleaning, ordering replacement parts, repairing mechanical malfunctions and reassembling and testing.

Train staff in work techniques, use of equipment and safety programs and techniques such as confined space entry procedures and lift station maintenance safety procedures.

Responsible for adherence to safety orders and compliance with federal and OSHA regulations in all aspects of work.

Confer with engineers, contractors, vendors, other City departments and staff as needed regarding assigned projects, project scheduling, material purchases, work assignments, office procedures and work production; make recommendations as appropriate regarding the design, installation and maintenance of lift stations and conveyance systems.

Read and interpret blueprints and schematics; provide input on design blueprints and recommend changes if appropriate.

Operate and maintain a variety of hand and power tools used in the performance of assigned duties; drive trucks and operate light and heavy equipment such as backhoes, fork lift, tractors, rollers, and loaders.

Fabricate parts and equipment as needed such as mounts, brackets and shields; operate welding and cutting equipment.

Spray pesticides, herbicides and insecticides as required.

Collect wastewater samples as assigned.

Perform general plumbing, electrical and carpentry duties as required.

Establishes standby lists to insure that personnel are available for problems which might occur after work hours, on weekends and holidays.

Responsible for the administration of outside contract work.

Prepare reports, forms, correspondence and related documentation regarding assigned operations; ensure that all required forms and reports are properly completed and filed in a timely manner.

Perform related duties as assigned.

Skills/Abilities:

Lead and perform skilled and semi-skilled work pertaining to the installation, maintenance, repair and service of electrical and mechanical equipment, instruments and structures used within a wastewater treatment and/or recycling plant.

Assign, direct and monitor the work of others; provide training and leadership to subordinate employees.

Troubleshoot and diagnose malfunctions with pumping capacities, pneumatic controls, and computerized controls and determine the effective course of action or correction.

Operate a variety of hand and power tools; drive trucks and operate a variety of heavy construction equipment.

Read and interpret drawings, blueprints and specifications.

Understand a variety of technical instructions in text mathematical or diagram form.

Prepare technical reports and documents.

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Work in confined work spaces.

Effectively present information to supervisors and managers in a clear and concise manner.

Respond to emergency situations in a timely manner.

Make sound decisions and meet critical deadlines.

Define problems, collect data, establish facts and draw valid conclusions.

Utilize standard business computer hardware and software to maximize productivity and efficiency. Be versed in the use of computerized maintenance management systems.

Communicate effectively, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of the work.

Physical Demands and Work Environment:

While performing the duties of this job, the employee is frequently required to sit, stand, walk, talk, hear, and reach with hands and arms. The employee is frequently required to use hands to finger, handle, or feel objects, tools, or controls, and will frequently be required to enter data into a terminal, personal computer or keyboard device and operate office equipment requiring repetitive arm/hand movement. The employee is occasionally required to climb, balance, stoop, kneel, crouch, or crawl, taste or smell. The employee must be able to perform heavy physical labor, including having sufficient strength to lift, carry and/or move items up to 75 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. While performing the duties of this job, the employee is occasionally exposed to outside weather conditions and wet conditions. Other work conditions include exposure to unpleasant odors, mechanical parts, fumes, airborne particles and moderate noise levels. There is risk of exposure to hazardous fumes and substances. Employees must operate vehicles and equipment in order to perform job duties. Employees may be required to work overtime, weekends, and/or holidays and may perform on call duties.

Special Physical Requirement:

May be required to enter confined space and /or respond in an emergency. Must be able to wear self-contained breathing apparatus (SCBA) and perform confined space entry and emergency response duties in protective clothing and equipment including SCBA weighing up to 32 pounds.

Qualifications

Knowledge of:

Typical operations, services and activities within water and water recycling facilities.

Principles, methods, materials and tools employed in the repair and maintenance of pumps, motors and other wastewater plant equipment, including welding, machining, institutional HVAC, equipment fabrication, pumps, and/or process equipment.

Occupational hazards and safety precautions necessary in heavy industrial maintenance work.

Basic plumbing and electrical principles.

Principles and practices of hydraulics related to pumps.

Practices and techniques of metal cutting and welding.

Supervisory Control and Data Acquisition (SCADA) pump control systems.

Principles and practices of employee supervision, leadership and training.

Report writing and records maintenance.

Gas and diesel engineer maintenance and repair.

Standard principles and practices of purchasing and inventory control.

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Methods and techniques of developing and implementing a preventive and predictive maintenance program.

Standard business computer applications including Microsoft Windows and Office and computerized maintenance management systems.

Education and Experience:

Any combination equivalent to the education and experience likely to provide the required knowledge and abilities would be qualifying. A typical way to gain such knowledge and abilities would be:

Education:

Equivalent to graduation from high school; additional technical or college-level coursework related to water systems and/or water recycling plant operations is highly desirable.

Experience:

Four years of increasingly responsible experience performing wastewater systems maintenance and repair duties at a level comparable to Mechanic Technician.

Licenses/Certificates:

Possession of a valid California Class C driver's license with a satisfactory driving record.

Possession of a valid Grade III Plant Maintenance Mechanical Technologist Certification issued by the California Water Environment Association (CWEA) within 30 months of appointment to position.

Possession of a valid Grade II Wastewater Treatment Plant Operator Certificate issued by the State of California Water Resources Control Board is desirable.

Possession of a valid Grade III Certificate in Collection System Maintenance issued by the California Water Environmental Association (CWEA) is desirable.

Additional Requirement

Must be available to work overtime and off-shift hours, including weekends, on a project or emergency basis. May be required to work on-call.

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