

Summary of Duties: Performs a variety of skilled tasks in maintaining, overhauling and assembling mechanical equipment and auxiliaries associated with combustion equipment, heat recovery boilers, steam and gas turbines, large diesel engines, large centrifugal pumps and compressors, and other equipment found in a wastewater treatment plant; performs the more difficult and skilled mechanical work with limited supervisory responsibility over a small crew; or supervises such work; and does related work.

Distinguishing Features: a Wastewater Treatment Mechanic does installation, maintenance and repair work requiring the knowledge and techniques of several mechanical crafts, such as machinist, welder and boiler mechanic. An employee of this class does skilled work and uses good judgement in determining the extent of necessary repairs and replacements. Supervision received varies with assignments, but usually consists of inspection for adequacy on completion. An employee of this class is exposed to typical hazards encountered in using welding equipment, machine tools and working around machinery in operation. In some assignments the employee may be exposed to explosive or toxic conditions. An employee of this class may supervise helpers or spend part of the time supervising a small crew of Wastewater Treatment Mechanics, Welders, and helpers and the rest of the time performing or providing the technical support for the more difficult and skilled mechanical work.

A Wastewater Treatment Mechanic Supervisor is a full-time supervisor of Wastewater Treatment Mechanics and other employees. The supervisor's major responsibility is to plan and implement a preventive maintenance program for combustion and cogeneration-type mechanical equipment, large compressors, diesel engines, pumps, and other equipment normally found in a large wastewater treatment facility, including determination of the extent of needed repairs subject to decisions of a superior. Assignments are in terms of objectives, and the supervisor is responsible for the quantity and quality of work performed.

Employees in these classes are distinguished from classes in the Mechanical Repairer series in that they work in steam turbine and gas turbine electric generating plants in Wastewater Treatment Division only and normally work on electricity generating equipment, its auxiliaries, and heavy machinery.

Examples of Duties: Wastewater Treatment Mechanic: Inspects, test, analyzes, adjusts and repairs a wide variety of electric, steam and gas powered electricity generating equipment and auxiliaries, including steam and gas turbines, electrical generators, induced draft blowers, centrifuges, combustion equipment, pneumatic and belt conveyors, high pressure boilers [600 to 1200 psi], compressors [to 40,000 cfm], high pressure steam systems [to 1200 psi], centrifugal

pumps [to 2500 hp], diesel engines 9to 2000 hp], screening equipment, and equipment associated with sedimentation tank [to 2.5 million gallons];

Performs preventive maintenance and repairs, overhauls, disassembles, reassembles and verifies operational status of heavy machinery; sets and aligns equipment, does rigging for the installation and moving of heavy equipment, fabricates metal parts and assembles ducts, machine guards and platforms, uses a wide variety of hand and power-driven equipment and tools necessary to perform these tasks;

Supervises and works with a small crew of employees engaged in maintaining, overhauling, assembling and repairing a wide variety of equipment including steam and gas powered turbines, boilers, compressors, blowers, screening equipment, diesel engines, electrical generator,s auxiliaries and other heavy equipment; personally performs the more difficult work; may plan, coordinate and inspect mechanics' maintenance work in progress; may determine work methods and assures that materials and supplies are available; may keep records of time and materials; assures that proper safety precautions are taken by subordinates; and may act for a Wastewater Treatment Mechanic Supervisor during absences.

Wastewater Treatment Mechanic Supervisor: Plans, supervises, lays out, assigns, coordinates, schedules, trains and inspects the work of one or more crews of Wastewater Treatment Mechanics, other journey-level workers and helpers engaged in maintaining, overhauling, repairing and installing a variety of equipment associated with wastewater treatment and co-generation systems; prepares work orders; determines work methods and procedures to be followed; reviews the work of subordinates; coordinates the repair of equipment with operating schedules; checks work to be done and assures that materials and supplies are available; personally supervises emergency or difficult work, particularly heavy work done to close tolerances; makes cost estimates; assures that work standards are maintained; conducts training and safety meetings; requisitions materials and supplies; maintains records of time, materials, tools and equipment; prepares budget items; makes recommendations concerning changes in procedures, construction and plans;

Reviews and evaluates the work of subordinates; approves vacation and sick time usage; represents the first level of review in the grievance process; disciplines employees, fulfills supervisory affirmative action responsibilities as set forth in the City's Affirmative Action Program.

Both Classes: May occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications:

Wastewater

Wastewater
Treatment

<u>Knowledges:</u>	<u>Treatment Mechanic</u>	<u>Mechanic Supervisor</u>
Principles, operation and maintenance of large gas and steam turbine generators, blowers, fans, pumps and their auxiliaries; and the adjustment, servicing and repair of such equipment, according to local demands and characteristics;	Good	Good
Methods of repairing and overhauling large steam and gas and air compressor units, pumps, gear drivers, boilers and fluidized bed furnaces;	Good	Good
Methods, equipment, tools and terminology of the trades involved in mechanical repair work;	Good	Good
Practices and procedure related to welding, brazing soldering and machining work;	Good	Good
Safety principles and practices related to boilers, steam, electric and auxiliary equipment maintenance, repair and rigging;	Good	Good
Knowledge of the laws and regulations relating to equal employment opportunities and affirmative action;	Working	Working

<u>Knowledges:</u>	<u>Wastewater Treatment Mechanic</u>	<u>Wastewater Treatment Mechanic Supervisor</u>
Principles of supervision;	Working	Good
Memorandum of understanding as they apply to subordinate personnel;	Working	Good
City personnel rules, policies and procedures;	Working	Good

Abilities

Prepare clear, concise and accurate reports; X X

Deal tactfully and effectively with others; X X

Analyze and interpret plant logs, instruments, charts and reports; X X

Estimate costs of proposed work; X X

Train and supervise employees in safe, maintenance, repair and overhaul of wastewater treatment plant equipment and its auxiliaries; X X

Analyze emergency plant conditions and adopt a quick effective course of action; X X

Make sound recommendations on the purchase, specifications and installation of turbine-electric and blower equipment; X X

Read and follow blueprints, plans and written instructions. Make sure sketches and notes of the installation, dismantling and repair of mechanical equipment. X X

Two years of experience as a Diesel Plant Operator in the repair of diesel-powered generating equipment 1000 hp or larger and associated auxiliaries; or two years of experience as a Steam Plant Assistant in the repair of steam or gas-powered turbine generating equipment and auxiliaries; four years as a Mechanical Repairer or six years as Mechanical Helper assisting in the maintenance and repair of steam or gas-powered turbine generating equipment and auxiliaries is required for Wastewater Treatment Mechanic.

Two years as a Wastewater Treatment Mechanic; or two years experience as a Steam Plant Maintenance Mechanic or as a Machinist in the maintenance and repair of steam and gas powered turbine generating equipment and auxiliaries; or four years experience as a Steam Plant Assistant in the repair and maintenance of steam and gas powered turbine generating equipment and auxiliaries; or six years as a Mechanical Repairer assisting in the maintenance and repair of steam and gas powered turbine generating equipment and auxiliaries is

required for Wastewater Treatment Mechanic Supervisor.

License: All Classes: Some positions may require a valid California Driver's license and a good driving record.

Physical Requirements: Strength to perform average lifting of 35 pounds and occasionally over 70 pounds; body agility and equilibrium necessary for activities such as climbing and balancing under precarious conditions; back and leg coordination involved in activities such as stooping, kneeling, crouching, and crawling; arm, hand and finger dexterity with both hands involved in activities such as reaching, handling and feeling. Good speaking and hearing ability and good eyesight are required for Wastewater Treatment Mechanic. Certain color blindness may preclude employment in this class.

Strength to perform average lifting of less than 5 pounds and occasionally over 15 pounds, good speaking and hearing ability and good eyesight are required for Wastewater Treatment Mechanic Supervisor.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in these classes. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the person's limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.