SAUSALITO-MARIN CITY SANITARY DISTRICT

OPERATIONS AND MAINTENANCE TECHNICIAN I

DEFINITION

Under general supervision of the Operations and Maintenance Supervisor, performs standard tasks to operate and maintain wastewater processes and equipment; performs mechanical maintenance and repair work and basic laboratory analyses.

SUPERVISION EXERCISED

This class has no supervisory responsibilities.

IMPORTANT AND ESSENTIAL DUTIES (Illustrative Only)

- Operates treatment equipment such as pumps, disinfection equipment, valves, and sludge dewatering equipment to control the flow and processing of wastewater sludge and effluent in accordance with plant operating procedures to ensure a high level of process performance, economy and compliance with the plant's wastewater discharge requirements.
- Monitors gages, meters, charts, instruments, control panels and computer work station screens, maintains log of operational data and events and reports a unusual operating conditions or events.
- Performs basic process control calculations and laboratory tests.
- Maintains documentation, including worksheet/log sheet entries and wastewater sample documentation precisely and accurately.
- Interprets and works from basic drawings, designs, schematics, sketches, and written and verbal instructions; performs basic maintenance, repairs, fabrication, and rebuilding of shop, field and plant equipment used in water and/or wastewater treatment facilities, pump stations, and collection systems.
- Lubricates, adjusts and maintains shop, field, and plant equipment, including inspection and cleaning of wet wells, pipelines, pumps, compressors, valves, chemical feed and processing equipment.
- Performs basic preventive and corrective maintenance by isolating power, grounding wires, troubleshooting problems, making repairs, restoring power and checking for proper operation.
- Performs basic electrical and instrumentation circuit installation for additions or modifications by bending and installing conduit, pulling wire, wiring in circuits as shown on construction drawings and tests system for proper installation
- Assists in the installation of, inspection, and repair of a variety of pumps, such as centrifugal, positive displacement, and screw; services, lubricates, adjusts, and maintains pumps; removes and installs packing and most seals.
- Using basic welding skills to perform horizontal welding and fabricating with acetylene and arc welders; heats and cuts materials; and fabricates simple projects.

- Maintains, installs, inspects, and repairs piping systems of galvanized, PVC, stainless steel, and copper tubing; identifies types of piping, fittings, and basic valves; cuts and threads pipes; and makes minor modifications to existing piping systems.
- Performs routine maintenance and repair tasks on engines, such as changing oil, belts and spark plugs; replacing filters; obtaining oil and fuel samples; and taking hydrometer readings of coolant and battery fluids.
- Performs regularly scheduled maintenance, inspection and repair tasks on comminuting and grinding devices; replaces and adjusts cutters and combs; cleans bar screens; lubricates devices; and assists others in the more complex repairs.
- Performs basic maintenance, inspection and repair tasks on mechanical and electrical drive components.
- Maintains, inspects, and repairs a variety of hydraulic, pneumatic and electrical process control equipment.
- Follows the safe and proper use of various hand, power tools and test instruments.
- Follows proper safety practices, precautions and procedures, such as confined space entry; proper storing, handling, and transporting materials in accordance with MSDS protocol; using correct lockout and tagout procedures and assisting in rigging as required for the movement or placement of heavy machinery or equipment.
- Operates, cleans, services, maintains, and paints equipment, machinery, vehicles, structures, buildings, pipelines, storage tanks and additional items found in modern wastewater treatment and conveyance facilities.
- Operates dump and flatbed trucks, generators, and other types of machinery, equipment and vehicles.

OTHER DUTIES

- Performs cleaning and upkeep of plant grounds, buildings, vehicles and equipment.
- Assists in the updating of operations and maintenance procedures and O&M manuals
- Responds to emergencies.
- Performs basic laboratory analyses, including total suspended solids, biochemical oxygen demand, chlorine residual and other tests.
- Prepares, sorts, washes, decontaminates, and sterilizes lab glassware.
- Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Basic standard physical, chemical and microbiological properties of wastewater.
- Basic methods, materials and equipment used in the operation and maintenance of wastewater treatment facilities and pump stations.
- Basic principles of wastewater sampling and routine process control tests.
- Safe work practices, including the handling of hazardous materials and chemicals.
- Methods, practices, procedures, and tools of plant maintenance.
- General equipment repair and maintenance techniques.
- Laboratory hazards and proper safety precautions and procedures, chemical hygiene, including personal protective equipment.
- Basic preventative maintenance techniques and procedures.

- Use of standard hand, electric and pneumatic tools and equipment of the mechanical trades.
- Basic electrical circuits, including sizing, installation, troubleshooting and repair
- Computer applications related to the work.
- Shop mathematics.

Skill in:
- Operating and maintaining wastewater plant and collection and disposal system equipment.
- Learning to diagnose faulty operations and evaluate seriousness of malfunctions.
- Reading and interpreting gauges and other recording instruments.
- Entering and retrieving computer information with sufficient speed and accuracy to perform the work.
- Operating and maintaining standard hand, electric and pneumatic tools and equipment of the maintenance trade in a safe manner.
- Performing standard laboratory tests and analyses.

Ability to:
- Wear personal protective equipment, such as safety glasses or goggles, hard hats, respirator protection (e.g. dust mask, self-contained breathing apparatus, etc.), safety steel toe boots, gloves, protective clothing and other safety protection as required.
- Prepare reports and keep accurate records.
- Communicate clearly and concisely, both orally and in writing in the English language.
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.
- Follow oral and written instructions.
- Analyze and interpret standard laboratory test results.
- Maintain accurate and complete laboratory records.
- Follow established safe working practices.
- Follow oral and written instructions.
- Clean and prepare laboratory equipment/glassware and maintain laboratory in orderly fashion.

Experience and Education:

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

Experience:
Two years of experience in the operation and maintenance of wastewater collection and treatment and facilities.

Education:
Equivalent to graduation from high school supplemented by specialized training in biology, chemistry, or related field.

LICENSES AND CERTIFICATES

Must possess a Grade I Wastewater Treatment Operator certificate issued by the California State Water Resources Control Board.

Must possess a Mechanical Technologist Grade I certificate issued by the California Water Environment Association or obtain such a certificate in a time frame specified by the District.

Must possess a valid California class C driver's license and a satisfactory driving record.

PHYSICAL DEMANDS

Must possess stamina to walk, stoop, climb and work in confined spaces and a laboratory setting; strength to lift and carry equipment, tools and supplies weighing up to 50 pounds and heavier weights with proper equipment; vision to read a printed page and a computer screen; and hearing and speech to communicate in person and over the telephone.

WORKING CONDITIONS

Must be willing to work under potentially hazardous conditions and with exposure to potentially hazardous chemicals. Must be available for emergency on-call and periodic off-shift work. Standby assignments may be required to fulfill the needs of the District.