

NATURE OF WORK

This position is responsible for preventative maintenance; mechanical, electrical, and electronic maintenance; and repair work for the water treatment, reservoir and water/wastewater pump and lift stations through-out the City.

Work involves scheduled and emergency maintenance activities of electrical, electronic or mechanical systems. Mechanical systems include pumps, motors, and valving systems in water and sewer stations. Electrical and electronic maintenance includes direct replacement, overhaul, and repair of electrical control and electronic instrumentation systems/devices and programmable controller monitoring systems. Assignments are received through oral and written instructions, sketches, or blueprints although work may result from inspection and troubleshooting. Assignments are received in the form of overall objectives as well as specific assignments. Work is ordinarily performed independently, subject to inspection in progress or upon completion by a supervisor. This is not a supervisory classification, however, Systems Technician may provide guidance and direction to the Maintenance Technicians and seasonal workers on maintenance and or repair projects as a lead worker. Work requires considerable understanding of the purpose, function, and operating systems to which the position is assigned.

The work is distinguished from the Instrumentation Technician by the responsibilities of the SCADA Data System. The work is distinguished from the Maintenance Technician by the expectation of performance in both mechanical/electrical maintenance and electronic diagnosis and repair.

ILLUSTRATIVE EXAMPLES OF WORK

(Any single position of a class will not usually involve all of the essential duties listed and many positions will involve essential duties which are not listed.)

Maintains and repairs the pumps and related electrical controls at water and sewage pump stations, wells, reservoirs, flow monitoring stations, and other municipal facilities.

Removes, overhauls, and reinstalls pumps, motors, compressors, and other equipment. Performs routine overhaul and maintenance work on telemetering equipment. Replace or repair bearings in pumps, motors, and other equipment. Replace or repair piping and perform other plumbing and pipe fitting tasks as required.

Maintains or repairs conduits, wires, alarms, motors, switches, control panels, and circuit breakers required in making additions, extensions, or alterations in electrical systems. Repairs and replaces defective parts in motors, clocks, generators, pumps, switches,

alarms, transformers, and other electrical fixtures and appliances; maintains diesel generators. Tests, locates, and repairs problems in electrical circuits and equipment.

Maintains accurate maintenance records of equipment and apparatus serviced, time records, purchases, documents system modifications and enhancements, and other related records systems. Maintains a daily maintenance log book

Replaces, calibrates, tests, and repairs electronic control devices at various city facilities for centralized monitoring of facility operations and the collection of field data for computerization. Cleans, inventories, and maintains specialized maintenance tools and equipment parts and supplies. Makes minor repairs and recommends when to refer repair to manufacturer.

Performs maintenance activities according to standard and special instructions; performs repairs to electronic or digital systems; participates in the design of alterations or adaptations to the systems such as the removal and reinstallation of programmable logic controllers, Remote Terminal Units's, Radio Telemetry, and telecommunications systems.

Performs maintenance on components of data communication system, inspects for potential breakdowns, maintains servicing and maintenance records, maintains supply of replacement parts. May occasionally erect and maintain antennas, towers, and associated transmission line. Diagnoses faults in telecommunications equipment and lines; adjusts telemetry line levels and verifies data transmissions. Diagnose and repair malfunctions in radio communications equipment.

Enters collected data into personal computer. Identifies unusual readings from data and reports significant or unusual readings to supervisor.

Researches technical data as required.

Orders parts and materials needed to maintain pump stations. (Supervisor approved)

Performs other related work as required.

WORK QUALIFICATIONS

Considerable work experience in the maintenance of industrial pumps, motors and controls and considerable experience in electrical and electronic work with programmable controllers, microprocessor-based systems, or distributed control systems; graduation from high school, supplemented by the completion of technical courses in pump repair,

electricity, and electronic instrumentation or related subjects or any equivalent combination of experience and training which provides the following knowledge, skills, and abilities:

Considerable working knowledge of the methods, materials, and tools used in the repair and maintenance of electrical/electronic motor controls, mechanical maintenance and repair of industrial pumps, motors, and valve systems in a water/wastewater pump station.

Knowledge of hydraulics, including principles of operation of various types of pumps and factors affecting pump performance.

Knowledge of the occupational hazards and proper safety precautions of the work.

Ability to operate and use electro/mechanical test equipment used to troubleshoot or maintain pumping stations.

Ability and to read and interpret blueprints, diagrams, sketches and schematic diagrams.

Ability to perform general building maintenance duties.

Ability to recognize and diagnose malfunctioning equipment and controls.

Ability to read and interpret control systems diagrams and manufacturer's manuals.

Ability to effectively communicate with others verbally and in writing.

Ability to work as a Team Member.

Possession of valid Oregon Electrical license that permits the holder to immediately work on electrical circuits of at least 115 volts AC in an industrial setting. Possession of an Oregon Limited Maintenance Industrial Electrical License is a minimum requirement. Must have a minimum of 4000 hours of documented electrical experience satisfactory to the Oregon Building Codes Agency. Possession of a Restricted Energy License (REL) is desirable.

Possession of a valid Oregon driver's license or Class C license and the ability to meet the City's driving standards.

Work involves field and limited office settings. Field conditions require work in a variety of weather conditions, stand-by, call back evening and weekend work, working at heights and underground confined-space locations, exposure to sewage, fumes and chemicals with safety precautions. Physical strength and agility sufficient to climb, bend, twisting and sufficient flexibility and dexterity to move around pumps, motors and control systems to complete task requirements. Ability to distinguish different colors of wiring. Work involves frequent interruptions, some public contact. Office work involves writing and utilizing modern office equipment including personal computers, drawing diagrams, occasional phone contact with suppliers, responding to alarms and monitoring equipment readings.

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