

CENTRAL UTAH WATER CONSERVANCY DISTRICT

Job Description

Revised: January 2016

JOB TITLE: Plant Instrumentation/Maintenance Technician

REPORTS TO: Water Treatment Plant Manager

STATUS: Non-Exempt

JOB SUMMARY:

This position is responsible for operations and maintenance of a drinking water treatment plant, and has lead responsibility for installation, maintenance and repair of treatment plant equipment, buildings, and grounds, including mechanical and electrical equipment and instrumentation.

ESSENTIAL FUNCTIONS:

1. In coordination with Treatment Plant Manager, performs mechanical and electrical maintenance on plant equipment and facilities, including pumps, mixers, motors, chemical feed equipment, etc. Additionally maintains reservoirs, sludge beds, buildings, and grounds.
2. Operates and maintains a water treatment plant which requires the knowledge, skill, and ability to utilize, troubleshoot, and calibrate various electrical equipment - including: chemical feed systems, computers, PLC's, I/O cards, turbine pumps, motors, valves, and analytical equipment. Performs daily maintenance responsibilities. Completes work assignments and provides technical input of all plant maintenance.
3. Installs and calibrates electronic equipment including analytical equipment such as: valves and actuators, flow meters, pumps and motors, level indicators, turbidimeters, particle counters, chlorine injectors and sensors, PLCs and I/O components, etc. Also assists in designing and maintaining the plant SCADA system.
4. Maintains and updates a maintenance database and assists plant personnel in submitting various logs and reports relating to maintenance of plant facilities.
5. Utilizes and maintains the district asset management program by participating in its growth and implementation as well as maintaining an accurate accounting of the plant assets and spare parts inventory and work order system to ensure that the plant remains prepared for critical equipment replacement.
6. Assists Plant Manager in preparing and submitting plant maintenance budget, prepares specifications for and assists in procuring materials, tools, and services for equipment and facilities maintenance and replacement.
7. Participates in and trains plant personnel in the District operator training program, especially in mechanical and electrical maintenance.
8. Operates or oversees operation of various heavy duty construction and power equipment needed for plant maintenance.

9. Prepares and/or reviews written reports, documentation, specifications, and summaries relating to plant equipment and facilities. Works on-call, and may work weekends and holidays as scheduled.

MARGINAL FUNCTIONS:

1. Oversees and performs plant operations and maintenance activities in absence of Plant Manager.
2. Occasionally supports other District facilities and managers in installation, repair and calibration of instrumentation, and equipment including facilities located in Vernal and Orem.

REQUIREMENTS:

Ability to maintain/repair various types of equipment such as piezometers, transfer pumps, generators, hydraulic units, valves, fences, vehicles, pipes, reservoirs, sprinklers, etc.

Ability to use/operate various equipment/tools such as sandblaster, air gun, fire hose, PVC cutter, welder, air tools, air compressor, drills, saws, shovels, hand tools, paint brushes, etc..

Ability to complete periodic system or equipment checks on all facility structures to ensure proper functioning.

Ability to perform minor welding tasks on pipes, equipment, etc.

Ability to change oil, oil filters, and air filters; check all fluids, belts and lubricate shafts and bearings.

Ability to clean structures, i.e., equipment, trash racks, water basins, etc.

Ability to drive various equipment, i.e., District vehicles, tractor, service vehicle, trucks, etc.

Ability to mount new equipment running conduit and wiring; install probes, and make interface connections to output of new equipment.

Ability to remove existing electronic equipment; check equipment with various meters; solder in new parts and wiring; reinstall equipment, replace defective or inadequate equipment, replace old wiring and/or conduit.

Ability to check and calibrate equipment with electronic test instruments using manufacturer's literature.

Ability to coordinate work to be done with various weather conditions, availability of parts and materials, with other CUWCD staff, and private contractors for CUWCD and USBR.

Ability to order supplies and materials from catalogs, sales literature or vendor facilities, using telephone and fax machine.

Ability to use/operate pen/pencil, PC, and various software (word processing, databases and spreadsheet).

Ability to be subject to extreme cold: temperatures below 32 degrees for periods of more than one hour.

Ability to be subject to extreme heat: temperatures above 100 degrees for periods of more than one hour.

Ability to be subject to noise in the operation of various equipment.

Ability to be subject to hazards: includes a variety of physical conditions, such as proximity to moving mechanical equipment, electrical current, working in high places or inside pipes, tunnels, reservoirs, tanks, on or near bodies of water (dams, reservoirs, etc.), exposure to heat/cold and/or exposure to chemicals.

Ability to be subject to atmospheric conditions: one or more of the following conditions that affect the respiratory system or the skin: fumes, odors, dusts, mists, gases or poor ventilation.

Ability to be subject to oils: there is air and/or skin exposure to oils and other cutting fluids.

Ability to read (by sight or braille) manuals, sales literature, catalogs, instructions, etc.

Ability to add, subtract, multiply, and divide all units of measure; to perform the four operations with like or common decimal fractions; to compute ratio, rate, and percent; to draw and interpret bar graphs.

Ability to communicate distinctly with appropriate pauses and emphasis; correct pronunciation (or sign equivalent) and variation in word order; using present, perfect, and future tenses.

Ability to work independently on assignments of above-standard difficulty with minimal supervision.

Ability to perform repetitive work; to continuously perform the same work according to set procedures, sequence or pace.

Ability to adapt to situations requiring the precise attainment of set limits, tolerances, or standards; to be precise, thorough, exacting, or meticulous in regard to material worked; or in activities such as numerical determinations, record preparation, or inspecting.

Ability to maintain relationships that facilitate task accomplishment; to cooperate and resolve conflicts; to recognize needs and be sensitive of others.

Ability to identify task requirements and monitor progress toward accomplishment.

Ability to receive guidance and supervision; follow work rules, safety practices, work procedures; meet deadlines, punctuality and attendance standards, etc.

Ability to apply common sense understanding to carry out detailed, involved instructions; to deal with problems involving several concrete variables in or from standardized situations.

Ability to troubleshoot various plant operation problems (leaks, equipment malfunctions, etc.) which arise during shift rounds; to move about to inspect plant; to move quickly to respond to an emergency situation.

Ability to inspect equipment, check chemical levels, check for water leakage, monitor water color, take instrumentation readings from flow charts, gauges, etc.; check MCB panel for flashing lights indicating water leaks, loss of air pressure, correct flow levels, intrusion alerts, etc.

Ability to wear and operate a respirator; to wear other designated safety equipment as assigned or needed.

Ability to work overtime, to respond to call-backs when emergency or unusual situations arise in a mental and physical condition to work; to attend work regularly, to sustain continuity in performance; to work weekends, evenings, and holidays; to work away from home for an indefinite period of time.

Ability to exert up to 100 pounds of force occasionally, and/or up to 40 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects.

Ability to climb: to ascend or descend ladders, stairs, scaffolding, ramps, mountains and the like, using feet and legs and/or hands and arms.

Ability to stoop: bending body downward and forward by bending spine at the waist to lift objects; to reach objects to repair pipes.

Ability to kneel: bending legs at knee to come to rest on knee or knees.

Ability to crouch: bending body downward and forward by bending leg and spine.

Ability to reach: extending hand(s) and arm(s) in any direction.

Ability to grasp: applying pressure to an object with the fingers and palm.

Ability to crawl when performing maintenance duties in confined spaces, hatches, basins, tunnels, etc.

Ability to push: using upper extremities to exert force in order to draw, drag, haul or tug objects in a sustained motion.

Ability to pull: using upper extremities to exert force in order to draw, drag, haul or tug objects in a sustained motion.

Ability to walk: moving about on foot to get to and accomplish various maintenance tasks, particularly for long distances on rough terrain.

Ability to exercise close vision to read, compute, record numerical data and in inspecting and repairing electrical equipment; depth perception required in the maintenance of such equipment.

EDUCATION/EXPERIENCE/LICENSE/CERTIFICATION:

Two year degree in electronics plus five years of experience related to job tasks, or an equivalent combination of education and experience (preference given to applicants with mechanical maintenance troubleshooting skills/experience) Must obtain State of Utah Grade IV Treatment certification within one year of hire date or two testing periods.