

INSTRUMENTATION CONTROL TECHNICIAN

General Statement of Duties

Performs difficult technical and skilled work in the maintenance, repair, installation, and replacement of electronic and electrical operating and control systems and equipment and mechanical equipment related to wastewater treatment plants, pumping stations and related facilities.

Distinguishing Features of the Class

An employee in this class performs journey level work in the operation, installation, maintenance, and repair of large and specialized systems and equipment in the wastewater treatment plant and pumping stations. Work involves responsibility for maintaining and repairing electric and electronic equipment and computers used to monitor and control equipment, telemetric equipment, pumps, motors, chemical pumps, filters, and other related plant equipment. Work requires a knowledge of trade skills in mechanical, electrical and electronic areas. The employee is subject to hazards associated with electrical current and mechanical operations including working in both inside and outside environments, and exposure to various hazards such as loud noises, moving mechanical parts, electrical current, working on scaffolding, exposure to chemicals, fumes, odors, dusts, mists, gases, poor ventilation, and oils. The employee may be required to wear protective breathing equipment and to function in man holes and sewage pipe lines. Work may also require standby and call back time. Work is performed under general supervision and is evaluated in terms of effectiveness in installing, maintaining, and returning equipment to proper operating conditions within given time schedules, and overall effectiveness of systems performance.

Duties and Responsibilities

Essential Duties and Tasks

Installs, maintains and repairs electrical and electronic circuit boards, telemetry systems, and other related equipment which monitor and control pumps, motors, hydraulic systems, and other apparatus and equipment in the water and wastewater treatment plants; programs logic control systems; installs conduit; coordinates contracted installation of equipment and inspects new installations.

Plans and participates in regular preventive maintenance inspections such as checking and calibrating a wide variety of equipment; performs preventive maintenance and repairs on generators; schedules contracted preventive maintenance and repairs; coordinates work with contractors; checks alarms.

Troubleshoots, diagnoses, and repairs parts or equipment due to failure; calibrates and adjusts electronic flow instruments, pneumatic equipment, recorders, controllers, variable speed drives, rotating assemblies, sensors and meters; debugs process equipment; modifies existing equipment to new requirements; fabricates and installs various metal parts; installs PLCs, software and computer cabling; installs and repairs variable speed drives, motorized valves, electrical and electronic panels; troubleshoots, repairs and maintains SCADA systems; ensures accurate data from inputs; operates electrical test equipment; repairs and replaces parts.

Leads and participates in removing and replacing pumps; changes out floats; replaces seals.

Serves as back up ORC for the sewer collection system.

Requisitions parts and supplies; maintains necessary records of work activities.

Reviews plans and specifications for new installations.

Operates heavy equipment such as back hoe, track hoe, forklift, tractor and other related equipment.

Operates welding equipment as needed.

Maintains records of preventive maintenance and repairs.

Additional Job Duties

Performs related duties as required.

Recruitment and Selection Guidelines

Knowledges, Skills, and Abilities

Considerable knowledge of the principles and property of and the theory and application of electronic circuits.

Considerable knowledge of computer hardware and software, electronic component troubleshooting and installation, and use and repair of process instrumentation and telemetry.

Thorough knowledge of the principles and properties of electricity as applied to water treatment and pumping equipment.

Considerable knowledge of mechanical maintenance and repair work.

Working knowledge of general trades maintenance and repair work including carpentry, plumbing, masonry, and mechanics.

Considerable knowledge of the occupational hazards and necessary safety precautions of the work.

Considerable knowledge of the tools, parts, and methods associated with diagnosing, repairing, and maintaining equipment.

Knowledge of the principles and procedures associated with wastewater collection and treatment.

Skill in the use and care of construction equipment and tools of the trade.

Skill in team work and customer service excellence.

Ability to detect mechanical, electrical or electronic malfunctioning of assigned equipment by testing, observation, sound, and chart readings, and to take proper remedial action.

Ability to read and follow schematic drawings, blueprints, and written and oral instructions.

Ability to establish and maintain effective working relationships with the public, co-workers and supervisors.

Ability to prepare and maintain accurate records.

Physical Requirements

Must be able to physically perform the basic life operational functions of climbing, balancing, stooping, kneeling, crouching, crawling, reaching, standing, walking, pushing, pulling, lifting, fingering, grasping, feeling, talking, hearing, and repetitive motions.

Must be able to perform medium work exerting up to 50 pounds of force occasionally; 20 pounds of force frequently; and 10 pounds of force constantly.

Must possess the visual acuity to operate machines and equipment including close inspection of moving and small parts, using measurement devices, assembly and fabrication of parts, prepare and analyze data, perform extensive reading, and operate a computer terminal.

Desirable Education and Experience

Graduation from technical or community college with an associates degree in electronics or electrical technology and considerable experience in a maintenance and repair of water and/or wastewater pumping, SCADA and treatment equipment including electronic repair; or an equivalent combination of education and experience.

Special Requirement

Possession of a valid North Carolina driver's license.

Prefer possession of grade II Maintenance Technologist certification.

Possession of grade I collection system certification.

Prefer possession of electrical license.

Instrumentation Control Technician
Page 2

Beaufort
2022
2018