

## PLANT MAINTENANCE MECHANIC

### General Statement of Duties

Performs difficult technical and skilled work in the operation, maintenance, and repair, and replacement of machinery and equipment in the pumping stations and wastewater and water treatment plants.

### Distinguishing Features of the Class

An employee in this class performs advanced journey level mechanical and electrical work in the operation, maintenance, and repair of large and specialized equipment and machinery in pumping stations and the wastewater and water treatment plants. Work involves responsibility for maintaining and repairing a variety of pumps and motors and other equipment including electrical, mechanical, hydraulic, and some electronic (SCADA) work. Work requires a knowledge of trade skills in electrical, mechanical, hydraulic, electronic and plumbing areas. The employee is subject to hazards associated with wastewater and mechanical operations including working in both inside and outside environments, in extreme hot and cold weather, and exposure to various hazards such as loud noises, vibrations, 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 a respirator. Work around raw sewage is also subject to the final OSHA standards on blood borne pathogens. Work is performed under regular supervision and may involve serving as a lead worker with other staff. Work is evaluated in terms of effectiveness in returning equipment to proper operating conditions within given time schedules and overall effectiveness of system performance.

### Duties and Responsibilities

#### Essential Duties and Tasks

Troubleshoots, diagnoses, and repairs parts or equipment due to failure; performs mechanical, plumbing, electrical, and electronic maintenance and repairs.

Rebuilds and overhauls defective parts and machinery, instrumentation and equipment; maintains and services electrical generators for emergency power sources during outages; dismantles and overhauls various equipment; cleans, replaces and repairs gauges, engines, and other equipment.

Trouble shoots hydraulic, pneumatic, electrical, HVAC, and programmable logic control (PLC) systems; changes PLC modules, replaces parts.

Participates in the operations of the water, wastewater plant or repair of line breaks when needed.

Troubleshoots, diagnoses, and repairs parts or equipment due to failure.

Maintains and repairs pumps, motors, and hydraulic systems, and other equipment.

Plans and participates in regular preventive maintenance inspections such as inspecting wastewater and water pumping stations; checking and lubricating bearings and gear boxes; checking and replacing filters; cleaning out wet wells; packing pumps; and other preventive maintenance activities.

Participates in ground, lawn, and facility maintenance; paints pump housing, repairs roofs; paints a variety of facilities and equipment.

Performs repairs on air compressors and blower systems, water mixers and gear drives, belt presses, and related systems.

Serves as lead worker on a team responsible for checking, maintaining and repairing water and sewer pumping stations; trains new employees; insures adherence to proper safety practices.

Performs welding and metal fabrication.

Maintains records of work activities.

Additional Job Duties

Performs related duties as required.

Recruitment and Selection Guidelines

Knowledges, Skills, and Abilities

Considerable knowledge of the installation, repair, and maintenance of the mechanical, plumbing, and hydraulic components of pumping stations and plants.

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

Knowledge of electrical and electronic maintenance and repair of some knowledge of related equipment including programmable logic controls and SCADA systems.

Knowledge of the operations and operating characteristics of water and wastewater treatment plants and pumping stations.

Knowledge of the operation and application of technology to the operation and maintenance of related equipment.

Knowledge of electrical wiring and parts and ability to diagnose and replace parts.

Skill in the use of related tools and equipment.

Skill in teamwork and team leadership.

Ability to train team members in work activities.

Ability to detect malfunctioning of pumps and motors by observation, sound, and chart readings, and to take proper remedial action; ability to diagnose electrical and electronic problems.

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

Ability to establish and maintain effective working relationships with co-workers and supervisor.

Ability to prepare and maintain accurate records and prepare reports.

Physical Requirements

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

Must be able to perform heavy work exerting up to 100 pounds of force occasionally; and/or up to 50 pounds of force frequently; and/or up to 20 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, perform assembly and fabrication of parts, prepare maintenance records and operate a computer terminal.

Desirable Education and Experience

Graduation from a community college with courses in electrical, electronic, mechanical and plumbing trades, and considerable mechanical maintenance and repair experience including pump, electrical and electronic repairs; or an equivalent combination of education and experience.

Special Requirements

Possession of a valid North Carolina driver=s license.

Possess of North Carolina wastewater treatment operator grade I, or water treatment grade C or distribution system operator grade C or collection system operator grade I certification.

Special Note: This generic class description gives an overview of the job class, its essential job functions, and recommended job requirements. However, for each individual positions assigned to this class, there is available a completed job questionnaire with a physical abilities checklist which can give further details about that one specific position. Those documents should be reviewed before initiating a selection process. They can provide additional detailed information on which to base various personnel actions and can assist management in making legal and defensible personnel decisions.