

MAJOR FUNCTION

This is highly skilled technical and supervisory work directing employees engaged in the maintenance of electrical/electronic/mechanical/pneumatic, analog and digital control systems, three-phase power circuitry, switch gears, metering, transformers, motors and motor starters, generators, internal communication systems, plant and field instruments, programmable logic controllers and other solid-state electronic devices, and historical data recording equipment. This employee also oversees the installation, testing, repair and calibration of electrical components, systems and instruments. Work is performed in accordance with establish policies and procedures, under the general supervision of the Electrical/Instrumentation and Control Engineer for Underground Utilities. However, the incumbent is expected to exercise considerable independent judgment and initiative in the performance of work tasks. Work is reviewed through observation, reports, and by results obtained.

ESSENTIAL AND OTHER IMPORTANT JOB DUTIES

Essential Duties

Supervises and/or performs the repair or preventive maintenance on water and wastewater electrical and instrument/control systems including, electronic, hydraulic and pneumatic control and monitoring systems which encompass: analog and digital data acquisition systems; electronic, hydraulic, and pneumatic process chart recorders; flow, pressure, temperature and level transmitters and meters; special purpose water analysis and treatment equipment; environmental monitoring devices; switch gear and motor control centers; treatment plant and remote facility circuitry; relays; motors; and transformers. Remains current on latest equipment and technology. Supervises and/or performs calibrations and vibration tests for pumps, fans, and associated field instruments. Maintains work records and associated documentation. Supervises, instructs and trains new employees. Provides instruction on safety procedures. Plans for new installations and checks specifications and prints. Purchases repair parts and new equipment. Confers with supervisors, design engineers, and manufacturer representatives as necessary. Recommends the hire, promotion, transfer, grievance adjustment, discipline, and dismissal of assigned staff. Conducts performance planning and evaluations. Prepares and/or assists with budget projections for electrical/instrumentation requirements and submits to superior. Assists with the operation and maintenance of SCADA systems, fiber optic links, cabling and associated linkages. Performs related work as required.

Other Important Duties

Assists plant engineers and project managers with special projects and system testing. Researches, plans and implements various improvement projects for power control loops and related systems.

DESIRABLE QUALIFICATIONS

Knowledge, Abilities and Skills

Thorough knowledge of the practices, procedures and techniques essential to the electrical and instrument/control maintenance of a water reclamation facility, water wells, wastewater pumping stations, and other electro-mechanical operating facilities. Considerable knowledge of digital controls systems and three-phase power systems. Thorough knowledge of the standards, methods, practices, tools and materials of the repair and maintenance of plant electrical and instrument/control equipment. Ability to plan, assign, supervise and lead the work activities of others. Ability to maintain required reports and records. Ability to communicate effectively, both orally and in writing. Ability to establish and maintain effective working relationships, as necessitated by the work. Ability to read electrical diagrams and blueprints. Skill in the use of personal computers and associated programs and applications necessary to successful job performance.

Minimum Training and Experience

Possession of a high school diploma or an equivalent recognized certificate and six years of technical industrial plant experience that includes electrical and/or instrumentation and control systems; or two years of college or technical school in electronics technology and four years of technical industrial plant electrical and/or instrumentation and control system experience; or an equivalent combination of training and experience.

Necessary Special Requirements

Must be medically certified to wear a respirator and pass a respirator fit test prior to employment.

Must possess a valid Class E State driver's license at time of appointment.

Established: 02-12-11

Revised: 02-20-24