

MAINTENANCE INSTRUMENTATION/SCADA TECHNICIAN

NATURE OF WORK:

Maintains and enhances programmable logic controllers (PLC) and supervisory control and data acquisition (SCADA) systems; troubleshoots, updates, modifies design and drawings pertaining to PLC/SCADA system. Performs preventive and corrective maintenance on all electrical, electronic and instrumentation equipment associated with the Reuse and wastewater systems.

DISTINGUISHING CHARACTERISTICS:

This technical skill is utilized to provide oversight of the preventive and corrective maintenance for the assigned areas and to perform advanced troubleshooting and repair of the system's equipment.

SUPERVISOR RELATIONSHIPS:

Works independently under general supervision at plant and remote work sites.

ESSENTIAL FUNCTIONS:

- Performs corrective and preventive maintenance and repair work on the SCADA and PLC systems, as well as a variety of electric, electronic and instrumentation equipment, electrical motors, transformers, electrical distribution systems, variable frequency drives, complex equipment appurtenances.
- Troubleshoots PLC and SCADA systems and equipment failures; analyzes and diagnoses problems; plans corrective action to plant and system maintenance problems. Replaces or rebuilds parts and equipment as needed.
- Manages the telemetry, PLC and SCADA systems; upgrades systems, drawings and software.
- Plans and performs projects for equipment, instrument, and system upgrades or replacements; conducts project research, conducts planning and design, working with engineering, vendor or contractor liaison; performs fabrication, testing, and installations.

ADDITIONAL WORK PERFORMED:

- Participates in meetings, informal training, communications, and related activities.
- May perform some limited fabrication of parts.

KNOWLEDGE AND SKILLS:

- Working knowledge of the National Electric Code and its application.
- Knowledge of instrumentation theory and process control application
- Knowledge and understanding in theory and operation of direct current (DC) and alternating current (AC) motors from fractional horsepower to 300 horsepower, current source and pulse width modulated variable frequency drives, and electrical generation.
- Ability to understand, program, and troubleshoot the logic in a variety of sizes and types of PLC and SCADA software.
- Ability to draw, read, understand, and translate electrical diagrams, complex circuit schematics, and complex technical manuals.
- Ability to analyze, troubleshoot and correct faults in complex electrical, electronic and instrumentation systems.
- Ability to perform basic math and algebraic calculations as related to electrical theory.
- Ability to work independently and as part of a work crew.
- Good skills in planning and organizing; problem analysis and decision making; time management.
- Ability to maintain records accurately and legibly.
- Ability and willingness to accept "on call" status for equipment failures.
- Physical ability to perform the job including:

- Ability to infrequently relocate loads of up to 50 lbs., and very infrequently relocate loads of approximately 70 lbs.
- Ability to work with exposure to raw sewage, and in proximity to potential chemical and industrial hazards.

WORKING ENVIRONMENT:

- Work may be performed indoors at a computer workstation, as well as outdoors in all types of weather conditions in an industrial plant environment at the wastewater plant, pump stations and other facilities of the water distribution and sewage collection system.
- Employees are required to use appropriate safety equipment, wear protective clothing, and follow standard safety practices.

EXPERIENCE AND TRAINING REQUIREMENTS:

- Successful completion of two years of post-secondary education of accredited training in electrical, electronics, instrumentation maintenance and repair, or closely related vocational areas.
- Five years experience in a process plant environment performing preventive and corrective maintenance on SCADA, PLC, electrical, electronic and instrumentation equipment required.
- Experience in a maintenance function for a water distribution or wastewater collection system desirable.
- Valid Pennsylvania State driver's license and good driving record.