



NEWPORT NEWS, VA
CITY OF OPPORTUNITY

JOB DESCRIPTION
PROCESS CONTROL SYSTEMS SPECIALIST
WATERWORKS

Human Resources Department
700 Town Center Drive, Suite 200
Newport News, VA 23606
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GENERAL STATEMENT OF RESPONSIBILITIES

Under general supervision, this position is responsible for monitoring and maintaining the computerized process control systems network, servers, workstations, Programmable Logic Controllers (PLCs), Remote Telemetry Units (RTUs), and water treatment plant's information systems infrastructure. Reports to the Senior Process Control Systems Specialist.

ESSENTIAL JOB FUNCTIONS

Installs, configures, programs, maintains, and troubleshoots Allen Bradley PLCs, RTUs, and Supervisory Control and Data Acquisition (SCADA) servers and workstations. Administers Structured Query Language (SQL) server, control system servers, workstations, desktop and laptop personal computers, and peripherals; modifies SQL server database as necessary. Establishes and initiates back-up and restoration procedures for systems and data network information resources on a routine basis and in disaster situations. Ensures the security of systems by limiting system access to appropriate personnel.

Designs and develops graphics/database tags via the human machine interface display for water treatment operations. Provides technical assistance to operations staff. Troubleshoots and responds to user helpdesk requests. Confers with customers to resolve issues and document as appropriate.

Develops reports and graphics for users. Recommends potential applications to system users. Assists in developing standard operating procedures for the process control system. Provides detailed database instructions for specific equipment configuration.

Performs other duties as assigned.

PERFORMANCE STANDARD

Employees at all levels are expected to effectively work together to meet the needs of the community and the organization through work behaviors demonstrating the City's Values. Employees are also expected to lead by example and demonstrate the highest level of ethics.

REQUIRED KNOWLEDGE

- Technology – Thorough knowledge of Programmable Logic Controllers (PLCs), analog and digital instrumentation, and Remote Telemetry Units (RTUs) units. Knowledge of client/server environments, Open VMS, Windows Operating Systems and word processing, spreadsheet, and database applications. Knowledge of high speed local and wide area networking, including wireless, fiber optics, and gigabit Ethernet.

- Relay Ladder Logic (RLL)- Understanding of - how to read, , develop, and debug RLL programs. Be able to program and tune open and closed loop control circuits.
- Electrical Circuitry - General knowledge of electrical circuitry and national electrical code standards. Knowledge of PLC Input/Output wiring circuits (i.e. 4-20mA loops, dry contracts, relay outputs, etc.)

REQUIRED SKILLS

- Critical Thinking - Using logic and reasoning to understand, analyze, and evaluate complex situations and research information to identify the strengths and weaknesses of alternative solutions, conclusions or approaches. Ability to logically work through a situation by testing and isolating problems.
- Training - Ability to develop and conduct computer user training programs for departmental personnel using best practice training principles and practices.
- Time Management - Plans and organizes daily work routine. Estimates expected time of completion of elements of work and establishes a personal schedule accordingly. Implements work activities in accordance with priorities and estimated schedules.

REQUIRED ABILITIES

- Communication - Excellent ability to communicate complex ideas effectively so others will understand. Excellent ability to listen and understand information and ideas presented verbally or in writing.
- Mathematics - Ability to perform mathematical calculations involving engineering unit conversions and control strategies.

EDUCATION AND EXPERIENCE

Requires an Associate's Degree in Computer/Information Science, Engineering, or a related field with 3-5 years of related experience to include maintaining and working with computer systems and Programmable Logic Controllers (PLC), or an equivalent combination of education and experience. Bachelor's Degree is preferred.

ADDITIONAL REQUIREMENTS

Acceptable general background check to include a local and state criminal history check and a valid driver's license with an acceptable driving record.

This position requires satisfactory results from an audio exam.

PHYSICAL REQUIREMENTS

- Tasks require the ability to exert moderate, though not constant physical effort.
- Some combination of climbing and balancing to include climbing ladders, stooping, kneeling, crouching, and crawling.
- Some lifting, carrying, pushing and/or pulling of objects and materials of moderate weight (12-20 pounds).

SENSORY REQUIREMENT

- Some tasks require the ability to perceive and discriminate colors or shades of color, sounds, odors, depth, textures, and visual cues or signals.
- Some tasks require the ability to communicate orally.

ENVIRONMENTAL EXPOSURES

Performance of essential functions may require exposure to adverse environmental conditions, such as odors, wetness, humidity, weather, fumes, temperature and noise extremes, hazardous materials, confined spaces, machinery, vibrations, electric currents, or pathogenic substances.