



Supervisory Control and Data Acquisition (SCADA) Systems Technician

Job Specification
Classification: Competitive
Series:
Level: 1 of 1

DISTINGUISHING FEATURES OF THE CLASS: This is a stand alone position that is responsible for performing a variety of technically oriented tasks related to the installation, programming, testing, maintenance, repair and calibration of the SCADA and electrical systems of the facilities within the Water Department (which include but are not limited to the Water Treatment Plant, the Wastewater Treatment Plant, the Transmission and Distribution Center, and the Hydro Electric Generation Plant). These systems include the capability and capacity for generation, transmission, collection and recording of analog and digital signals for multiple forms of instrumentation, gages, meters, transmitters, switches, boosters, receivers, programmable logic controllers (PLC), and computers. The incumbent does related work as required.

EXAMPLES OF WORK ACTIVITIES: (Illustrative only)

- Participates in the design, management, planning, operation, integration, maintenance, repair, installation and modification of telemetry, process, and equipment control and monitoring systems, operator interface graphics, ladder logic control, communication equipment, application programs and system support programming;
- Reviews, and participates with technical staff in monitoring the database for the SCADA system to display and archive accurate information;
- Researches and evaluates new and existing operational methods, software, techniques and equipment and recommends their application;
- Troubleshoots, repairs, programs, configures, tests, and performs maintenance on a variety of industrial electrical and electronic systems, components and equipment relating to the operations of Water Department Facilities. Performs bench repairs at the component level in shop and field settings;
- Assists Chief Operators and Section Supervisors in the requisition of necessary parts, tools, equipment and supplies;
- Participates in the development of annual budget for electrical, instrumentation and SCADA needs;
- Uses standard and specialized testing equipment;
- Maintain, review, a variety of reports, including daily activity reports, work orders, work requests, monthly statistical reports, and other reports and records and required;
- Ability to read, interpret, plan and lay out jobs from blueprints, electrical diagrams, schematics, manufacturer instructions, directions and verbal instructions;
- Produce, develop, maintain, edit and upgrade records in the form of blueprints, plans and specifications for industrial electrical and instrumentation, equipment and devices for all existing systems and especially for in-house projects;
- Train and instruct staff in the operation and maintenance and safe work practices concerning the SCADA and other electrical control sub-systems;
- Work at times in areas containing chemicals, dust, fumes, vapors, gases, exhaust, grease and solvents;
- Read, understand, and comply with facility safety manuals, and have proper knowledge of use of power operated hand tools and safety gear; attend safety meeting as required;
- Performs other related duties as assigned.

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Configuring and programming the SCADA system (Water Department has standardized on National Instruments Lookout ©);
- The installation and commissioning of a SCADA system; editing, modifying, and upgrading of same;
- Configuring and programming data acquisition and data base software;
- Computer operation and applicable software programs;
- Computer hardware configuration and components;
- Network and telecommunication cabling and configurations.

Ability to:

- Install, configure, support and use a variety of software development languages and tools;
- Design and implement from scratch a SCADA application and incorporate as a subunit within existing SCADA applications;
- Thread SCADA accumulated signals into facility operational database platforms (Water Department employs Hach WIMS Multi User as an operational management system and the Cartêgraph maintenance and asset management system);
- Establish wireless monitoring and control at main facilities for remote pumping stations and other such remote sites;
- Program, configure, edit, modify, upgrade hand held wireless monitoring, controlling and communicating devices.

Physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Either

- (A) Graduation from a regionally accredited college or university or one accredited by the NYS Board of Regents to grant degrees with an Associate’s Degree Computer Information Systems, Computer Science, Computer Information Technology, or closely related field; or
- (B) Graduation from high school or possession of a high school equivalency diploma and 15 credit hours in computer science, information systems, telecommunications, or management information systems, electrical circuitry, digital fundamentals & systems, and one (1) year experience in electronic maintenance and manipulation; or
- (C) An equivalent combination of training and experience as described in (A) and (B) above.

Licensing Requirements: Valid NYS driver’s license.

SPECIAL NECESSARY REQUIREMENT:

None required.

Classification history:

Adopted: 8/21/2012