

CONTROL SYSTEM SUPPORT SPECIALIST

NATURE OF WORK

This is advanced, highly technical work performing a broad range of activities including computer programming, data base management and SCADA system design, configuration and maintenance.

Work involves responsibility for the design and implementation of complex process control software and hardware systems used in the support of water production, treatment, transmission and distribution system operations. Work also includes administration of management information systems to provide data for operational/management planning. Work requires analysis of existing and proposed plant processes to determine process algorithms, develop control strategies and evaluate system hardware requirements. Confers with plant staff, management, consultants, vendors and contractors to determine specific needs and control solutions. Work requires an understanding of water system processes and engineering principles, and the implementation of control system software strategies for plant process control. Supervision is received from an administrative superior with work being reviewed through conferences, reports and results achieved.

EXAMPLES OF WORK PERFORMED

Manages the SCADA database through point generation and data entry; plans, creates, modifies, troubleshoots and deletes software control strategies to manage plant processes; writes new and edits existing PLC ladder logic software; plans, creates, modifies and deletes control system process graphics, configures control point parameters; manages Windows NT, 98, 2000 operating system for proper control system operation.

Ensures scheduled generation of daily, weekly and monthly operation reports; verifies operational report content data accuracy and acceptability; edits and troubleshoots Lotus spreadsheets; reviews existing and identifies new MIS requirements with management.

Performs software diagnostics with Windows NT, 98, 2000 operating system; performs hardware and software maintenance to CPU's, network hardware, servers, workstations, printers, I/O devices, Programmable Logic Controllers and data radio equipment; performs software backup and recovery functions; consults with control system vendors regarding specialized system diagnostic tasks; debugs software to optimize process control strategy performance.

Consults with operations, maintenance, management staff, consulting engineers and system vendors to determine existing/future SCADA system needs and implementation of system solutions; assists with development of annual capital improvement and capital outlay budget; coordinates operational and maintenance activities with plant staff; coordinates data management with administrative LAN personnel; provides training and technical assistance for system users.

Transfers relevant data from SCADA system to administrative LAN system; maintains reports.

Makes updates to existing drawings and blueprints.

Performs related work as required.

DESIRABLE KNOWLEDGE, ABILITIES AND SKILLS

Considerable knowledge of all relevant system software applications pertaining to control system operation and maintenance.

Considerable knowledge of distributed control system computer hardware architecture, man-machine interfaces, radio and hardwired data networks and support systems.

Considerable knowledge of principals, methods and techniques of control system strategy development, application and debugging.

Knowledge of all machine operating systems for the hardware platform used (ie. Windows NT, 98, 2000).

Some knowledge of water production, treatment and distribution physical processes.

Some knowledge of plant engineering fundamentals.

Ability to analyze problems or objectives and implement solutions.

Ability to coordinate personnel for plant system testing and problem resolution.

Ability to use technical manuals, and other documentation/resources relating to software applications, hardware configuration and plant equipment operation.

Ability to exhibit independent judgment and initiative in analyzing system problems and making sound recommendations and/or implement solutions.

Ability to communicate effectively both orally and in writing.

Ability to establish and maintain effective working relationships with co-workers, contractors and consultants.

DESIRABLE TRAINING AND EXPERIENCE

Graduation from a senior high school or equivalent supplemented by vocational or college level course work in computer programming, industrial electronic or engineering and considerable experience in water, wastewater or electrical plant operations or process control systems.

MINIMUM QUALIFICATIONS

Graduation from a senior high school or equivalent supplemented by vocational or college level course work in computer programming and experience in water, wastewater or electrical plant operations or process control systems; or any equivalent combination of training and experience which provides the desirable knowledge, abilities and skills.

NECESSARY SPECIAL REQUIREMENT

Possession of a valid driver's license when operating a vehicle is necessary for the satisfactory performance of assigned duties.

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