

City of Salem
CLASS SPECIFICATION

CLASS. TITLE:	Control Systems Manager	CLASS. CODE: 0862
DEPARTMENT:	Public Works/WLWPCF	FLSA: E
REPORTS TO:	WPCF Services Manager	DATE: 8/23/2004

Job Summary:

Design, implement, and manage Willow Lake's Distributed Control System (DCS), integrated with related on-site and remote facilities and their support systems, to support automated monitoring, alarm notification, data acquisition, integration and optimum performance of all water pollution control facilities.

Essential Job Functions

(All functions may not be performed by all incumbents.)

1. Plan and develop projects to design, test, and integrate current and future, on and off-site operational water pollution control systems into a distributed control system that supports optimum performance.
2. Identify and justify value-added control system projects; install, test, and debug current and new operational systems; ensure compatibility with related systems; develop and maintain user documentation and training manuals.
3. Set project goals and objectives, establishing completion dates, perform or monitor project performance; make project adjustments to meet quality and timeliness requirements.
4. Develop programs and procedures to fully automate wastewater processes; develop process narratives and specifications, build complex treatment plant control strategies, build extensive graphics to communicate operational conditions; develop user friendly system documentation, identify training needs and opportunities, and provide for staff training that supports maximum staff performance.
5. Develop communication, software, hardware, and data management requirements; incorporate into bid specifications; develop and administer contracts with vendors to ensure optimum plant performance and integration.
6. Establish processes for and manage data integrity and security.
7. Meet with engineers, consultants, and plant staff to effectively design, implement, and provide continued optimum operation of the plant and its expanding facilities.
8. Develop and administer budget for the DCS and related systems to ensure adequate funding and support of processing goals.
9. Maintain up-to-date knowledge of new technology and industry trends in hardware and software process control; advise plant management regarding the feasibility of hardware and software upgrades, and participate in the selection of upgrades.

Important Job Functions

1. Work effectively with other City staff to develop standards and interface requirements for wastewater programs.
2. Attend meetings and various training seminars and conferences as required.
3. Perform other duties as required by supervisor.

MATERIAL AND EQUIPMENT USED:

- Desktop computer and related workstation equipment
- Programmable Logic Controllers and their programming
- Human Interface Modules (HIM)

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- DCS hardware, software, and related communication equipment
- Miscellaneous office automation equipment, i.e. – fax, phone, copier, etc.

MINIMUM QUALIFICATIONS REQUIRED:

Education and Experience:

Bachelor's degree from an accredited college or university in electrical engineering, processing systems engineering and considerable experience in all aspects of real-time distributed control processes including architecture, design, coding, maintenance, and life-cycle analysis; proven experience in establishing systems to ensure backwards capability and future performance; or any combination of education, experience and training that provides the required knowledge and abilities to perform the essential functions of the class.

License(s) and Certification(s):

- Related technical certifications are desirable but not required.

KNOWLEDGE AND ABILITIES:

Knowledge of:

- Water pollution control facilities including liquid pipeline operational principles and practices.
- Supervisory Control and Data Acquisition (SCADA) and industrial communication protocols.
- UNIX with some knowledge of: C/C++, Visual Basic, COM/DCOM, ActiveX, OLE/DB, ADO, Windows NT/2000, XML, and SQL.
- Information networking systems to include workstations, servers, switches, LAN, WAN, nodebus, and fiber optics.
- Principles and procedures of major project planning through all phases including design, timing, implementation, monitoring, and evaluation.
- Contemporary office practices and procedures including basic office software products: word processing, spreadsheet, and database development.
- Clear and concise report writing, both informational and persuasive.

Ability to:

- Complete multiple projects within strict timeframes and with limited supervision.
- Effectively accommodate changing priorities.
- Creatively approach problem solving with a strong focus on improving operational performance.
- Establish and maintain effective working relationships with staff, engineers and consultants to ensure project success in meeting operational goals.
- Speak and write clearly to effectively communicate with individuals from different educational and operational backgrounds..
- Work independently and make timely decisions with minimal supervision.
- Comprehend and apply concepts for enhancement and efficiency of department and general operations.
- Maintain required work hours and attendance.

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Physically able to:

- Sit, keyboard, write, hear and speak for extended periods.
- Stand frequently for extended periods.
- Drive motor vehicles
- Bend, kneel, stoop and work in limited spaces
- Climb stairs, work at heights and occasionally outdoors.
- Lifts up to 50 pounds.

The above statements are intended to describe the general nature and level of work being performed by employees assigned this classification. They are not to be construed as an exhaustive list of all job duties or roles performed by personnel so classified. It is as well intended to be compliant with the Americans with Disabilities Act.