



Operations Systems Analyst Senior Operations Systems Analyst

Class Code:
458,459

DEFINITION

Under supervision of the Facilities Engineering Supervisor, performs a variety of technical and administrative tasks, control and computer system configuration, programming and special assignments related to the operation and maintenance of the District's Supervisory Control and Data Acquisition (SCADA) systems, Programmable Logic Controllers (PLC), Human Machine Interface (HMI) software, and other support systems used in the supply, treatment, production and distribution of water; performs project management activities and may direct the work of District staff, contractors and consultants engaged in SCADA system installations and/or upgrades; conducts training, both formal and informal for systems users; and performs other related work as required.

DISTINGUISHING CHARACTERISTICS

The Operations Systems Analyst is a skilled staff specialist in the Operations and Maintenance Department and the first level in the Systems Analyst series. Under general supervision within a framework of established policies and procedures, incumbents perform a variety of technical and administrative tasks of moderate difficulty related to configuration programming, development, maintenance and operational performance of the District's SCADA and other support systems, such as the Programmable Logic Controller (PLC) (including PLC wiring and interconnection to control components), Human Machine Interface (HMI), networking software and hardware, database development and support, control system logic development and control system component selection. Assignments are given in general terms and are subject to periodic review while in progress and upon completion. There is some latitude for independent judgment and action in well-defined areas of work.

This classification is distinguished from the advanced-level Senior Operations Systems Analyst which performs a full range of highly skilled systems analysis, programming and systems maintenance activities with less supervision, requiring a higher degree of knowledge and competencies. These classifications are flexibly staffed. Incumbents in this classification normally advance to a Senior Operations Systems Analyst after two years at the first level and with a performance rating of "meets requirements" overall on the most recent evaluation, demonstrated proficiency in the job requirements of the senior level classification and approval of the department manager.

Senior Operations Systems Analyst is the advanced level classification in the Systems Analyst series. With limited direction within a framework of established policies and procedures, incumbents perform a variety of technical and administrative tasks of advanced difficulty and complexity that require thorough knowledge of the District's SCADA and other operational support systems, including communications hardware and systems, and a high level of proficiency in system analyses tools, programming and project management techniques. Assignments are given in broad terms and are subject to review primarily upon completion. There is considerable latitude for independent judgment and action.

TYPICAL DUTIES

TYPICAL EXAMPLES OF DUTIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- Performs and/or oversees SCADA system Human Machine Interface software and PLC programming changes; may direct the work of District staff, contractors, and consultants engaged in making system changes; maintains system documentation; modifies and updates databases; monitors system performance after changes are implemented.
- Responsible for operations automation systems hardware maintenance activities including: installation of software upgrades; troubleshooting software or hardware failures and control system wiring problems, communication systems, ensures adequate inventory of replenishments parts; and may direct work of District staff, contractors and consultants engaged in work associated with SCADA systems.
- Responsible for long term and short term planning of the Capital Improvement Program (CIP) associated with the Supervisory Control and Data Acquisition (SCADA) systems and other operations and maintenance related automation and controls.
- Serves as liaison between the Operations and Engineering Departments on Engineering projects involving SCADA systems.
- Chairs and/or participates in work teams to evaluate the District's future needs for SCADA system hardware and software (both HMI and PLC); evaluates District future instrumentation needs; identifies hardware, software, and instrumentation best suited to meet those needs; oversees acquisition and implementation.
- Oversees day-to-day administration of installed SCADA applications (including setting up user accounts and policies) as well as other support systems.
- Prepares specifications and Requests for Proposals; evaluates and selects consultants and contractors and may direct contractor work activities; performs project management including monitoring budgets, schedules and quality of deliverables.
- Researches and stays informed on new developments in the field of SCADA systems and related technology, server computer hardware and software and instrumentation and control components.
- Conducts training, both formal and informal, for automated systems users including plant operations personnel, maintenance support staff and staff engineers.
- Performs other related work as required.

REQUIREMENTS

Any combination of education and experience that would likely provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the knowledge, skills, and abilities would be the equivalent of:

Education and Experience: A bachelor's degree from a college or university with a curriculum accredited by Accreditation Board for Engineering and Technology (ABET Inc.) with a major in engineering, computer science, information systems or related field and

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Operations Systems Analyst: Two (2) years of recent, full-time experience working with SCADA systems.

Senior Operations Systems Analyst: Four (4) years of full time experience in systems analysis and computer programming work, at least two years of which are equivalent to experience as an Operations Systems Analyst involving work with SCADA systems.

Knowledge, Skills and Abilities:

Knowledge of: SCADA systems hardware and software, control system wiring practices, communication systems and equipment, instrumentation, work-related computer hardware and software and process control theory; general engineering principles; project management principles and practices, including planning, budgeting, scheduling and control; basic principles of employee training; applicable federal, state and local regulations, laws, guidelines and District policies and procedures; safe work practices and the ability to identify workplace hazards and/or unsafe conditions and take appropriate corrective action.

Skill and Ability to: conduct complex systems analyses, studies and evaluations; utilize effective project management skills to oversee system implementation or upgrade projects; operate a personal computer including use of word processing and spreadsheet software; operate various process control test equipment; provide technical and applications support to various operations and maintenance systems; prepare and maintain complete and accurate records; prepare clear and concise reports; oversee and direct the work of consultants, contractors and District staff; provide technical training to District staff; organize work, set priorities, meet critical deadlines and follow-up on assignments; communicate effectively, both orally and in writing; establish and maintain effective working relationships; and perform essential duties of the job without causing harm to self or others.

Senior Operations Systems Analyst: (In addition to the above)

Advanced knowledge of SCADA systems hardware and software, control system wiring practices, communication systems and equipment, instrumentation, work-related computer hardware and software and process control theory.

Skill and Ability to: evaluate and enhance existing systems for performance and take appropriate action when system operating problems occur; utilize effective project management skills to oversee major system installation and upgrade projects; conduct the most complex system analysis studies.

Additional Requirements:

- Must possess a valid California driver's license and have a satisfactory driving record.

Working Conditions/Physical Requirements:

The essential duties of these classifications require the ability to speak to verbally exchange ideas and information; hear to receive verbal detailed information and instruction; see sufficiently to perform assignments; sit for extended periods of time while operating a computer and related hardware; to periodically work under various climatic and geographic conditions; to work near hazardous machinery and equipment and in an environment with potential exposure to loud noise, chemicals, fumes, and other environmental substances; to respond to emergency call-outs as required; finger dexterity for fine manipulation, and hand strength to operate a computer and related hardware and to grasp tools and equipment on a daily basis; and frequently lift and/or carry objects weighing up to 25 pounds and occasionally up to 55 pounds.

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Approved: 
Human Resources/Risk Manager