

EL DORADO IRRIGATION DISTRICT
Class Specification

CLASS TITLE: Senior Process Control Technician

DEFINITION

Under general supervision performs highly technical industrial control technology support functions for the District SCADA network, including PLC programming code, instrumentation, implementation of new systems, process control networks, supervisory stations, HMI, administration of Structured Query Language (SQL) servers, data acquisition, SCADA alarm management, SCADA data management and reporting, SCADA security, and SCADA governance; assists, recommends and identifies SCADA needs; manage large and complex projects.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey level in the Process Control Technician series. The Senior Process Control class is distinguished from the Process Control Technician by the level of responsibility assumed, complexity of duties assigned, independence of action taken and by the amount of time spent performing the duties. Employees perform the most difficult and responsible types of duties assigned to classes within this series, including providing technical and functional supervision over assigned personnel and perform the most difficult and complex duties associated with the maintenance and operation of the District's SCADA and associated systems. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the designated Division Supervisor and/or Manager; may exercise technical and functional supervision over assigned technical personnel.

EXAMPLES OF ESSENTIAL DUTIES: *the duties specified below are representative of the range of duties assigned to this class are not intended to be an inclusive list.*

Performs the most complex implementation and troubleshooting of communication strategies between remote PLC's and SCADA central locations utilizing available District infrastructure and technologies.

Installs, configures, troubleshoots programs, analyzes, diagnose and maintain maintains control systems, network systems, supervisory systems, and database systems.

Assist with projects and studies associated with District control systems, network systems and supervisory systems and database systems.

Provides technical advice and recommend potential enhancement to control system hardware, software and services; assists in planning for long term technology infrastructure including service delivery implications.

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Recommends industrial control systems improvement, vendor products and technologies; provides high level technical review and analysis.

Monitor and implement technology advances in SCADA programs and advise management regarding potential upgrades and improvements to programs as necessary.

Stays current with technology advancements; develops and presents training to District staff on relevant technology related information, new equipment, and program upgrades.

Assist with ordering materials and products, resolves issues with vendors, technical support, and departments to resolve system problems; assists with estimating labor, materials and equipment needs and schedule for an assigned project; user problems and maintains user contact to assess needs, answer questions and provide technical information.

Assist with and prepares and maintains documentation and instructions; maintains and updates manuals, codebooks, templates, web pages and related documents; and follows protocols and procedures.

Plans and adheres to all worksite safety policies and procedures, including electrical safety, LOTO, and the safe operation of equipment.

Assists with the development of control programs using common control programming languages, as appropriate; under general supervision, performs other programming functions and modifications.

Assist with developing and maintaining standards, procedures and methodologies for effective operation, access, control, backup and recovery of control programs, configurations and databases.

Assist with developing methodologies for the ongoing assessment of overall industrial control system performance; assists with and identifies and resolves conflicts arising over the control, and use of data; and enforces system and database use guidelines.

Builds and maintains positive working relationships with co-workers, other District employees and the public using principles of good customer service.

Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

Effective report writing, documentation and research for highly complex technical work. Principles and practices of good team building, team leadership and conflict resolution methodologies. Principles and practices of project management and workflow analysis, current industrial control systems, including application to utility operations. Common control

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programming languages. Principles and practices of information technology, including network infrastructure, database administration, operating systems, virtualization, IT life-cycle management, system security, and web technology. Good customer service skills. Advanced principles and practices of systems and procedures analysis and design. Security systems and methodologies for network computer and communications systems. Standards and protocols for data communications and methodologies for database management. Troubleshooting techniques used in resolving operational problems in computer software and computer networks. Pertinent local, State and Federal laws, ordinances and rules; including work safety. Basic principles of hydroelectric power generation, water and wastewater treatment, storage, and conveyance.

Skill/Ability to:

Train multiple team members in the use of complex technical equipment and software. . Provide functional supervision to technical staff. Diagnose problems of the most complex nature. Work independently researching and proposing solutions to technical problems of the most complex nature. Effectively work with employees from multiple departments, with contract employees and outside vendors to complete industrial control system projects. Conduct analysis of alternatives; and review a technical support plan; write control programs to meet division-specific needs for internal and external users in accordance with standards and practices. Ability to maintain reliable attendance is a condition of employment, subject to applicable medical and disability leave laws. Analyze and define problems, identify appropriate alternative solutions, consequences of proposed actions and coordinate recommendations. Interpret and explain pertinent District and Department policies and procedures. Maintain confidentiality of information. Maintain and update highly technical and complex manuals, codebooks and computer control tables.

Prepare and maintain documentation for systems procedures, such as control network troubleshooting, backup and recovery procedures. Provide on-call duties and service during off hours, nights, weekends, and holidays. Interpret and apply local, State, Federal, District and departmental laws, regulations, policies, procedures, and rules. Establish and maintain effective working relationships with those contacted in the course of work. Communicate clearly and concisely, both orally and in writing. On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe and problem solve operational and technical policy and procedures.

On a continuous basis, sit at desk for long periods of time; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, and write or use a keyboard to communicate through written means; and lift or carry weight of 50 pounds or less.

Experience and/or Education:

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

Two years of responsible experience similar to Process Control Technician with the El Dorado Irrigation District.

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Education:

Equivalent to a Bachelor's degree from an accredited college or university in electrical engineering, computer science, information systems, mathematics or a related field.

SPECIAL QUALIFICATIONS

License and Certificate:

Possession of, or ability to obtain, a valid California driver's license at the time of appointment. Individuals who do not meet this requirement due to physical disability will be reviewed on a case-by-case basis.

Possession of a California Water Environment Association (CWEA) Grade II Electrical/Instrumentation Certificate and/or an Instrumentation, Systems, or Automation Society of America (ISA) Level I Certified Control Systems Technician Certificate and/or possession of an Industrial Computing and Process Control Technology Certificate of completion from an accredited college and/or technical institute and/or completion of a formal training program from a state agency, utility, or military school with verifiable equivalent competencies is highly desired.

Employees in this classification whose job duties require internet connectivity or the use of a District laptop and air card while on standby must provide and utilize, at their sole expense, a functionally reliable personal internet connection or District provided reliable air card with a District-provided laptop to facilitate District stand-by business.

 _____ Human Resources Authority	<u>02/26/2022</u> Date
Established: 08/08/2012 Revised: 10/04/2017, 02/26/2022 FLSA: Non-Exempt Unit: Safety	