

JOB DESCRIPTION

Dept: Treatment Plant



Position: Controls Engineer

Effective: 12-17-25

JOB TITLE: Controls Engineer

GENERAL DESCRIPTION

Support and maintain Supervisory Control and Data Acquisition (SCADA) system infrastructure. Duties and Responsibilities, Education and Licenses, Knowledge, Experience, and Abilities required to be successful in this position, are detailed in this document.

SUPERVISION RECEIVED AND EXERCISED

This position receives direct supervision from the Public Works Director.

Duties and Responsibilities

- Work collaboratively with design engineers, integrators, and internal staff on the design, review, information compilation, inspection, and commissioning of plant improvement and lift station projects that include the SCADA system.
- Investigate new technological developments and processes. Research, recommend, and implement changes to enhance functionality and reliability.
- Execute SCADA system projects from conception to start-up within budget and project schedule.
- Examine existing algorithms and make programming and configuration changes to existing SCADA system such as adding or modifying system signals, control strategies, graphic displays, and alarms, as needed.
- Review SCADA system control logic strategies and implement programming changes to optimize treatment and pumping processes and automate where appropriate.
- Advise, instruct, and/or assist staff on proper operation and maintenance of SCADA system equipment.
- Perform or coordinate maintenance activities on SCADA system equipment.
- Perform SCADA system upgrades and provide replacement of hardware and software.
- Perform quality assurance checks of the SCADA system as required.
- Troubleshoot and resolve complex SCADA and instrumentation problems as required.
- Create or modify tags and generate SCADA system reports.
- Assist operating personnel in navigating, interpreting, and utilizing SCADA system graphics and reports.
- Order parts and equipment and assist in planning budgets.

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Education and Licenses

- B.S. degree in Civil, Chemical, or Environmental Engineering, Electrical or related Engineer discipline is required. Significant additional experience and/or certifications or other education and training may be considered in lieu of relevant B.S. degree.
- State of Indiana Municipal Class IV Certified Operator's License is preferred.

Knowledge

- Engineering concepts and their application to wastewater/water treatment and conveyance system operations.
- Principles and practices of civil engineering.
- Principles and practices of environmental engineering.
- Principles and practices of project and program management.
- Principles and practices of wastewater and water resources planning including master plans, collection systems, wastewater treatment systems, water reclamation and recycled water systems.
- Environmental regulatory systems such as NPDES.
- Strong knowledge of industrial control systems platforms.
- Principles and practices of budget development and development of a capital improvement program.

Experience

- A minimum of five (5) years of experience in the design, maintenance, troubleshooting, calibration, repair and installation of SCADA systems, and configuration and programming of PLCs.
- At least five (5) years of experience of project management experience.
- At least five (5) years of experience in engineering, operations, maintenance, and/or instrumentation and controls in a wastewater/water treatment facility.

Abilities

- Design, program, configure, and troubleshoot complex SCADA and instrumentation systems.
- Establish and maintain effective working relationships with peers and external contacts.
- Strong verbal and written communications skills.
- Implement innovative initiatives and ensure that new programs, systems, and developments are supported.

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- Perform complex professional and analytical work.
- Affect and lead change through innovation and vision.

Special Requirements

- Be available during non-business hours for emergency call-out situations.
- Ability to sit, twist, lean, operate a keyboard, lift files and reports from desktops or file drawers and be able to interface and meet with staff throughout the District campus.
- Ability to perform field work, including construction site visits.
- Successfully pass a physical examination including drug and alcohol screening.

Special Working Conditions

Persons in this position require moderate physical activity and long periods in a seated position working in front of a computer terminal. The position may also include frequent disagreeable working conditions such as noise, fumes, odor and hazardous chemicals located near the work site. The person in this position must have the ability to effectively communicate and interface with all staff throughout the Sanitary District and the City of Michigan City. There will be as needed field site visits, including construction sites.