



WWTP Sr. Instrument Technician/Plant Electrician

Department:	Public Works – Wastewater Treatment	Pay Grade:	N
Bargaining Unit:	Teamsters	FLSA Status:	Non-Exempt
Revised Date:	September 2018	Reports To:	WWTP Manager

The Sr. Instrument Technician/Plant Electrician is differentiated from the Instrument Technician/Plant Electrician by advanced level industry specific system knowledge and application, demonstrated control systems expertise, ability to manage capital projects and support of the plants energy management program.

POSITION PURPOSE: Under general supervision, performs journey-level technical support work related to the Wastewater Treatment Plant (WWTP) instrumentation, controls, and telemetry and power distribution systems and maintains and repairs Supervisory Control and Data Acquisition (SCADA) system. Work assignments are received via work orders, email or written log and require the incumbent to understand, investigate and determine the appropriate procedures to follow to complete the work. Works independently with little or no direct supervision or may lead a small cross functional team in the completion of assigned work. Evaluates and troubleshoots equipment and systems to determine appropriate repairs. Works closely with leadership team to assure compliance with all Federal, State and local laws, set priorities and manage I&C/E elements of larger projects. Work is reviewed in progress and upon completion for compliance with instructions and work standards.

ESSENTIAL FUNCTIONS AND RESPONSIBILITIES:

*The following duties **ARE NOT** intended to serve as a comprehensive list of all duties performed by all employees in this classification, only a representative summary of the primary duties and responsibilities. Incumbent(s) may not be required to perform all duties listed and may be required to perform additional, position-specific duties.*

- Performs a variety of Journey level work related to WWTP Instrumentation including: process control instrumentation, programmable logic controllers (PLC), tone telemetry systems and instrumentation calibration control system software.
- Performs a variety of journey level work related to the WWTP electrical systems including: power distribution system, motor controls, basic wiring and electrical circuits.
- Determines priorities and troubleshoots emergency situations related to equipment failure or process downtime.
- Performs routine maintenance, repair and calibration on a variety of instrumentation and control equipment, including: transducers, timers, switches, sensors, transmitters, monitors, level indicators, detectors, pressure sensors, flow meters, signal conditioners, enunciators, controllers, motor starters and relays.
- Maintains and repairs the Supervisory Control and Data Acquisition (SCADA) system and performs scheduled routine calibrations to ensure proper maintenance and accuracy of equipment operation.

Sr. WWTP Instrument Technician/Plant Electrician

- Assists in the development and implementation of preventive maintenance programs related to the WWTP's instrumentation and control equipment, including: preventive maintenance schedules, record keeping, and inventory and equipment repairs.
- Prepares and maintains a variety of records and reports, maintain technical manuals and drawing and schematics for plant equipment.
- Operates and maintains a variety of specialized tools and equipment, including: computer diagnostic equipment, oscilloscope, signal simulator, calibrators, solder equipment and others. Determines most cost effective manner to ensure equipment is calibrated and maintained properly.
- Coordinates daily work activities with Operations and Maintenance based on established priorities, verifies work is completed to standards with effective resource utilization.
- Energy Management Champion; responsible for helping to manage electrical usage and distribution.
- Assists IT in the maintenance of plant PC's and plant servers.
- Performs basic programming of PLC's, ensuring documentation is properly updated and make minor modifications to Control Strategies within SCADA while ensuring that the plants programming standards are met and that appropriate personnel are trained on the modifications.
- Troubleshoots generator malfunctions and Automatic Transfer Switches for energy management.

Required Knowledge of:

- Instrumentation of electrical systems related to industrial applications.
- Electrical theory, principles and practices of AC/DC power, electrostatic discharge and control circuits and motor control circuits.
- Instrumentation theory and process controls fundamentals, ladder logic diagrams, tone telemetry equipment and PLC logic.
- Methods and procedures of operating electronic computers and peripheral equipment.
- Methods and practices of preventive maintenance, troubleshooting and equipment malfunction diagnosis.
- Health and safety regulations and procedures, including safe work practices with high voltage equipment.
- Proper methods of storing equipment, materials and supplies.
- Technical aspects of the building maintenance trades.
- Effective oral and written communication principles and practices.
- Modern office equipment including computers and computer applications to include such programs as Microsoft Office Suite or others in order to sufficiently to perform work assignments.
- English usage, spelling, grammar and punctuation.

Required Skill in:

- Performing a variety of technical support work related to the WWTP instrumentation and electrical systems.
- Inspecting, adjusting, repairing and replacing mechanical and electrical units and related parts.
- Reading and understanding complex electronic schematics and technical manuals.
- Maintaining, repairing and calibrating plant instrumentation, controls and telemetry; maintaining and repairing the SCADA system.
- Troubleshooting, adjusting and servicing specialized equipment used in the WWTP.
- Calibrating process instruments and PID loops.
- Operating computers and peripheral equipment properly and efficiently.

JOB DESCRIPTION

Sr. WWTP Instrument Technician/Plant Electrician

- Learning department goals and objectives.
- Reading, interpreting, applying and explaining rules, regulations, policies and procedures.
- Maintaining current knowledge of technological advances in the field.
- Observing health and safety regulations and safe driving practices.
- Following oral and written instructions.
- Working various shifts and being available to be on call for 24 hour emergency response.

MINIMUM QUALIFICATIONS:

Education and Experience:

Required: Any combination equivalent to: two years of vocational training in design of control loops, industrial instrumentation, electronic controls, AC/DC Power, electrical circuits and electrical systems to include wiring of 480 volt equipment and interpretation of electrical wiring diagrams and two years' experience troubleshooting electrical systems and documenting modifications.

Preferred:

Five years' experience with instrumentation and Controls in a secondary wastewater facility and responsible for the daily O&M of the plants SCADA, PLC's, Laboratory and Historical Data Management. Experience in developing procedures and training others to ensure safety in and around 480 volt, 3 phase equipment. Four years' experience troubleshooting and testing Automatic Transfer Switches designed for power management.

Required Licenses or Certifications:

ControlLogic Maintainer Certification

Valid State of Washington Driver's License.

CPR, First Aid, AED, and Bloodborne Pathogen Cards within 6 months of hire date.

Must be able to successfully complete and pass a background check.

Mandatory drug test subject to conditional job offer.

WORKING CONDITIONS:

Environment:

- Indoor/outdoor work environment.
- Driving a vehicle to conduct work.
- Working in a confined or classified space.

Physical Abilities:

- Hearing, speaking or otherwise communicating to exchange information in person or on the phone.
- Operating a variety of grounds equipment and power and hand tools.
- Operating a computer keyboard or other office equipment.
- Reading a variety of materials and instruments and possess close vision, far vision, side vision, depth perception, night vision and color vision.
- Ascending/descending ladders.
- Lifting/ carrying or otherwise moving or transporting heavy objects frequently up to 50lbs.

JOB DESCRIPTION

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- Sitting/standing or otherwise remaining in a stationary position for extended periods of time.
- Walking or otherwise moving over rough or uneven surfaces while performing inspections and investigations.
- Performing repetitive motions, including: balancing, stooping, kneeling, bending, crouching, crawling, reaching overhead, above the shoulders and horizontally and standing, pushing, pulling and using stairs.
- Working in tight spaces.
- Ability to wear appropriate personal protective equipment based on required City Policy.

Hazards:

- Exposure to chemicals, used in Wastewater treatment such as: Sodium Hypochlorite, Caustic Soda, Bisulfate, Polymers, Clay, Lime and Carbon.
- Exposure to raw and treated sewage, odors associated with sewage treatment, high heat and moving equipment.
- Exposure to cleaning chemicals, herbicides and dust.
- Working at heights using ladders and structures.
- Working around and with sometimes noisy machinery having moving parts.
- Exposure to slippery surfaces and damp spaces while cleaning in and around equipment.
- Exposure to electrical power supply and high voltage.

Incumbent Signature: _____

Date: _____

Department Head: _____

Date: _____