



WWTP Instrument Technician/Plant Electrician

Department:	Public Works – Wastewater Treatment	Pay Grade:	L
Bargaining Unit:	Teamsters	FLSA Status:	Non-Exempt
Revised Date:	June 2013	Reports To:	WWTP Manager

POSITION PURPOSE: Under general supervision, performs journey-level technical support work related to the WWTP instrumentation, controls, 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. 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.
- Assists in the development and implementation of preventive maintenance programs related to the Plant'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.

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- Coordinates and assigns daily work activities with Operations and Maintenance leads based on established priorities; verifies work is completed to standards with effective resource utilization.
- May be required to work various shifts and is required to respond to emergencies.

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, 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 such as Microsoft Office Suite sufficient 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.
- Performing a variety of technical support work related to the WWTP 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 wastewater treatment plant.
- Calibrating process instruments and PID loops.
- Operating computers and peripheral equipment properly and efficiently.
- 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.
- Establishing and maintaining cooperative and effective working relationships with others.

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MINIMUM QUALIFICATIONS:

Education and Experience:

Required: Any combination equivalent to: graduation from high school supplemented by two years of vocational training in industrial instrumentation and electronics controls and four years of industrial instrumentation and/or process control experience.

Preferred: Any combination equivalent to: two years of vocational training in design of control loops, AC/DC Power, electrical circuits and electrical systems to include wiring of medium voltage equipment and interpretation of electrical wiring diagrams and two years' experience troubleshooting electrical systems and documenting modifications

Required Licenses or Certifications:

Valid State of Washington Driver's License.

Valid CPR, First Aid, AED, and Bloodborne Pathogen Cards.

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

Mandatory drug test subject to conditional job offer.

WORKING CONDITIONS:

Environment:

- Exposure to extreme temperatures and adverse weather conditions.
- 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 move or transport heavy objects frequently up to 50lbs.
- 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.

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- 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, damp spaces while cleaning in and around equipment.
- Exposure to electrical power supply and high voltage.

Incumbent Signature: _____

Date: _____

Department Head: _____

Date: _____