

DEPARTMENT: SEWER
CLASSIFICATION: COMPETITIVE
APPROVED: APRIL 18, 2024

ELECTRONICS TECHNICIAN - WASTEWATER

DISTINGUISHING FEATURES OF THE CLASS: This is a responsible position that maintains and repairs scientific electrical/electronic controls equipment, devices, and apparatus that are located in a wastewater treatment facility and associated pump stations. Work is performed on a wide variety of electrical/electronic controls equipment which requires an in-depth knowledge of modern repair and maintenance procedures. The incumbent maintains proper operating condition of, assembles and installs, and repairs electrical/electronic controls equipment, devices and apparatus located in a wastewater treatment facility and associated pump stations. The incumbent may be assigned responsibility for maintaining critical equipment during emergencies. Works under the general supervision of the Chief Wastewater Treatment Plant Operator and the Supervisor of Sewer Maintenance. Considerable leeway is allowed for the exercise of independent judgment in accordance with applicable laws and district policy. Employees in this class are required to travel between facilities. Does related electrical and general maintenance work as required.

TYPICAL WORK ACTIVITIES:

1. Conducts detailed process and equipment electrical and control evaluation studies and may be assigned responsibility for overseeing and directing the start-up of major process operations in concert with district operations and/or maintenance personnel;
2. Maintains, repairs, troubleshoots, and installs such machines/equipment as generators, motors, volt meters, oscillators, digital computer trainers, radio transmission equipment, relays, modules, solenoids, actuators, vibrations and speed sensors, soft starts, variable and constant speed drive controllers, process or treatment plant controllers, industrial controls, flow meters, level monitoring equipment and floats, motorized valves and computers (micro and mini), programmable logic controllers (PLCs), general controls equipment, etc. and calibrates instrumentation devices (flow, level, etc.);
3. Diagnoses and corrects problems in electrical and electronic control circuits for various screening, pumping, conveyance and collection, dewatering, filtration, and mixing equipment;
4. Assembles purchased equipment and sets in place; tests new equipment (including portable) for accuracy in operation and adjustment or calibration where necessary;
5. Maintains inventory of equipment and tools and requisitions supplies as required;
6. Keeps currently abreast of latest developments in the field of electronics, communications, and general controls equipment and systems;
7. Maintains and implements electrical safety protocols and Arc Flash Hazard requirements;
8. May design, fabricate or assemble various types of tools or equipment for use in water pollution control;
9. Installs and terminates new conduit and wire;
10. Updates and maintains department electrical plans with all modifications and maintains necessary maintenance reports as required;
11. Maintains department electrical systems, general controls equipment and systems, heating, ventilating, air conditioning, telephone, paging systems, and PLC controls equipment, etc.
12. Prepares reports and maintains records for all electrical/instrumentation repair and maintenance work.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Thorough knowledge of the tools, terminology, procedures and equipment of electricity and electronics; good knowledge of the operation and maintenance of electronic and controls equipment; ability to diagnose problems and make repairs to scientific electronic, instrumentation, and controls equipment; working knowledge of computers, modern software, and related equipment; working knowledge of electrical/electronic/PLC equipment and controls used in a wastewater treatment and conveyance system; working knowledge of process control equipment; working knowledge of medium voltage as well as 3-phase 480V and 120/208V systems; working knowledge of programming/configuring/implementing/setup and familiarity with interfacing instrumentation and controls with an existing SCADA system; working knowledge of specifying/configuring/setup and installation of PLC/controls and electronics equipment; good communications and report writing skills; ability to design, fabricate and repair various types of electrical and electronic equipment and components; ability to read and interpret electrical diagrams, schematics, and drawings; ability to prepare and maintain records and reports; sound professional judgment; dependability; willingness and ability to learn and understand wastewater treatment processes and general process control equipment; willingness and responsiveness to be called into work during emergency situations; physical condition commensurate with the requirements and demands of the position.

ELECTRONICS TECHNICIAN – WASTEWATER CONTINUED

MINIMUM QUALIFICATIONS: Candidates must meet one of the following:

1. Graduation with an Associate's Degree in electronics **and** two (2) years of full-time paid satisfactory experience in the maintenance, repair and fabrication of electrical and electronics equipment of which at least twelve (12) months was in an industrial setting; **OR**
2. Graduation from high school or possession of an equivalency diploma **and** four (4) years of full-time paid satisfactory experience in the maintenance, repair, and fabrication of electrical and electronics equipment as a journeyman electrician of which at least two (2) years was in an industrial setting;

SPECIAL REQUIREMENT:

Candidates must possess a valid New York State driver's license at the time of appointment and for the duration of employment.

NOTE:

1. Degrees must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education;
2. Examples of controls equipment include but are not limited to computers, PLC's, control panels, instrumentation, and other electronic related equipment and software for the remote readings and/or control of temperature, pressure, flow data, elevations of process material, pumps, valves, chemical dosing and metering, and other ancillary equipment associated with the wastewater treatment industry.