

**MIDDLESEX COUNTY UTILITIES AUTHORITY
JOB OPENING**

JOB TITLE: Automation Engineer II

DEPARTMENT: WW Administration	DIVISION: Wastewater
LOCATION: Central Treatment Plant	EXEMPT: Yes
SALARY LEVEL: E-4 (\$50,190.00-\$116,170.00)	SHIFT: No
REPORTS TO: CTO	NEW: 07/09/2020
OTHER REQUIREMENTS: Must be available for overtime and call-in work	

SUMMARY: Designs, implements and tests automated, electronic and manual controls, hardware and software interfaces and other technology used within the CTP, pump stations and collection system to optimize process control, inter-connectivity and data collection by performing the following duties personally or in conjunction with others.

ESSENTIAL DUTIES AND RESPONSIBILITIES: Include the following and others as assigned.

Program and troubleshoot PLCs using ladder Logic, function block and structured text.

Program and troubleshoot Ethernet, Ethernet I/P, DeviceNet, ControlNet, Modbus and DNP3 Networks.

Program and troubleshoot SCADA HMI, OIT and mobile applications including devices drivers, databases, graphical user interfaces, networking, security, and alarms.

Manages an electronic historian database for all OT equipment containing manufacturers' literature, operating and maintenance manuals, technical documentation, testing, calibration and performance data and efficiency studies.

Coordinate automation/SCADA projects with electricians, mechanics and outside vendors from start to completion; including design, implementation, as built drawings/records.

Support in-house and consulting engineers and technical and management personnel to discuss and plan equipment or process control upgrades to enhance safety, efficiency, and cost effectiveness

Makes modifications to or troubleshoots problems with existing OT equipment, devices, applications or networks and provides guidance to subordinate technicians on more difficult issues.

Wires, configures, tests, integrates and/or adjusts Variable Frequency Drives (VFDs) or sensors for equipment and other process control instrumentation, as well as programmable logic controls (PLCs) or remote terminal units (RTUs) into existing SCADA networks.

Oversees vendors or other third-party contractors that provide technical support, installation or other

services to the Authority's OT systems to monitor progress, ensure compliance with specifications and to test the quality of the work performed/installed for final acceptance.

Complies with applicable safety and health policies and procedures and performs other duties as assigned.

QUALIFICATION REQUIREMENTS: To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required.

EDUCATION and/or EXPERIENCE: Bachelor of Science Degree (B.S.) with major coursework in Computer Science, Technology, Automation or related engineering discipline such as Mechanical or Electrical; four (4) years related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS: Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions.

MATHEMATICAL SKILLS: Ability to calculate figures and amounts such as rate, ratio, proportions, percentages, area, circumference, weight and volume. Ability to apply concepts of basic algebra, calculus and geometry.

REASONING ABILITY: Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret a variety of technical information and instructions in mathematical or diagram form and deal with abstract and concrete variables.

OTHER SKILLS AND ABILITIES: Thorough knowledge of design, operation, and maintenance of electrical and mechanical (industrial) controls. Thorough knowledge of SCADA software applications related to machine communication/ connectivity and data transmission. Knowledge of Computer-aided Manufacturing software as well as operational and quality control analysis. Ability and dexterity to wire and program devices and interfaces, and to make modifications to automated or electronic controls. Ability to clearly define problems and explain solutions and to provide guidance and instruction to subordinate technicians. Solid understanding of the relationship between OT and IT methods and systems. Thorough knowledge of wireless networks and accompanying cyber-security measures. Ability to prepare concise and accurate reports and recommendations. Ability to maintain a high level of safety and performance awareness. Ability to work harmoniously with associates and consulting personnel. Must be able and willing to utilize appropriate respiratory and other safety equipment/PPE in the performance of duties. Must be able to read electrical, control panel, P&ID and loop drawings. Shall be able to design, update and maintain drawings using drafting software. Must be able to work in a virtual machine environment.

LICENSES: Must possess valid state of residence Driver's License and meet Authority insurance requirements.

PREFERRED CREDENTIALS: Designation as an Engineering-in-Training or Professional Engineer's license with a background in electrical or mechanical engineering.

PHYSICAL DEMANDS: While performing the duties of this job, the employee is occasionally required to stand; walk; sit; use hands to finger, handle, or feel objects, tools, or controls; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; talk or hear; and taste or smell. The employee must frequently lift and/or move up to 10 pounds and occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, depth perception, and the ability to adjust focus.

WORK ENVIRONMENT: While performing the duties of this job, the employee occasionally works in high, precarious places and in outside weather conditions and is occasionally exposed to fumes or airborne particles and toxic or caustic chemicals.

INSTRUCTIONS TO APPLY FOR THIS POSITION:

Anyone interested in applying for this position should submit a current resume and a letter of interest explaining how the candidate meets the job requirements **before 4:00 PM Friday June 10th, 2022, to Human Resources Office, Central Administration Building, Room 124, Sayreville or to mwwiater@mcua.com**. Employees who are newly hired or accept a new position within the Authority, those who are promoted to a new job classification or have been transferred to a new assignment, and former employees who have been rehired, are classified as Conditional Employees for a period of six (6) months beginning with the first day on the new job. Employees are eligible to apply for a different position within the Authority after they have completed the 6 month period as a Conditional Employee. Any current employee who accepts and begins working in this position may not be able to return to their old position, or to any other position within the Authority, because of withdrawal or removal from, or inability to perform in this position. Qualified employees are encouraged to apply for posted positions as they occur.

The MCUA is an Equal Opportunity Employer (EEO/AA).