

POWER PLANT CONTROL SYSTEMS TECHNICIAN

PURPOSE AND NATURE OF WORK

Positions in this classification are responsible for troubleshooting, compliance testing support, system administration, and software maintenance tasks of the Continuous Emissions Monitoring Systems (CEMS) units at all electric generation stations in order to comply with EPA-mandated Title V air permits. Incumbents travel as needed between both local generating stations supporting unit operations and troubleshooting and solving problems that arise. Positions in this class are distinguished from those in the class Instrument, Control, and Electrical Technician by the dedication to advanced control system work, such as compliance testing support and control system administration, involving a greater consequence of error and greater potential impact to reliability. Incumbents work under the general direction of the Power Plant Maintenance Foreman and have no supervisory responsibilities. Work is potentially hazardous. Incumbents are subject to 24 hour call as well as additional overtime.

ILLUSTRATIVE EXAMPLES OF WORK (Note: These examples are intended only to illustrate the various types of work performed by incumbents in this class. All of the duties performed by any one incumbent may not be listed, nor does any incumbent necessarily perform all of these duties.)

Performs advanced troubleshooting and repair work involving process control systems, electrical protection systems, and/or software while unit is online. Serves as point of contact for complex control systems programming tasks, modbus/serial communications, and point-to-point controls. Participate in control system design reviews and factory acceptance testing of new or upgrade process control system project equipment and programming. Responsible for making changes in control system logic.

Reviews manuals and manufacture's specifications for equipment; inspects, tests and takes necessary actions to ensure proper and optimum performance of all sensors, processors, annunciator/indicators/ recorders, controls and power distribution equipment and systems. Maintains, calibrates, troubleshoots and repairs turbine control systems, and loop circuits, including testing control valves for proper operations, performing prescribed control system line-up and check-out, adjusts feedback transducers, position and limit switches, meters, indicators, motor actuator control drives and control boards. Ensures proper function of continuous air emission and water chemistry monitoring systems by testing operation according to specifications; maintaining and repairing system components, probes, controls, power supplies, communications and controls. Maintains remote and peripherals components as well as overall functioning of centralized plant data acquisition and performance monitoring system. Interprets schematics, inspects, tests, cleans, maintains and repairs as necessary to ensure proper, safe and efficient operation of all plant electric distribution systems. Uses volt/ohm meters, meggers and high potential testers to measure, analyze, locate and resolve any and all problems with motor controls, starters, circuit breakers, switches, connections and related. Maintains vibration analyzers in routine monitoring of all rotating equipment. Tests, cleans and performs maintenance as necessary to ensure performance of battery banks, emergency systems, firefighting, HVAC systems and alarms. Maintains generator voltage control excitation systems, generator/turbine electrical/electronic system. Maintains all cranes and related equipment.

Performs related work as required.

NECESSARY KNOWLEDGES, ABILITIES, AND SKILLS

Extensive knowledge power plant control system hardware and software, including applications and programming.

Thorough knowledge of CEMS units operating characteristics.

Knowledge of and ability to implement the lockout/tagout system

Ability to interpret equipment manual, prints, and drawings.

Ability to use various types of diagnostic equipment commonly found in the power plant.

Ability to climb, lift 50 pounds, work at heights, in confined spaces (manholes), at high temperatures and high noise levels.

Ability to communicate clearly, as well as teach, train and evaluate employee performance objectively.

Ability to perform duties calmly and effectively in emergency and time critical conditions.

Ability to observe work and remain alert while working under stress and adverse conditions for extended periods of time and at irregular hours.

Ability to form and maintain effective working relationships with technicians, mechanics, contractors, employees and public.

DESIRABLE TRAINING AND EXPERIENCE

Associates degree in Computer Programming, Networking, or Process Control Technology, at least 3 years of progressively responsible experience as an ICE Technician (or equivalent position) in a heavy industrial process plant, ISA Certified Control System Technician, completion of the Power Plant Maintenance Technician Training Program, including at least 120 hours of formal control system programming and training, or equivalent combination of education and experience.