



CLASS SPECIFICATION FOR:

Instrumentation Specialist I

General Statement of Duties:

Performs basic skilled electrical, electronic and instrumentation installation, maintenance and repair work at the Water Treatment Plant or the Water Reclamation Facility; does related work as required.

Distinguishing Features of Class:

Under general supervision, performs routine maintenance, preventative maintenance, basic diagnostic troubleshooting and related repairs, and basic programming required for process specific pneumatic controls, electronics, instrumentation, integrated mechanical and motor controls and equipment, infrared technologies, VFD (Variable Frequency Drives) and PLC (Programmable Logic Controller). Assigned duties may also include a variety of basic electrical work. Work is performed both in the shop and the field as determined by the work assignment. Position may be required to work on-call assignments and be subject to call back for emergency repairs.

Examples of Assigned Duties *(illustrative of the types and scope of duties and responsibilities assigned to positions in this class):*

- Performs routine day-to-day regular and preventative maintenance as assigned;
- Completes assigned work orders utilizing the current electronic work order system;
- Performs basic diagnostic troubleshooting, including researching and recommending repair options, and making approved repairs for process specific pneumatic controls, electronics, instrumentation, integrated mechanical and motor controls and equipment, infrared technologies, VFD (Variable Frequency Drives), MMR, and PLC (Programmable Logic Controller) and electrical controls and components;
- Obtains the necessary parts for maintenance and repairs, includes researching and recommending appropriate parts;
- Works with pneumatics, assorted mechanical, electrical and electronic equipment and devices used for assembling, installing, servicing, testing, repairing and adjusting the electrical, electronic, and mechanical components specific to the assigned facility's process controls;
- Performs basic networking and programming as necessary for integrating older mechanical technologies with automated, programmable, and variable electronic (computerized) process controls;
- May adjust or assist with adjusting constants and variables and proportional-integral-derivative (PID) settings;
- Assists with troubleshooting ladder logic in PLC programming to better control facility's processes;
- Performs basic IT centric duties such as running cabling for networked interfaces and equipment, wiring and rewiring cabinets, and debugging programmable devices and equipment;
- May perform basic set-up, troubleshooting and repairs to servers, routers and other networking equipment and devices;
- Performs basic troubleshooting and repair work on SCADA as related to assigned maintenance and repair work;
- May serve as essential personnel during emergency situations;
- Performs other duties as assigned.

Required Knowledge, Skills and Abilities:

Basic working knowledge of the standard practices, materials, tools, and equipment of the electronic and instrumentation trade; demonstrated skill in the use and care of the tools, equipment and materials used in the work; basic working knowledge of the principles of electronics and instrumentation; basic understanding of the occupational hazards of and safety precautions involved in electronic work; ability to read and interpret typical electronic schematics; ability to read, write and comprehend manuals and instructions; ability to read and follow detailed directions; basic knowledge of relevant programming principles and concepts including higher math calculations; basic knowledge of diagnostic and troubleshooting principles and processes; ability to work independently with limited general supervision; basic critical thinking skills for solving work-related problems; sound judgment with the ability to make appropriate decisions, identify and report issues, including proactively; ability to create and maintain accurate paper and electronic records; physical condition permits activities including but not limited to lifting, carrying, bending, stooping, kneeling and routinely working under adverse temperature and/or weather conditions and in confined work spaces as needed; ability to perform accurate basic visual inspections; ability to work safely in adverse weather conditions and temperature extremes; basic knowledge



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of personal computers and /or automated systems and the ability to enter, maintain, retrieve and analyze data (CMMS data entry); effective oral and written communication skills with ability to express ideas clearly and concisely; effective oral and written communications skills with the ability to communicate, interpret and understand technical information; ability to collaborate and work effectively independently and as a team member; ability to establish and maintain good working relationships with Department personnel; personal accountability including teamwork and establishing and maintaining positive relationships with Department personnel and other County employees; good organizational skills; excellent customer service skills; tact; and courtesy. Requires the ability to work a flexible schedule as needed for work assignments that may require working evenings, weekends, and some holidays.

Minimum Education and Experience:

Education: Graduation from high school with additional formal training (e.g. apprenticeship or vocational training) or education in electronics and instrumentation or certified journeyman electrician;

Experience: One (1) year of relevant electronic and/or instrumentation experience;

OR: Any equivalent combination of experience and training which provides the required knowledge, skills and abilities.

Additional Requirements:

NOTE: Effective 4/1/2009 County Ordinance 1128 requires a criminal history record check and fingerprinting of all employees in authorized and hourly safety sensitive positions.

- Current valid driver's license.
- May require current journeyman electrician's license.
- May require a pre-employment and/or annual/regularly scheduled physical examination and/or medical tests administered by Henrico County Employee Health Services, the components of which are based on and appropriate to the specific sensory and/or physical demands of the given position.