



CLASS SPECIFICATION FOR:

## Instrumentation Specialist Supervisor

### General Statement of Duties:

Supervises and performs complex electronic and instrumentation installation, maintenance, testing 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, supervises and performs complex installations and maintenance, complex diagnostic troubleshooting and related repairs, and complex programming required for networked and process specific pneumatic controls, electronics, instrumentation, integrated mechanical and motor controls and equipment, infrared technologies, VFD (Variable Frequency Drives), PLC (Programmable Logic Controller), Proportional-Integral-Derivative Controller (PID) and millitronic controls to ensure the compatibility and reliability of components and consistency and efficiency in the treatment process. 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):*

- Provides day-to-day direct supervision of the monitoring technicians, including schedules, work assignments and providing appropriate training as well as all other supervisory related duties;
- Serves as a working supervisor performing complex installations and maintenance;
- Performs complex diagnostic troubleshooting including research researching and designing repair options and problem solutions to optimize component compatibility and efficiency;
- and related repairs;
- Performs complex programming required for networked and process specific pneumatic controls, electronics, instrumentation, integrated mechanical and motor controls and equipment, infrared technologies, VFD (Variable Frequency Drives), MMR, PLC (Programmable Logic Controller), Proportional-Integral-Derivative Controller (PID) and millitronic controls;
- Performs IT centric duties such as running cabling for networking interfaces and equipment, wiring and rewiring PLC cabinets, programming and reprogramming logic, and debugging programmable devices and equipment;
- Networks, interfaces and programs all types of process specific devices necessary for integrating older mechanical technologies with automated, programmable, and variable electronic (computerized) process controls;
- Networks, troubleshoots and repairs process specific servers, routers and related networking equipment and devices;
- Troubleshoots ladder logic in PLCs and proportional-integral-derivative (PID) settings and modifies or rewrites programs to better support treatment processes and control interfaces;
- Installs, verifies, and upgrades software used in computer controlled systems, networks and interfaces;
- Analyzes, maintains, and calibrates the Supervisory Control and Data Acquisition System (SCADA);
- Works with and/or oversees the work of vendors and contractors;
- Handles or supervises projects related to treatment process components' compatibility, upgrade or replacement to ensure the efficiency, consistency and integrity of the treatment process as assigned;
- Develops, implements and updates the preventive maintenance program;
- Develops and maintains training materials and trains staff on electronic and instrumentation maintenance;
- Prepares work orders;
- Prepares and reconciles purchases orders;
- Prepares budget for section and manages to the approved budget;
- Prepares requests for bids, proposals and contracts including scope of work, specifications and requirements;
- Performs other duties as assigned.



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### Required Knowledge, Skills and Abilities:

Extensive knowledge of the standard practices, materials, tools, and equipment of the electronic and instrumentation trade; extensive skill in the use and care of the tools, equipment and materials used in the work; thorough knowledge of the principles of electronics and instrumentation; extensive knowledge of electricity including real and imaginary power management; thorough knowledge of the occupational hazards of and safety precautions involved in electronic work; ability to read and interpret typical electronic schematics; thorough knowledge of water and/or wastewater treatment principles and processes; thorough knowledge of relevant programming principles and concepts including higher math calculations; ability to work independently with limited general supervision; excellent critical thinking skills for solving work-related problems; ability to create and maintain accurate paper and electronic records; demonstrated ability to communicate effectively with diverse audience of County personnel and vendors; ability to effectively train and supervise direct reports and to handle sensitive issues; 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 and wearing a self-contained breathing apparatus as needed.

### Minimum Education and Experience:

Education: Possession of a two-year degree in relevant electronic or instrumentation field;

Experience: Five (5) years relevant electronic and/or instrumentation experience in a water or wastewater treatment facility, including at least two (2) years in a lead or supervisory capacity;

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 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.

G.C.N.0039

Career Code:

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