

## TREATMENT PLANT OPERATOR-WATER

### General Statement of Duties

Performs responsible operational, laboratory, and maintenance functions in a water treatment plant.

### Distinguishing Features of the Class

An employee in this class performs a variety of operational, laboratory, and maintenance duties designed to produce safe treatment of potable water. Work is performed on an assigned rotating shift. Work includes monitoring the plant's operation through observation, mechanical readings and the results of standard chemical and biological tests and making necessary adjustments in the process as conditions or test results dictate. Other duties include performing standard laboratory duties and tests and assisting with plant and facilities maintenance. Work also includes substantial record keeping of work activities. Employees are subject to hazards associated with plant operations including working in both inside and outside environments, in hot and cold temperatures, and exposure to various hazards such as loud noises, moving mechanical parts, electrical current, chemicals, fumes, odors, dusts, mists, gases, poor ventilation and potentially working in small spaces. Work is performed under the supervision of the Water Plant Superintendent/ORC and is reviewed by observation, conferences, and review of records for adherence to operational standards, legal requirements, and safety practices.

### Duties and Responsibilities

#### Essential Duties and Tasks

Makes regular tours of plant and checks bar screens, engines, generators, pumps, settling tanks, filters, chlorinators, and other equipment for proper functioning.

Observes various meters, gauges and dials and records readings as required; logs daily, weekly, and monthly activities; notifies distribution and collection field personnel if readings indicate a potential lead in system.

Samples water at every stage of treatment process including raw and finished water.

Performs process control standard laboratory chemical and biological tests such as pH, chlorine residual, turbidity, alkalinity, etc. on standard prescribed schedules.

Calibrates pH meter, fluoride ION meter, CL<sub>2</sub> meter, and turbidity meter as required by operating requirements and standards.

Performs general preventive and scheduled maintenance; checks equipment and pumps for correct operations; performs maintenance such as greasing, lubricating; troubleshoots problems and contacts contracted service personnel if major maintenance or repair is required.

Regulates and adjusts motors, pumps, valves and other apparatus to meet changing operating conditions; switches to back-up systems if required.

Analyses plant performance and makes chemical feed and other adjustments consistent with operating standards and supervisory guidelines.

Monitors bulk storage and supply tanks for alum, caustic, chlorine, fluoride, poly ortho phosphate, etc; adds materials to tanks to ensure daily operating needs.

Back washes and rewash filters as required by readings.

Maintains a variety of required records of plant operations and laboratory tests; ensures all required tests are performed; prepares and signs required operating reports.

#### Additional Job Duties

Performs other duties as required.

### Recruitment and Selection Guidelines

### Knowledge, Skills, and Abilities

Working knowledge of the operating characteristics and maintenance requirements of water treatment plants.

Working knowledge of applicable Federal, State, and local laws, ordinances, and permitting requirements.

Working knowledge of the occupational hazards of the work and of necessary safety precautions.

Working knowledge of standard laboratory tests and procedures used in water treatment plant.

Working knowledge of the use of computers to record data, prepare reports, and operate plant equipment.

Some knowledge of hydraulic, chemical, and mechanical principles pertinent to water treatment plant operations.

Ability to detect flaws in the operation of mechanical equipment and to determine proper remedial measures.

Ability to conduct chemical and/or bacteriological laboratory tests on prescribed schedule.

Ability to calibrate a variety of laboratory equipment.

Ability to understand and follow moderately complex oral and written instructions.

Ability to read meters, charts, and technical manuals and drawings accurately and to maintain records of operations and laboratory tests performed.

Ability to establish and maintain effective working relationships with superiors, coworkers, and regulatory personnel.

### Physical Requirements

Must be able to physically perform the basic life operational functions of climbing, balancing, stooping, kneeling, crouching, reaching, standing, walking, pushing, pulling, lifting, grasping, talking, and hearing.

Must be able to perform medium heavy work exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

Must possess the visual acuity to read gauges, dials, conduct laboratory tests, calibrate equipment, observe moving parts of machines and to record and review written records.

### Desirable Education and Experience

Graduation from high school supplemented by course work in chemistry or biology and some experience in the operation and maintenance of machinery and equipment, preferably in a water treatment plant; or an equivalent combination of education and experience.

### Special Requirements

Possession of a valid North Carolina Driver's license.

Ability to obtain North Carolina water operator's grade C certificate within 12 months of hire date.