

LABORATORY TECHNICIAN

General Statement of Duties

Performs difficult technical work in a state certified wastewater treatment plant laboratory necessary for the monitoring of municipal wastewater operations.

Distinguishing Features of the Class

An employee in this class performs a variety of chemical, biological, and microbiological tests designed to produce safe operation of water and waste treatment. Work includes following standard methods; troubleshooting process problems; conducting laboratory procedures; and preparing necessary reports and maintenance of records and files. Work also includes ensuring proper inventory of equipment and supplies and calibration of equipment. The employee is subject to hazards associated with wastewater and chemical work including exposure to electrical current, and chemicals, fumes, odors, dusts, mists, gases, and poor ventilation. Work is also subject to the final standards of OSHA on blood borne pathogens. Work is performed under regular supervision and is reviewed for conformance to testing and reporting procedures and accuracy.

Duties and Responsibilities

Essential Job Tasks

- Performs tests on a variety of raw and treated water and wastewater samples; coordinates test results with plant operations personnel; follows standard methods to be used; follows state and EPA guidelines; operates a microcomputer to analyze and track test results.
- Performs tests to determine ph, alkalinity, biological oxygen demand, total solids, volatile solids, settleable solids, fecal coliform, ammonia, nitrates, and nitrites, manganese, and other tests.
- Interprets laboratory results and prepares state and federally required reports.
- Maintains an inventory of chemicals, solutions, culture media, reagents, required forms, and other laboratory supplies.
- Performs quality control program for equipment and supplies to assure reliable test results; maintains laboratory equipment in proper operating order; maintains state laboratory certification; calibrates instruments.
- Consults with, informs, and advises plant personnel about controls to be used, defects found, or changes in treatment process.
- Prepares solutions and reagents.
- Performs sampling and prepares samples for contract laboratory analysis; reviews results of analyses.
- Participates in plant operations, maintenance and repair.
- Performs related tasks as assigned.

Recruitment and Selection Guidelines

Knowledge, Skills and Abilities

- Considerable knowledge of modern laboratory techniques, materials, and equipment, including those used in complex chemical and biochemical analysis of water and wastewater.
- Knowledge of the principles of organic and inorganic chemistry.
- Knowledge of state, federal, and local laws, regulations, and practices related to wastewater treatment and discharge
- Considerable knowledge of the application of information technology to the work.
- Skill in the operation of laboratory testing equipment.
- Ability to read and interpret technical federal guidelines on treatment procedures and tests.
- Ability to read and interpret state and federal regulations related to water and wastewater treatment.
- Ability to prepare laboratory reagents and assemble laboratory apparatus for chemical and biological analysis.
- Ability to take water and sewage samples and perform the necessary laboratory tests.
- Ability to prepare and keep accurate records and prepare reports.
- Ability to lead coworkers in the absence of the supervisor.
- Ability to understand and carry out complex oral and written instructions.
- Ability to perform mathematical calculations.
- Ability to establish and maintain effective working relationships with peers, superiors, and contracting agencies.

Physical Requirements

Must be able to perform the basic life functions of stooping, crouching, reaching, standing, lifting, fingering, grasping, talking, and repetitive motions. Must be able to perform light work exerting up to 20 pounds of force occasionally; up to 10 pounds of force frequently, and a negligible amount of force constantly to move objects. Must possess visual acuity to prepare and analyze laboratory results, data, and figures, to operate a microcomputer, and to perform visual inspection of measurement devices.

Desirable Education and Experience

Graduation from a community college with an associate's degree in chemistry technology, biology, environmental science or related field, and some related laboratory experience; or an equivalent combination of education and experience.

Special Requirements

May require ability to obtain North Carolina class I Laboratory Analyst certification.

