

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 waste treatment. Work includes establishing standard methods, work schedules, and timetables; 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, quality control, and calibration of equipment. The employee is accountable to the state for the accuracy and record keeping in the certified laboratory. 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. The employee may be required to participate in standby and call back rotation. Work is performed under general 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; establishes standard methods to be used following state and EPA guidelines; researches and updates methods and procedures based on changing regulations.

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; researches prices and places orders.

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.

Utilizes various meters, incubators, vacuum apparatus, analytical balances, spectrophotometer, personal computer, autoclave, samples, and other equipment.

Consults with, informs, and advises plant personnel about controls to be used, defects found, or changes in treatment process.

Prepares solutions and reagents.

Performs regular and industrial sampling and prepares samples for contract laboratory analysis; reviews results of analyses.

Enters laboratory results into monthly discharge monitoring report and submits to ORC; updates and revises quality manuals and standard operating procedures.

Monitors lift stations via SCADA and other means; responds to after hours calls to troubleshoot and mitigate problems.

Participates in plant operations, maintenance and repair.

Additional Job Duties

Performs related tasks as assigned.

Recruitment and Selection Guidelines

Knowledges, 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.

Considerable knowledge of the principles of organic and inorganic chemistry.

Considerable knowledge of state, federal, and local laws, regulations, and practices related to water and wastewater treatment and discharge.

Knowledge of the application of information technology to the work.

Skill in teamwork and accuracy.

Ability to read and interpret technical federal guidelines on treatment procedures and tests.

Ability to interpret Town ordinances and state 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 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.

Ability to organize work, set and follow effective work priorities, and meet established deadlines.

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 Associates Degree in chemistry, biology or environmental science and related experience; or an equivalent combination of education and experience.

Special Requirements

Possession of operator's certificate level I in wastewater treatment.

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

May require possession of a valid driver's license.