ENVIRONMENTAL LAB TECHNICIAN

DISTINGUISHING FEATURES OF THE CLASS:

This is entry level technical laboratory work responsible for environmentally-related analysis of sewage and water samples. Duties include the accurate completion of a variety of standardized laboratory tests and procedures, within limits prescribed by higher technical staff who would devise procedures for new tests, generally in accordance with standard methods. Work is carried out according to prescribed environmental health procedures and safety procedures established by local, state and federal authorities. Incumbents are responsible for performing tests accurately and also for maintaining personal and overall laboratory safety. Incumbents must work weekends and holidays in rotation. Supervision is received from appropriate higher level technical staff such as the Environmental Laboratory Director.

TYPICAL WORK ACTIVITIES:

1. Operates and maintains a variety of laboratory equipment such as sterilizers, microscopes, centrifuges, stills, pH meters, dissolved oxygen meters, balances, incubators, vacuum pumps and turbidimeter;
2. Prepares and standardizes a variety of required reagents, bacteriological media and solutions necessary for standard chemical and bacteriological tests;
3. Performs total coliform, and fecal strep bacteriological tests using either membrane filtration or most probable number procedure;
4. Tests samples for color, turbidity, taste, odor, hardness, alkalinity, chlorides, iron, pH value, residual chlorine, nitrates, fluorides, LSI (Langlier Saturation INDEX), MBAS (Methylene Blue Activated Substances), total dissolved solids, and sulfates;
5. May test sewage influent and treated effluent for such things as temperature, pH, settleable solids, suspended solids, sludge volume index, sludge age, dissolved oxygen, chlorine residual, bio-chemical oxygen demand, chemical oxygen demand and ammonia;
6. Tests for standard plant counts of various types of water samples;
7. Isolates micro-organisms in pure cultures and identifies organisms;
8. Stains slides and examines microscopically;
9. Selects the appropriate laboratory equipment to use for various laboratory techniques and follows the proper procedures for usage of the equipment;
10. Inspects laboratory equipment to insure proper operation conditions;
11. Maintains laboratory and chemical storage facilities in a safe, clean and orderly fashion;
12. Cleans and sterilizes equipment;
13. Observes and records the results of test and may prepare reports;
14. Performs appropriate arithmetical and statistical (t-test, percentages) compilations of laboratory results;
15. Maintains inventory on all supplies, especially on toxic, caustic and carcinogenic materials;
16. Participates in all quality control testing procedures;
17. May relate to customers the results of routine tests performed;
18. Does related work as required.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

Working knowledge of modern technical laboratory techniques, equipment and terminology used in the analysis of water, waste water and sludge; working knowledge of biology and chemistry as applied to the analysis of water, waste water and sludge; working knowledge of modern laboratory safety procedures; working knowledge of environmental health laboratory procedures and techniques; skill in the operation and care of laboratory equipment and apparatus and in performing laboratory routines; ability to perform routine laboratory tests; ability to follow technical prescribed methods and procedures, both oral and written; ability to plan and schedule work phases; ability to write simple reports of observations and laboratory results; ability to perform varied arithmetical computations; accuracy; thoroughness; good powers of observation; manual dexterity; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS:

Graduation from a regionally accredited or New York State registered college or university with an Associate's degree in chemistry, biology, environmental science or a closely related field with two (2) laboratory courses in chemistry, one (1) laboratory course in biology and one (1) mathematics course, such as algebra or statistics.

NOTE: Three (3) to four (4) semester hours is equivalent to one course. Transcripts must be submitted with application.

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