

MAJOR FUNCTION

This is complex professional laboratory work, performing routine and non-routine physical, chemical, or biological analyses on water, wastewater, and/or other environmental samples. Duties are performed with independence and with limited general supervision of the laboratory Supervisor.

ESSENTIAL AND OTHER IMPORTANT JOB DUTIES**Essential Duties**

Performs complex analyses on water, wastewater, groundwater, sediments, sludges and related environmental samples. Conducts a variety of water quality tests which may include but not limited to biochemical oxygen demand (BOD), residual chlorine, bacteriological tests and pH. Maintains and performs routine maintenance and troubleshoots analytical equipment for accurate performance. Reports supply needs to supervisor. Responsible for the care and cleaning of equipment used in testing. Prepares standard solutions, reagents and media. Assists in training and providing guidance to laboratory technicians. Reviews analyses for accuracy and QA/QC acceptability before submitting to supervisor. Reports analytical problems and procedures to supervisor. Assists in interpreting and developing new methods and procedures. Makes necessary improvements to analytical methods and laboratory procedures.

Essential Duties (Chemistry Track)

In addition to the duties provided above, achieves and maintains expertise in two of the following chemistry sections: physical, metals or nutrients. Performs related work as required.

Essential Duties (Microbiology Track)

In addition to the duties provided above, achieves and maintains expertise in the microbiology section and in specified physical chemistry analyses. Maintains control cultures.

Other Important Duties (Chemistry & Microbiology Track)

Creates charts and graphs for use in reports or presentations. Reads reference materials and other similar literature to keep abreast of developments in area of focus. Accepts limited leadership role(s) as assigned by the supervisor for specified areas or duties within the laboratory. Requires working weekends/holidays as part of a scheduled rotation. Performs related work as required.

DESIRABLE QUALIFICATIONS**Knowledge, Abilities and Skills**

Considerable knowledge of standard laboratory procedures, hazards, and safety precautions in using chemicals and laboratory equipment including but not limited to analytical balance, spectrophotometer, pH meter and other advanced laboratory instruments. Ability to perform routine maintenance and troubleshoot analytical instruments. Knowledge of mathematics sufficient for laboratory calculations. Knowledge of statistics, with ability to use least square and normal distribution analysis. Ability to learn complex analytical procedures. Ability to communicate effectively both orally and in writing. Ability to learn, understand and apply environmental regulations, policies, and procedures. Ability to establish and maintain effective working relationships as necessitated by the work. Ability to work independent of immediate supervision and assists lower trained staff with the performance of duties. Ability to maintain records and statistical reports. Advanced skill in the use of computers and experience in the use of analytical and laboratory software. Ability to understand root cause analysis and utilize problem solving techniques.

Knowledge, Abilities and Skills (Chemistry Track)

Considerable knowledge of inorganic and/or organic analytical chemistry. Considerable knowledge of advanced analytical instrumentation such as GC, GC/MS, AA, or auto analyzers. Ability to troubleshoot problems arising from electrical or mechanical failure and chemical contamination with laboratory equipment and instrumentation.

Knowledge, Abilities and Skills (Microbiology Track)

Considerable knowledge of biological and microbiological techniques and theories. Considerable knowledge of water and wastewater biology. Basic knowledge of inorganic and/or organic analytical chemistry.

Minimum Training and Experience

Possession of a bachelor's degree in chemistry, biology, environmental science, or a related field and two years of technical, professional experience in environmental water and/or wastewater analysis, analytical chemistry or an equivalent combination of training and experience. Possession of a master's degree in chemistry, biology, environmental science, or a related field can substitute for one year of required experience. Possession of a PhD in chemistry, biology, environmental science, or a related field can substitute for two years of required experience.

Established: 11-23-22