

MAJOR FUNCTION

This is advanced professional level laboratory work performing routine physical, chemical, or biological analyses on water, wastewater, and/or other environmental samples. Duties are performed with extensive independence and minimal supervision.

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

Performs complex and advanced analyses on water, wastewater, groundwater, sediments, sludges and related environmental samples. Plans, conducts and coordinates a variety of water quality tests, which may include but are not limited to biochemical oxygen demand (BOD), residual chlorine, bacteriological tests, and pH. Responsible for and performs routine maintenance and troubleshoot analytical equipment to ensure acceptable performance of equipment. 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 provide guidance to lab technicians and lower-level Laboratory Analyst. Reviews methods and analyses of lower-level Laboratory Analysts for accuracy and QA/QC acceptability. Reports analytical problems and procedures to supervisor. Develop and interpret new methods and procedures. Researches and develops new or more expedient procedures of analyses. Communicates new procedures or changes in procedures to other laboratory staff.

Essential Duties (Chemistry Track)

In addition to the duties provided above, achieves, and maintains expertise in Volatile or Semi Volatile sections and expertise in one of the following chemistry sections: Physical, Metals, Nutrients OR achieves and maintains expertise in all three of the following chemistry sections: Physical, Metals, and Nutrients.

Essential Duties (Microbiology Track)

In addition to the duties provided above, achieves, and maintains expertise in the microbiology section and achieves and maintains expertise in one of the following chemistry sections: Physical, Metals, or Nutrients. Maintains control cultures

Other Important Duties (Chemistry & Microbiology Track)

Takes a lead role in the development and revision of laboratory procedures. 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 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**

Extensive 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 more advanced laboratory instruments. Can proficiently perform routine maintenance and troubleshoot analytical instruments. Extensive knowledge mathematics sufficient for laboratory calculations. Considerable 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 provide oversight to lower trained staff. 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 lead teams in root cause analysis and problem-solving techniques.

Knowledge, Abilities and Skills (Chemistry Track)

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

Knowledge, Abilities and Skills (Microbiology Track)

Extensive knowledge of biological and microbiological techniques and theories. Extensive knowledge of water and wastewater biology. Considerable 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 three 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 may substitute for one year of the equired experience, Possession of a PhD in chemistry, biology, environmental science, or a related field may substitute for two years of required experience.

Established: 11-23-22