



CLASSIFICATION NO. 786

Established: 8/78

Revised: 4/09, 2/18

FLSA: Non-Exempt

EEO: 2

## **LABORATORY ANALYST**

### **CLASS CHARACTERISTICS**

Under direction, to perform complex chemical analyses on water, wastewater, industrial waste, and biosolids samples; to perform sample preparation and analysis; and to do other work as required.

### **DISTINGUISHING CHARACTERISTICS**

The Water Quality Laboratory section within Water Environment Services provides physical, chemical, and biological analyses of industrial wastes, storm water, surface water, biosolids samples, septage wastes and wastewater.

The Laboratory Analyst is a professional journey-level classification which performs varied and complex analyses including conducting the most complex metals analysis and toxic analysis of unknown substances. Incumbents report the results of testing to plant operations staff for plant management and process control to ensure compliance with federal and state regulations regarding effluent, biosolids handling, and surface water management. The Laboratory Analyst may train other plant personnel in specific laboratory operations and has lead responsibility over Laboratory Technicians.

The Laboratory Analyst differs from the entry-level Laboratory Technician who assists in collecting samples and performing routine process control tests. It differs from the Laboratory Supervisor who has full supervisory responsibilities for all of the laboratories and lab employees.

### **TYPICAL TASKS**

Duties may include but are not limited to the following:

1. Analyzes water, wastewater, industrial waste, and biosolids samples for BOD, COD, oxygen demand, suspended solids, alkalinity, coliform bacteria, pH, nutrient levels, metals content, and other counts in accordance with standards of federal, state and local agencies; prepares chemical and bacteriological media, stains, reagents and test solutions routinely used in the laboratory.
2. Prepares samples for testing using digestion and/or chemical reagents; conducts complex laboratory tests using a wide variety of equipment to determine concentrations of metals or other hazardous materials.
3. Conducts field inspections and assessments; performs special chemical and technical studies as required for quality control standards; maintains all complex quality assurance/control work.

4. Follows permits, federal, state, and local regulations and laws to develop testing procedures to meet those requirements; records results of analyses for compilation into test reports which are subsequently filed with state and federal water quality agencies; uses test results to calculate complex statistical reports and trending for process control.
5. Trains and/or leads Laboratory Technicians engaged in preparatory and analytical laboratory work; serves as a reference and provides technical assistance to project managers and other personnel.
6. Maintains and calibrates laboratory testing equipment; operates and maintains analytic instrumentation.
7. Ensures that safety regulations in the laboratory are followed.

### **REQUIRED KNOWLEDGE AND SKILLS**

Thorough knowledge of: Principles of standard chemical, biological, microscopic and microbiological examination techniques; operation and maintenance of analytic instrumentation and other laboratory equipment; statistical methodologies to collect, analyze and evaluate data and perform short term studies on industrial waste, surface water, wastewater, and biosolids; laboratory procedures, methods and techniques used in standardized sampling, examination, testing, and analysis of water and wastewater samples; laboratory safety procedures including management of chemical and biological hazards; principles of quality control; principles and concepts of work teams; sampling and sample preparation techniques; mathematics, algebra and geometry; English grammar, spelling and punctuation; microcomputer applications in wastewater treatment.

Skill to: Communicate effectively, both orally and in writing; read and interpret federal and state water quality regulations; comply with established laboratory testing programs; read, analyze and use complex formulas, charts, and directions; prepare comprehensive technical written reports; plan improvements in standard laboratory methods; operate complex analytical lab instrumentation; perform complex and precise physical, chemical, and biological analytical procedures; interpreting and explaining laboratory methods, processes, and procedures; use of computers and software for word processing, spreadsheets, data collection and database management; prepare and maintain accurate records; establish and maintain effective working relationships with work team members, customers, contractors, vendors, County employees, and the public.

### **WORKING CONDITIONS**

Duties require frequent standing, squatting, bending, reaching, fine motor control, accurate color perception, and the ability to lift up to 45 pounds, and carry, push and pull objects. Duties involve exposure to bacteria, viruses and toxic material in wastewater, and handling chemicals and bacteriological waste matter.

### **MINIMUM QUALIFICATIONS**

Minimum qualifications are used as a guide for establishing the minimum experience, education, licensure, and/or certifications required for employment in the classification. The following minimum qualifications are established for this classification. Additional minimum qualifications

and special conditions may apply to a specific position within this classification and will be stated on the job announcement.

**Experience:** A minimum of three (3) years of related experience that would provide the required knowledge and skills to perform the responsibilities of this position.

**Licenses/Certifications:** None.

### **PRE-EMPLOYMENT REQUIREMENTS**

Employment is contingent upon passing a post-offer physical assessment. Accommodation requests will be reviewed on an individual basis in compliance with State and Federal legislation

Driving may be necessary for County business. For position(s) with occasional/incidental driving, incumbents must possess a valid driver's license. Accommodation requests for an acceptable alternative method of transportation will be reviewed on an individual basis in compliance with State and Federal legislation. For position(s) with regular driving, incumbent(s) must also possess and maintain an acceptable driving record throughout the course of employment.

### **OTHER INFORMATION**

The Laboratory series is part of a promotional career path within Water Environment Services. Incumbents in the Laboratory Technician classification may be promoted to open position in the Laboratory Analyst classification upon satisfactory completion of an approved training and development plan. Possession of the required knowledge, skills and abilities at the higher-level must be documented in an approved promotional evaluation.

Edited: 6/16