



## Laboratory Technician I/II

Class Code:  
309,310

ALAMEDA COUNTY WATER DISTRICT  
Revision Date: July 2012

### DEFINITION

Under supervision of the Laboratory Services Supervisor, collects water samples required by the District's compliance and operational monitoring program; performs physical, chemical, biological, and bacteriological analyses of water; cleans, washes, and maintains laboratory glassware; records analytical and field data; maintains adequate supplies of standard chemical reagents, sterilized bacteriological media, and sample containers; and performs other related work as required.

### DISTINGUISHING CHARACTERISTICS

**Laboratory Technician I** is the entry level in the Laboratory Technician series. Under close to general supervision within a framework of established policies and procedures, incumbents perform a variety of routine physical, chemical, biological and bacteriological analyses in the laboratory and the field and provide technical support to laboratory activities. Assignments are given in specific terms and are subject to frequent review while in progress and upon completion, except where tasks are well defined by established standards, policies and procedures. As experience and proficiency are gained, assignments become progressively more diversified and difficult with less supervision.

This class is distinguished from the journey-level Laboratory Technician II class by the routine nature and limited complexity of work assignments and the level of supervision received. The Laboratory Technician I and II classifications are flexibly staffed. Incumbents normally advance to the Laboratory Technician II classification after gaining requisite experience, demonstrating sustained satisfactory performance, achieving and demonstrating proficiency in the job requirements of the journey-level classification and upon recommendation and approval of departmental supervisory and management staff.

**Laboratory Technician II** is the journey level in the Laboratory Technician series. Under general supervision within a framework of established policies and procedures, incumbents perform the full range of more difficult and complex instrumentation, physical, chemical, biological and bacteriological analyses in the laboratory and the field and provide technical support to laboratory activities. Assignments are generally reviewed upon completion; difficult and non-routine assignments may be reviewed while work is progressing. Initiative and good judgment are required.

This class is distinguished from the entry-level Laboratory Technician I class by the complexity of work assignments, the potential impact of error, the level of independence with which assignments are performed and the level of supervision received.

### TYPICAL DUTIES

#### TYPICAL EXAMPLES OF DUTIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- Collects and preserves a variety of water samples; may conduct specific analyses in the field as required.
- Conducts routine physical, chemical, biological, or bacteriological analysis of water;

## Laboratory Technician I/II

recognizes problems that occur in analytical procedures; applies known procedures and/or confers with others to identify solutions; recommends procedural changes as appropriate.

- Prepares samples for transport, storage, and laboratory analysis; prepares sample collection kits as needed; and may serve as courier as needed by Laboratory Services.
- Prepares field documentation and submits/receives samples for analysis.
- Cleans and prepares laboratory glassware and apparatus for use.
- Maintains inventory of sample containers, sterilized media, chemical reagents, and related items; disposes of bacteriological wastes.
- Enters analytical data in the Laboratory Information Management System; maintains written records and files of analytical work performed.
- Sets up, calibrates, operates, and performs minor maintenance on a variety of laboratory equipment and instruments.
- Safely operates a motor vehicle in connection with duties involving sample collections in the distribution system, in treatment facilities, and on customer property.
- Inspects, performs housekeeping, and reports maintenance needs for dedicated sampling stations in the distribution system to ensure they are maintained in a clean, working order.
- Assists chemists on assigned analytical projects.
- Performs other related work as required.

### **REQUIREMENTS**

*Any combination of education and experience that would likely provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the knowledge, skills, and abilities would be the equivalent of:*

#### **Education and Experience:**

High school diploma or its equivalent and two years of college level studies in a science-related discipline that included at least four laboratory courses; and

**Laboratory Technician I:** No work experience is required.

**Laboratory Technician II:** Two years of employment in a chemical, biological, or bacteriological laboratory working at a level equivalent to or higher than the District's Laboratory Technician I classification.

**Knowledge, Skills and Abilities:**

**Laboratory Technician I:**

**Knowledge of:** basic principles of chemistry and bacteriology as applied to analysis of water; standard laboratory terminology, equipment, and procedures; basic statistical analysis and principles of quantitative and qualitative analysis; laboratory safety practices; and sample collection and preservation techniques.

**Skill and Ability to:** perform routine physical, chemical, biological, and bacteriological analyses of water using established procedures and routine laboratory instruments and equipment; prepare bacteriological media and standard chemical reagents and dispose of hazardous waste and chemicals according to established procedures; make arithmetic calculations; learn to perform routine laboratory work; use a computer to enter data into the Laboratory Information Management System (LIMS); maintain proper inventories of laboratory supplies and related items; quickly recognize laboratory results requiring special notification or action; respond accurately and tactfully to inquiries from the general public when in the field; work with minimal available supervision; communicate effectively both orally and in writing; maintain accurate and detailed notes and records; learn to prepare clear and concise technical reports; establish and maintain effective working relationships with those contacted in the course of the work; and perform the essential functions of the job without causing harm to self or others.

**Laboratory Technician II:**

**Working Knowledge of:** general principles of chemistry and bacteriology as applied to analysis of water; methods of water sampling, methods of statistical, quantitative and qualitative analyses and issue identification; quality assurance and quality control parameters; applicable drinking water regulations; chemical and bacteriological characteristics of water and principles of drinking water distribution and treatment; LIMS system and work-related software applications.

**Skill and Ability to:** perform more difficult physical, chemical, biological, and bacteriological analysis of water according to established procedures and involving instrumentation; troubleshoot analytical procedures; dispose of hazardous waste and chemicals according to established rules and regulations; perform difficult mathematical calculations with speed and accuracy; respond accurately and tactfully to inquiries from the general public when in the field; work on projects alone with minimal supervision or cooperatively with others; communicate effectively both orally and in writing; maintain detailed, complete and accurate records; compile data and prepare clear and concise technical reports; establish and maintain effective working relationships with those contacted in the course of the work; and perform the essential functions of the job without causing harm to self or others.

**Additional Requirements:**

- Must possess a valid California driver's license and have a satisfactory driving record.

**Working Conditions/Physical Requirements:**

The essential duties of the job are performed in both laboratory and field environment and require the ability to sit for extended periods of time in front of a computer and laboratory equipment; to intermittently twist to reach instruments or supplies surrounding equipment; to use hand strength and finger dexterity to perform simple grasping and fine manipulation; to hear and talk to receive and communicate information; to frequently operate a vehicle; to work outdoors under a variety of climatic and geographic conditions in an environment with exposure to toxic and caustic chemicals, solvents and other environmental substances;

Laboratory Technician I/II

to traverse uneven terrain; to stand for long periods of time; to walk, bend, and squat; and to perform work activities with hands in and out of water.

Revised: 07/12

Approved:  \_\_\_\_\_  
Human Resources/Risk Manager