

**CITY OF MILLBRAE**  
**CLASSIFICATION SPECIFICATION**

**LABORATORY CHEMIST**  
**May 2019**

**DEFINITION**

Under general supervision, performs routine and special physical, chemical, biological, and biochemical testing and analysis of wastewater; prepares and maintains laboratory records, reports, and data; performs required annual testing to ensure regulatory compliance; and other duties as assigned.

**DISTINGUISHING CHARACTERISTICS**

Wastewater Treatment Chemist is a specialized classification responsible for performing routine and specialized chemical, biological, and biochemical testing and analysis of wastewater for the City.

**SUPERVISION EXERCISED AND RECEIVED**

Receives general supervision from the Lab and Source Control Supervisor.

**DUTIES AND RESPONSIBILITIES**

The duties listed below are illustrative only and are not meant to be a full and exhaustive listing of all of the duties and responsibilities of the position.

- Performs a variety of routine and special chemical, physical, bacteriological, and related tests on samples of wastewater, including analyses of dissolved oxygen, chlorine demand and residuals, relative stability, hydrogen ion concentration, and alkaline, grease, and nitrogen;
- Takes periodic, representative grab and composite samples of sewage influent, processing products, and final effluent;
- Receives and cares for bioassay specimens upon arrival; sets up bioassay apparatus; prepares chemicals; and runs monthly bioassay;
- Maintains, cleans, and assembles laboratory equipment and supplies; prepares purchase requests for necessary laboratory equipment and supplies;
- Interprets laboratory analyses, makes recommendations, maintains logs and records, and prepares reports;
- Makes necessary arithmetic computations; enters data and prepares required documents for analysis;
- Insures compliance with Federal and State regulations and city treatment plant procedures;
- Prepares and maintains required laboratory records, reports, and data for NPDES permit;
- Develops new test procedures and conducts special analytical studies relating to source control, process control, or other applicable matters; tests and evaluates new chemicals for use in the treatment process;
- Designs, programs, and updates computer usage for all plant programs, including those involving monitoring, laboratory analysis, quality assurance, maintenance, and operations; evaluates and manages data from such programs as are related to laboratory operations;
- May assist with department programs, such as the Fats, Oils, and Grease (FOG) Pre-Treatment program;

- May serve as a liaison with other divisional programs, other City divisions and departments, and with representatives of other applicable agencies; and
- Performs related duties as assigned.

## **JOB-RELATED QUALIFICATIONS**

**Knowledge of:** Principles, methods, and techniques of chemical, bacteriological, biological, and physical testing and analysis; techniques, terminology, and equipment used in chemical and related laboratory work; principles of record keeping and of data collection, compilation, and analysis; applicable Federal and State regulations; basic principles of supervision and budget control; and computer operations and applications.

**Ability to:** Acquire a thorough knowledge of plant operations in general and specific procedures related to the laboratory operation in particular; effectively perform routine and special sampling, testing, and analyses; accurately interpret test results and develop recommendations as appropriate for remedial action; effectively train personnel; effectively apply computer techniques to laboratory plant operations; prepare complete and accurate reports and notices; communicate clearly and concisely in oral and written forms; work protracted or irregular hours; understand and carry out oral and written directions; establish and maintain effective working relationships with the those contacted in the course of work including peers, subordinates, and supervisors.

## **EDUCATION AND TRAINING GUIDELINES**

Any combination of experience and training that would likely provide the required knowledge and abilities. A typical way would be:

**Education:** Equivalent to a Bachelor's degree from an accredited college or university with a major in chemistry, biology, microbiology, or a closely related field. Additional graduate work in organic or inorganic chemistry is highly desirable.

**Experience:** Two (2) years of work as a laboratory technician and/or analyst in a wastewater or water treatment plant.

**Licenses:** Must possess and maintain a valid Class "C" California Driver's License with a satisfactory driving record. Possession of a Grade I Laboratory Technologist Certificate issued by the California Water Pollution Control Association. Ability to obtain a Grade II Laboratory Technologist Certificate issued by the California Water Pollution Control Association within one (1) year from date of employment.

## **SPECIAL REQUIREMENTS**

Speak clearly and understandably; ability to work in a standard office environment and use computer software applicable to the job; physical stamina and mental alertness to work additional hours to meet deadlines; hear and speak well enough to converse, by telephone and in person, and be clearly understood.