

City of South San Francisco
Human Resources Department

Laboratory Chemist
Class Description

Definition

Under general supervision performs routine and special chemical, biological, bacteriological, physical, and biochemical analysis of water, wastewater, or other materials; maintains lab records and reports; cares for laboratory materials and equipment; and performs related work as required.

Distinguishing Characteristics

This is the journey level class in the Laboratory Chemist series and performs the full range of duties as assigned. Employees at this level receive only occasional instruction or assistance as new, unusual or unique situations arise and are fully aware of the operating procedures and policies within the work unit.

This class is distinguished from the Senior Laboratory Chemist in that the latter is the advanced journey level and performs the most difficult and responsible types of duties assigned to classes within this series, including providing technical and functional supervision over assigned personnel.

Typical and Important Duties

(Essential and other important responsibilities and duties may include, but are not limited to, the following:)

1. Performs a variety of routine and special chemical, physical, bacteriological, and related laboratory tests on samples of wastewater, various plant processes and final plant effluent.
2. Processes tests including analyses of activated sludge, mixed liquor, sludge digestion units, industrial wastewaters, and receiving water monitoring; as well as dissolved oxygen, suspended solids, biochemical oxygen demand, chemical oxygen demand, hydrogen ion concentration, ammonia, and total and fecal coliform.
3. Maintains and prepares reagents, microbiology media, and chemical solutions.
4. Filters and weighs samples in preparation for further laboratory analysis.
5. Receives and cares for bioassay specimens upon arrival; sets up bioassay apparatus; prepares chemicals; and runs monthly bioassay.
6. Cleans and assembles laboratory apparatus and glassware.
7. Prepares purchasing requests for necessary laboratory supplies and equipment.
8. Makes necessary arithmetic computations; enters data and prepares required documents for analysis.
9. Prepares and maintains required laboratory records, reports, and data for NPDES permit.
10. Performs annual Environmental Protection Agency DMR-QA tests.
11. Attends monthly staff meetings and other related meetings as assigned.
12. Understands and reviews current standard operating procedures.
13. May direct the work of lower level personnel in the absence of the supervisor.
14. Builds and maintains positive working relationships with co-workers, other City employees and the public using principles of good customer service.

15. Performs related duties and responsibilities as assigned.

Job-related Qualifications

Knowledge of:

- Principles, methods, and techniques used in wastewater treatment.
- Principles, methods and techniques used in chemical, bacteriological, physical, and biological analysis.
- Techniques, equipment and terminology used in chemical and other related laboratory analysis.
- Care and use of laboratory equipment and materials.
- Techniques for dealing with the City staff, representatives of other agencies, organizations, and the public and resolving problems tactfully and effectively.
- Basic methods used in statistical and mathematical analysis.
- Pertinent Federal, State and local rules, regulations, and policies
- English usage, spelling, grammar, and punctuation used in report writing.
- Safety principles, practices, regulations, and procedures related to the work, including OSHA regulations.
- Principles and practices of customer service.
- Modern office equipment, methods, procedures, and computer hardware and software.

Ability to:

- Independently perform chemical, bacteriological, physical, and biological analysis and related laboratory work and analyze results.
- Use and operate a variety of laboratory equipment in the performance of standardized and specialized laboratory tests.
- Maintain accurate records and files.
- Accurately prepare required reports.
- Make accurate arithmetic calculations.
- Assist in revising and streamlining laboratory policies and procedures.
- Observe proper safety precautions and procedures.
- Take a proactive approach to customer service issues.
- Understand and carry out oral and written directions.
- Work in a safe manner, following City safety practices and procedures; safely handle hazardous materials; identify, correct, and report safety hazards; and administer first aid.
- Organize own work, set priorities, meet critical deadlines, and follow-up on assignments with minimal supervision.
- Communicate effectively in writing and orally, and with others to assimilate, understand and convey information, in a manner consistent with job functions.
- Establish and maintain cooperative working relationships with those contacted in the course of work.
- Maintain confidentiality regarding sensitive information.

Skill in:

- Operating a personal computer and a variety of software applications.
- Using lab equipment.

Experience and Training

Any combination of experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:

Experience:

One year of increasingly responsible experience performing chemical, bacteriological, biological, or biochemical laboratory analysis. Experience performing laboratory analysis in a treatment plant is preferred.

Training:

A bachelor's degree from an accredited college or university in microbiology, biology, chemistry, or a related field.

Licenses and Certificates

All licenses and certificates must be maintained as a condition of employment.

- Possession of, or ability to obtain and maintain, valid California driver's license and maintain a satisfactory driving record.
- Possession of, or ability to obtain and maintain, a California Water Environment Association Laboratory Analyst II Certificate is required within two years of employment.

Special Requirements

Essential duties require the following physical skills and work environment:

Physical Skills:

Able to use standard office and laboratory equipment, including a computer; sit, stand, walk, kneel, crouch, stoop, squat, crawl, twist, and climb stairs and ladders; lift and carry up to 25 pounds; maintain sustained posture for prolonged periods of time; distinguish among various colors; distinguish various computer generated auditory signals; vision to read printed materials and a computer screen; hearing and speech to communicate in person, over the telephone, and to make public presentations; smell to distinguish odors.

Work Environment:

Mobility to work in a typical office setting or laboratory environment; exposure to cold, heat, noise, outdoors, inclement weather, dust, dirt, vibration, chemicals, traffic, traffic hazards, confining workspace, odors, mechanical hazards, electrical hazards, explosive hazards, and bio-hazards.

Ability to:

Travel to different sites and locations; drive safely to different sites and locations; maintain a safe driving record; maintain a clean and neat appearance; work shifts including weekends, nights, and holidays; work protracted and irregular hours; respond to a pager; take 24-hour call

and stand-by; available for unusual hours in emergencies; available for evening meetings.

Additional Information:

- Approved: September 2013
- Revised Date: July 1995, September 2002, March 2003, June 2003, May 2013
- Former Titles:
- Abolished:
- Bargaining Unit: Operating Engineers
- DOT: No
- Status: Classified/Non-exempt
- Job Code: D120