

Summary of Duties : Supervises the work of a group of Chemists and Laboratory Technicians and participates in performing difficult organic, inorganic, and physical chemical analysis and research studies in connection with water quality, wastewater, air emissions, solid waste, and industrial waste treatment; determines and establishes methods and procedures to be followed in conducting research programs; may assist in directing the activities of a small chemistry laboratory; and does related work.

Distinguishing Features : A Senior Chemist is responsible for supervising the activities of specific function or specialty in a laboratory or a small laboratory facility. Assignments are made in general terms from a laboratory manager and are primarily concerned with planning, assigning, and reviewing the work of Chemists and Laboratory Technicians. An employee of this class is responsible for developing laboratory techniques, conducting research programs, making work assignments, and reviewing test results. A Senior Chemist frequently receives project directions but not technical supervision. A Senior Chemist frequently contacts EPA and California regulatory agency testing laboratories and other academic authorities in refining methodologies and up-to-date instrumentation requirements. A Senior Chemist may assist in managing sections of the laboratory in the absence of a Wastewater Treatment Laboratory Manager.

Examples of Duties : Plans, assigns, and reviews the work of a group of professional and technical employees engaged in making laboratory or field tests and conducting research involving the use of equipment such as inductively coupled plasma analyzers, radioactivity scalers and counters, automatic titrators, X-ray diffractometers, gas chromatographs, atomic absorption spectrophotometers, UV-visible spectrophotometers, infrared-red spectrophotometers, spectrographs, ion chromatographs, and gas chromatograph/mass spectrometers, to determine quantitatively the presence of chemical constituents in water, wastewater solids, and air, and in determining specification compliance for various materials and compounds; makes studies of results of chemical, physical, and radiological research on factors affecting water quality, sewage quality, air pollution, or industrial waste discharge; recommends purchase, design, and construction of new or improved measuring or testing equipment for use in the field; administers the personnel matters in the section; requisitions supplies and equipment for the section; recommends capital improvements such as new instrumentation or equipment; assists in preparing operation and maintenance budgets for the section; and may occasionally be assigned to other duties for training purposes or to meet technological changes or unexpected emergencies.

Qualifications : A good knowledge of the principles of organic, inorganic, and physical chemistry, including qualitative and quantitative analysis, chemical thermodynamics, and reaction kinetics; a good knowledge of chemical laboratory procedures, techniques, and instrumentation; a good knowledge of safety principles and practices;

a good knowledge of OSHA regulations as applied to the laboratory and treatment plant environment; a good knowledge of water pollution regulations; a good knowledge of environmental chemistry and basic biochemistry; a general knowledge of physics and mathematics; a working knowledge of the laws and regulations related to equal opportunity and affirmative action; a general knowledge of City personnel rules, policies, and procedures; a general knowledge of memoranda of understanding as they apply to subordinate personnel; the ability to analyze chemical problems and devise methods of solution; the ability to initiate, layout, and supervise the performance of special chemical analyses; the ability to prepare reports on the findings of complex chemical analyses; the ability to establish the maintenance of laboratory records; and the ability to supervise professional and technical laboratory personnel.

Two years of professional experience performing a variety of chemical tests in a laboratory is required.

A Master's degree in Chemistry, or a closely related field, may be substituted for one year of the required experience.

License: A valid California drivers license is required.

Physical requirements: Strength to perform average lifting up to 15 pounds and occasionally over 25 pounds; arm, hand, and finger dexterity with both hands involved in activities such as reaching and handling; and good eyesight.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the person's limitation.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.