

Summary of Duties: Directs a laboratory staff of professional and technical employees engaged in making qualitative and quantitative chemical, environmental and related physical tests, analyses, and investigations of construction and maintenance materials and supplies; directs laboratory staff engaged in testing and analyses required for the air pollution improvement program of the Department of Water and Power; directs, investigates and makes recommendations in areas of governmental compliance to air quality, waste management, safety standards and equipment failure; and does related work.

Distinguishing Features: An Industrial Chemist is responsible for directing a laboratory staff consisting of professional Chemists and Laboratory Technicians and interpreting the results of chemical and physical tests of a wide variety of materials and supplies. An employee of this class reports to a Senior Electrical Engineer and exercises entirely independent judgment in determining the types of tests and procedures to be used. This class is distinguished from classes in the materials testing engineering series by the fact that an Industrial Chemist specializes in the field of chemical testing. Industrial Chemist is distinguished from the class of Chief Chemist by the fact that the latter is primarily responsible for chemical and biological analysis and testing of water quality.

Examples of Duties: Directs the planning, assigning, and reviewing of work in a chemical laboratory involving qualitative and quantitative chemical, and related physical tests, analyses, and investigations; directs the determination of conformance to detailed purchase specifications of materials and supplies such as metals, alloys, paints and other protective coatings, soaps, waxes, greases, gases, oils and other petroleum products, cleaners, rubber, cement, paper, and insulating and fibrous materials; confers with engineers and technical personnel to solve a variety of chemical problems such as correction of soil deficiencies, composition of soil waters, causes for failure of mechanical equipment, identification of materials, causes for corrosion of metals, and nature and cause of deposits in condenser tubes.

Directs the supervision of Department's air pollution improvement program, including the development of sampling and analytical methods for solving air pollution problems; confers with government agencies and private research laboratories regarding new developments, problems, and program activities and to exchange information relating to methods and techniques of analysis;

Directs the development of techniques and procedures for a variety of new problems; reviews reports of completed work and directs the preparations of technical reports and recommendations; directs the maintenance of records of laboratory tests, methods, and reagents used in evaluating materials and supplies; directs and assists in the preparation of chemical specification for purchase of materials and

supplies; serves on various committees concerned with Department activities relating to the field of chemistry; reviews laboratory lists of needed supplies and equipment; and may occasionally be assigned other duties for training purposes or to meet technological changes or unexpected emergencies.

Qualification: A good knowledge of the principles of organic and inorganic chemistry, with particular reference to quantitative and qualitative analyses; a good knowledge of modern chemical laboratory procedures, techniques, and equipment; a good knowledge of federal, state and local regulations and standards in areas of air quality control, liquid and solid waste management, occupational safety and environment; a good knowledge of physical chemistry; a good knowledge of the requirements and standard testing methods of the American Society for Testing Materials and regulatory agencies; a good knowledge of literature in the materials testing field as applied to chemical testing; a good knowledge of the equipment, organization and procedures of the Power System; a good knowledge of supervisory principles, practices and techniques; a good knowledge of safety principles and procedures; a working knowledge of laws and regulations related to equal employment opportunity and affirmative action; a general knowledge of City personnel rules, policies and procedures; a general knowledge of memoranda of understanding as they relate to subordinate personnel; the ability to direct and coordinate the work of professional and non-professional assistants; the ability to direct the initiation, lay out, and supervision of the performance of special chemical analyses; the ability to direct the preparation of clear and concise reports on the findings of complex chemical analyses; the direct the analysis of to analyze chemical problems and the use of initiative and judgment in devising methods of solution, developing laboratory procedures, and interpreting results; and the ability to deal tactfully and effectively with employees and the public.

Four years of full-time paid professional experience as a Chemist in a chemistry laboratory or in a class at least at that level supervising a variety of chemical tests of materials and supplies is required for Industrial Chemist.

Physical Requirements: Strength to perform average lifting of less than 5 pounds and occasionally over 15 pounds; good speaking and hearing ability; and good eyesight are required.

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 limitation, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the person's limitations.

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 the duties and responsibilities of any position shall be.