

## CHEMIST II

### JOB DESCRIPTION

**Classification Responsibilities:** A Chemist II is responsible for performing professional-level chemical and microbiological analysis of water, wastewater, and/or industrial wastes. An incumbent in this class performs the more complex analyses using one or all of the following: Ion Chromatograph, Total Organic Carbon Analyzer, TKN Analyzer, Mercury Analyzer, Gas Chromatograph/Mass Spectrometer, Inductively Coupled Plasma/Mass Spectrometer, and Inductively Coupled Plasma/Optical Emission Spectrometer. A Chemist II conducts a wide variety of chemical and microbiological examinations of water and/or wastewater in the various stages of treatment. In addition, the Chemist II is responsible for developing methods and procedures for the analysis of water and/or wastewater samples. Incumbents in this class may provide lead supervision to staff members. This class performs related duties as required.

**Distinguishing Features:** This class is distinguished from the Chemist I class by its responsibility for performing the more complex analyses and by its lead responsibilities. An incumbent in this position is required to work safely with dangerous and toxic chemicals, infectious materials, and acids. This class is subject to the Occupational Safety and Health Administration (OSHA) CFR 1910.1450 guidelines regarding occupational exposure to hazardous chemicals in a laboratory. A Chemist II may be required to work irregular hours, such as (but not limited to) weekends, evenings, holidays, and other hours as required to complete specialized and/or time-sensitive assignments. Employees may progress to this class by noncompetitive promotion upon meeting the specific criteria-based promotion requirements. Incumbents in this class are supervised by the Laboratory Supervisor. Work is reviewed through conferences, observation of results achieved, and review of reports. This class is FLSA exempt-professional.

### QUALIFICATIONS

**Employee Values:** All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

**Minimum Qualifications Required.** Any combination of training, education, and experience equivalent to graduation from an accredited college or university with a Bachelor's Degree in Chemistry, Microbiology, Biochemistry, or closely related field. Three years' full-time employment in a professional-level chemical and/or microbiological laboratory.

**Special Requirements.** Must possess a valid Arizona Driver's License by hire date. Per CFR 1910.1200 the incumbent must attend OSHA Hazardous Communication training and attend a refresher course annually.

**Substance Abuse Testing.** Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug, and/or controlled substance testing as outlined in City policy and procedures.

**Preferred/Desirable Qualifications.** Previous experience in a public health-oriented water or wastewater laboratory is strongly preferred. Possession of any Water or Wastewater Operator certification from Arizona Department of Environmental Quality (ADEQ) at the time of hire is preferred.

## **ESSENTIAL FUNCTIONS**

**Communication:** Communicates verbally and in writing with other City employees, vendors, customers, and management staff in order to explain chemical data analysis, technical data, and review of technical specifications. Prepares written materials for reporting to state agencies in compliance with laboratory licensure.

**Manual/Physical:** Performs periodic physical, chemical, and microbiological analysis of water and wastewater. Distinguishes colors to complete analytical data. Uses specialized hand tools to install, maintain, calibrate, and repair laboratory analytical equipment. Operates a variety of standard office equipment (e.g., personal computer [PC], calculator, and fax) to communicate and receive information. Enters data into a Laboratory Information Management System (LIMS), maintains databases, and reports analytical results. Makes purchases of and performs physical inventories of spare parts, laboratory equipment, and chemicals. Moves material, chemicals, and water samples from one place to another using hand trucks, trays, or lab carts. Moves objects weighing up to 50 pounds. Cleans work area and/or laboratory equipment in order to maintain same. Works with hazardous chemicals such as standards, organic solvents, acids, and bases, using personal protective equipment. Connects and disconnects high-pressure tanks of laboratory gases, some very flammable. Collects water/wastewater samples as needed. Drives a vehicle requiring a standard Arizona Driver's License to routinely pick up and deliver samples, materials, and supplies, and to attend meetings and training at off-site facilities. Meets scheduling and attendance requirements.

**Mental:** Develops and determines methods and procedures for compliance analyses, conformance to state and federal specifications, and investigation of microbiological and chemical problems related to the water and/or wastewater treatment processes. Provides analytical data to be utilized in quality control of water and wastewater treatment. Plans and organizes water and wastewater compliance and laboratory activities. Conducts research and analyzes data for water and/or wastewater quality. Performs mathematical calculations, statistical computations, and analytical quality control calculations to analyze trends. Maintains all required records for lab licensure. Technical training is provided by analytical equipment suppliers and regulatory agencies such as the Arizona Department of Health Services (ADHS).

## **Knowledge and Abilities**

Knowledge of:

chemical and microbiological principles and practices;  
techniques, equipment, and terminology used in water and/or wastewater treatment plant and laboratory;  
sophisticated analytical methods such as: Ion Chromatograph, Total Organic Carbon Analysis, TKN Analyzer, Gas Chromatograph with Mass Selective Detector, Inductively Coupled Plasma/Mass Spectrometer, and Inductively Coupled Plasma/Optical Emission Spectrometer;

chemicals, safety precautions, and equipment used in environmental, water, and wastewater facilities; OSHA regulations as they apply to safe use of hazardous chemicals in the laboratory; PC and related software pertinent to laboratory equipment and data reporting; and the calibration, operation, and maintenance of specialized laboratory equipment.

Ability to:

prioritize scheduled and unscheduled duties;  
maintain ADHS lab licensure by updating all lab records, quality control records, and Standard Operating Procedures (SOPs);  
perform physical, chemical, and microbiological examinations of water and/or wastewater;  
understand technical literature related to the field;  
prepare work reports on problems and research; and  
handle all physical requirements, including eyesight, sufficient to permit extended microscopic work and normal color perception.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included do not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

Revised to Update Distinguishing Features 10/15

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CS4621.DOCX

PAY GRADE: 48

EEO-Prof

NDOT SAFETY-Yes

SECURITY-No

NDOT RANDOM-No

DOT SAFETY-No

CDL-No

RESP-No

IND-7580

JOB FCTN-ADM

SWORN-No

INCREMENTS 62-200