



Title: Environmental Chemist

FLSA Status: (Non-Exempt)

BRIEF DESCRIPTION:

The purpose of this position is to perform analytical chemist and microbiological-level laboratory duties primarily associated with testing water and wastewater before and after treatment. This is accomplished by conducting routine and complex laboratory analysis, including preparing solutions, cleaning lab and equipment, gathering samples, calibrating and operating analytical equipment, performing laboratory tests, quality assurance, quality control, and keeping records. Other duties may include method development, the analysis of other types of environmental samples and completing related tasks as assigned.

ESSENTIAL FUNCTIONS:

Note: This information is intended to be descriptive of the key responsibilities of the position. The list of essential functions below does not identify all duties performed by any single incumbent in this position. Additionally, please be aware of the legend below when referring to the physical demands of each essential function.

(S) Sedentary	(L) Light	(M) Medium	(H) Heavy	(V) Very Heavy
Exerting up to 10 lbs. occasionally or negligible weights frequently; sitting most of the time.	Exerting up to 20 lbs. occasionally; 10 lbs. frequently; or negligible amounts constantly; OR requires walking or standing to a significant degree.	Exerting 20-50 lbs. occasionally; 10-25 lbs. frequently; or up to 10 lbs. constantly.	Exerting 50-100 lbs. occasionally; 10-25 lbs. frequently; or up to 10-20 lbs. constantly.	Exerting over 100 lbs. occasionally; 50-100 lbs. frequently; or up to 20-50 lbs. constantly.

#	Code	Essential Functions
1	L	Analyzes water and wastewater for a variety of microbiological, physical, and chemical constituents for regulatory compliance and process control. Identifies microbiological organisms found within water and wastewater.
2	L	Operates and maintains analytical instrumentation according to federal, state, county rules and regulations; maintains equipment inventory records.
3	M	Performs or assists with sample collection activities, prepares samples for analysis, ensures that chain of custody and sample integrity is maintained.
4	L	Researches new instrumentation/technology to recommend the most efficient and cost effective methods following recognized EPA/Standard Methods requirements. Performs method development for new and additional analytical procedures. Performs laboratory quality assurance and quality control.
5	L	Prepares chemical reagents; calibrates equipment used for testing.
6	L	Maintains accurate records including sample logs, equipment logs, media records, and chemical and material inventory.
7	L	Maintains laboratory supplies; orders supplies following City purchasing policies.
8	L	Provides oversight and training as necessary to new staff and to temporary or outside laboratory technicians and/or assistants.



JOB REQUIREMENTS:

-Description of Minimum Job Requirements	
Experience	1-2 years experience. Moderate previous experience required in the same or similar previous positions. The job requires a good working knowledge of common and uncommon laboratory techniques, methods, practices, procedures, use of forms, routines, etc., of a moderate to complex nature.
Education	Four year college or university (or baccalaureate equivalent) with coursework in microbiology and/or chemistry.
Technical Skill	Skilled technical skills. Work requires predominately routine and some non-routine technical skills. Requiring practical knowledge of a technical field with use of judgment and decision-making abilities appropriate to the work environment to the organization.
Physical Demands	Work requires moderate physical exertion. Forces exerted are equivalent to lifting between 10 and 25 pounds. Job requirements for manual dexterity or physical manipulation are also moderate. The need for physical stamina and endurance is of some significance. The degree of physical strain produced on the job is moderately taxing, and is fatiguing. Work could involve a considerable amount of walking, standing, a confining or tiring work position, or constant periods of sitting in one position where the freedom does not exist to walk about.
Contacts	Contacts are necessary to perform the job as work involves <u>internal and external</u> contacts for the purpose of explaining routine and non-routine business matters including how information was collected or processed or to correct a breakdown in the flow of information. Contacts are frequently with other departments. Work involves <u>infrequent</u> contact with people who are upset, uncooperative or have difficulty communicating their requirements and/or an <u>infrequent</u> requirement to communicate information that people do not want to hear to find upsetting.
Responsibility	The job requires some accountability for scheduling, assigning or coordinating work. Employees check the quality of work and provide guidance to others. Although the job does not require formal or official supervisory responsibility the incumbent serves as a lead or acts in a lead role. In addition, the employee may be expected to <u>provide information or suggestions on others' performance</u> .
Accountability	Decision/action situations have a significant impact on the organization. Errors are difficult to detect and result in immediate impact on resources and continuing influence on operational effectiveness. Revenue, productivity, service, quality, security of assets or external relationships may be adversely affected. Corrections may be more costly than original action.
Environment	Exposure to physical hazards, health and safety risks, adverse or otherwise undesirable characteristics in the environment such as laboratory or warehouse, machinery vibration and noise, and hazardous chemicals. Personal risks require use of safety equipment or following precautions closely.
Safety	Responsibility for personal performance as a source of minor safety risk. Work involves intermittent but daily use of equipment, tools or materials or defusing of potentially volatile situations.
Reading	Advanced - Ability to read literature, books, reviews, scientific or technical journals, abstracts, financial reports, and/or legal documents. Ordinarily, such education is obtained in at the college level or above. However, it may be obtained from experience and self-study.
Math	Advanced - Ability to apply fundamental concepts of theories; work with advanced mathematical operations methods and functions of real and complex variables. Ordinarily, such education is obtained in at the college level or above. However, it may be obtained from experience and self-study.
Writing	Advanced - Ability to write editorials, journals, speeches, manuals, or critiques. Ordinarily, such education is obtained in at the college level or above. However, it may be obtained from experience and self-study.
Certifications & Other Requirements	Valid Arizona Class "D" Drivers License. One (1) Arizona Department of Environmental Quality (ADEQ) Grade II Certification in any discipline within twelve months of hire, or one (1) Association of Boards of Certification (ABC) Class II Laboratory Analyst Certification in either category within twelve months of hire.



OVERALL PHYSICAL STRENGTH DEMANDS:

-Physical strength for this position is indicated below with “L”				
Sedentary	Light	Medium	Heavy	Very Heavy
Exerting up to 10 lbs. occasionally or negligible weights frequently; sitting most of the time.	Exerting up to 20 lbs. occasionally, 10 lbs. frequently, or negligible amounts constantly OR requires walking or standing to a significant degree.	Exerting 20-50 lbs. occasionally, 10-25 lbs. frequently, or up to 10 lbs. constantly.	Exerting 50-100 lbs. occasionally, 10-25 lbs. frequently, or up to 10-20 lbs. constantly.	Exerting over 100 lbs. occasionally, 50-100 lbs. frequently, or up to 20-50 lbs. constantly.

PHYSICAL DEMANDS:

C Continuously 2/3 or more of the time.	F Frequently From 1/3 to 2/3 of the time.	O Occasionally Up to 1/3 of the time.	R Rarely Less than 1 hour per week.	N Never Never occurs.
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Note: This is intended as a description of the way the job is currently performed. It does not address the potential for accommodation.

-Physical Demand-	-Frequency-	-Brief Description-
Standing	F	Observing work site, observing work duties, in field, making presentations
Sitting	F	Desk work, meetings, driving
Walking	O	To other departments/offices, around work site
Lifting	O	Supplies, files, equipment
Carrying	O	Supplies, files, equipment
Pushing/Pulling	F	File drawers, tables and chairs, equipment/tools
Reaching	F	For supplies, for files, for equipment/tools
Handling	F	Paperwork
Fine Dexterity	F	Computer keyboard, telephone keypad, calculator, tools/equipment
Kneeling	O	Filing in lower drawers, retrieving items from lower shelves/ground, in equipment, for maintenance
Crouching	O	Filing in lower drawers, retrieving items from lower shelves/ground, in equipment, for maintenance
Crawling	R	Under equipment
Bending	F	Filing in lower drawers, retrieving items from lower shelves/ground, making repairs
Twisting	F	From computer to telephone, getting inside vehicle, operating equipment
Climbing	O	Ladders, step stools
Balancing	O	On ladders, on step stools
Vision	C	Reading, computer screen, driving, observing work site
Hearing	F	Communicating via telephone/radio, to co-workers/public, listening to equipment
Talking	O	Communicating via telephone/radio, to co-workers/public
Foot Controls	R	Driving
Other (specified if applicable)		



MACHINES, TOOLS, EQUIPMENT, SOFTWARE, AND HARDWARE:

Standard office equipment, Microsoft Office, and lab specific software. Dionex ion chromatographs, UV/VIS Spectrophotometer, pH meter, turbidmeter, autoclave, microscope, water bath, incubators, chlorine meters, Trace Detect arsenic analyzer, total organic carbon (TOC) analyzer, RO water system, Ultra-Pure water system, centrifuge, precision refrigerators and freezers, analytical balances, Quantitray thermal sealer, thermometers (digital and Mercury), dri-bath heater, pipettes, autopipettors, fume hoods, automsampler, telephone, fax machine, copier and various light trucks and SUVs.

ENVIRONMENTAL FACTORS:

C Continuously	F Frequently	O Occasionally	R Rarely	N Never		D Daily	W Several Times per Week	M Several Times per Month	S Seasonally	N Never	
-Health and Safety Factors-						-Environmental Factors-					
Mechanical Hazards					R	Respiratory Hazards					M
Chemical Hazards					O	Extreme Temperatures					S
Electrical Hazards					R	Noise and Vibration					N
Fire Hazards					R	Wetness/Humidity					S
Explosives					N	Physical Hazards					M
Communicable Diseases					F						
Physical Danger or Abuse					R						
Biological					F						

PROTECTIVE EQUIPMENT REQUIRED:

Nitrile Gloves, leather gloves, Laboratory coats, safety footwear, hard hats, reflective vest, fume hood, and safety glasses.

NON-PHYSICAL DEMANDS:

F Frequently From 1/3 to 2/3 of the time	O Occasionally Up to 1/3 of the time	R Rarely Less than 1 hour per week	N Never Never occurs
-Description of Non-Physical Demands-			-Frequency-
Time Pressure			O
Emergency Situation			R
Frequent Change of Tasks			F
Irregular Work Schedule/Overtime			O
Performing Multiple Tasks Simultaneously			F
Working Closely with Others as Part of a Team			F
Tedious or Exacting Work			F
Noisy/Distracting Environment			O

PRIMARY WORK LOCATION:

Office Environment		Other: Laboratory	X
Warehouse		Outdoors	