



## **CITY OF CALEXICO**

### **CLASS TITLE: LABORATORY TECHNICIAN**

**MONTHLY: \$3,660 - \$4,449**

**RANGE: O-13**

### **BASIC FUNCTION:**

Under the direction of an assigned supervisor, perform a variety of technical work related to chemical, physical and biological laboratory analysis of process sampler in waste water; perform water quality and other laboratory testing for regulatory compliance, industrial waste source control and plant process control; evaluate and interpret effluent quality.

### **REPRESENTATIVE DUTIES:**

#### **ESSENTIAL DUTIES:**

Perform a variety of technical work related to chemical, physical and biological laboratory analysis of process sampler in waste water; conduct a variety of routine and chemical, physical, bacteriological and related waste water tests.

Evaluate and interpret effluent quality in accordance with established requirements; collect various samples such as representative grab and composite samples of sewage influent; utilize manual and automatic samplers to collect samples; process product and final effluent.

Perform water quality and other laboratory testing for regulatory compliance, industrial waste source control and plant process control; assure compliance with standard testing methods, procedures, regulations and certification requirements; identify and determine appropriate response to treatment problems.

Collect samples and conduct laboratory analysis such as pH, suspended solids, volatile and total solids, dissolved oxygen, turbidities, conductivity, silica, ammonia, nitrate, chlorine residual, hardness and alkalinity, volatile acids and others.

Interpret and evaluate lab data and analysis, and determine and recommend appropriate corrective actions; recalibrate equipment to facilitate proper chemical, physical and bacteriological levels; notify proper authority of potential permit violations as appropriate.

Operate and maintain a variety of laboratory equipment including a refrigerator, BOD incubator, BOD meter, oven, muffle furnace hot plate, condenser apparatus, desiccator, IMHOF cone support, thermometers, fume hoods, DO meter, pH meter, turbidity meter, electrical conductivity meter and analytical weighing balance meter; clean equipment.

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Provide assistance to other plant personnel regarding assigned laboratory functions; respond to inquiries and provide technical information concerning related equipment, standards, practices, techniques and procedures.

Maintain a variety of logs and records related to laboratory analysis, quality assurance, lab operations, standard deviation, chain of custody, process control and assigned activities; prepare periodic and special reports related to quality control and laboratory test results in accordance with compliance and certification requirements.

Input a variety of laboratory data into an assigned computer system; establish and maintain automated records and files; initiate queries and generate a variety of computerized reports; assure accuracy of input and output data.

Communicate with City personnel and outside agencies to exchange information and resolve issues or concerns.

Monitor inventory levels of laboratory equipment and supplies; order, receive and maintain adequate inventory levels of supplies and equipment.

Dispose of outdated chemical according to established requirements and procedures.

Participate in monitoring and operating the treatment plant as required.

Remain on stand-by as directed.

**OTHER DUTIES:**

Perform related duties as assigned.

**KNOWLEDGE AND ABILITIES:**

**KNOWLEDGE OF:**

Waste water laboratory analysis methods, practices and procedures.

Quality assurance procedures and general principles of waste water collection and treatment.

Principles of chemistry, microbiology, physics and bacteriology.

Current laboratory procedures, techniques and related equipment operation, including analytical instruments utilized in wastewater analysis.

State health standards, rules, regulations and requirements applicable to City water systems.

Proper laboratory health and safety practices.

Technical record-keeping and report preparation techniques.

General operations of a waste water treatment plant.

Oral and written communication skills.

Regulatory requirements.

**ABILITY TO:**

Perform a variety of technical work related to chemical, physical and biological laboratory analysis of

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process sampler in waste water.

Perform water quality and other laboratory testing for regulatory compliance, industrial waste source control and plant process control.

Evaluate and interpret effluent quality in accordance with established requirements.

Identify and determine appropriate response to treatment problems.

Analyze and interpret standard lab test results.

Prepare mandated and requested reports related to quality control and results of laboratory tests according to compliance and certification requirements.

Interpret lab data and determine appropriate corrective action.

Operate a variety of equipment used in laboratory analysis.

Observe health and safety regulations.

Communicate effectively both orally and in writing.

Work cooperatively with others.

Meet schedules and time lines.

**EDUCATION AND EXPERIENCE:**

Any combination equivalent to: graduation from high school supplemented by college-level course work in chemistry, biology or related field and one year experience with laboratory analysis procedures.

**LICENSES AND OTHER REQUIREMENTS:**

Grade I Laboratory Technician certification issued by the CWEA.

**WORKING CONDITIONS:**

**ENVIRONMENT:**

Indoor and outdoor work environment.

Regular exposure to fumes and odors.

Adverse and extreme weather conditions.

Evening or variable hours and emergency call-out.

**PHYSICAL DEMANDS:**

Dexterity of hands and fingers to operate laboratory equipment.

Climbing ladders and stairs.

Sitting or standing for extended periods of time.

Lifting, carrying, pushing or pulling heavy objects as assigned by the position.

Bending at the waist, kneeling or crouching.

Reaching overhead, above the shoulders and horizontally.

Seeing to perform lab analysis.

Walking to collect samples

**HAZARDS:**

Exposure to chemical fumes.

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Infectious materials from waste water.  
Working in confined spaces.  
Exposure to toxic gases and other poisonous substances.  
Extreme heat.