



Career Service Authority

Page 1 of 5

Chemist

GENERAL STATEMENT OF CLASS DUTIES

Performs full performance laboratory analysis of water samples to determine compliance with water quality standards and provides technical analytic support for governmental agencies responsible for enforcement of standards.

DISTINGUISHING CHARACTERISTICS

This classification performs full performance laboratory analysis of water samples to determine compliance with water quality standards and provides technical analytic support for governmental agencies responsible for enforcement of standards. This class is distinguished from the Wastewater Quality Control Manager, which performs management-level work planning and directing the activities of the Quality Control and Laboratory Sections of Wastewater Management, which includes the Industrial Pretreatment, Sampling, and Investigation units.

Guidelines, Difficulty and Decision Making Level:

Guidelines are generally but not always clearly applicable, requiring the employee to exercise judgment in selecting the most pertinent guideline, interpret precedents, adapt standard practices to differing situations, and recommend alternative actions in situations without precedent.

Duties assigned are generally complex and may be of substantial intricacy. Work assignment is performed within an established framework under general instructions but requires simultaneous coordination of assigned functions or projects in various stages of completion.

Employee is responsible for determining time, place, and sequence of actions to be taken. Unusual problems or proposed deviations from guidelines, practices, or precedents may be discussed with the supervisor before being initiated.

Level of Supervision Received and Quality Review:

Under general supervision, the employee receives assignments and is expected to carry them through to completion with substantial independence. Work is reviewed for adherence to instructions, accuracy, completeness, and conformance to standard practice or precedent. Recurring work clearly covered by guidelines may or may not be reviewed.

Interpersonal Communications and Purpose:

Contacts with the public or employees where explanatory or interpretive information is exchanged, defended, and gathered and discretion and judgment are required within the parameters of the job function.

Level of Supervision Exercised:

By position, performs lead work.

ESSENTIAL DUTIES

Performs qualitative and quantitative analysis of water, wastewater, sludge, and industrial effluents using laboratory equipment and standardized procedures.

Calculates the chemical and biological oxygen demands, alkalinity, suspended solids, volatile solids, the presence of and identification of microorganisms, chemicals, or other contaminants constituting a public health hazard.

Performs tasks which may require familiarity with a variety of laboratory techniques and equipment including oxygen analyzers, pH/selective ion systems, total organic carbon analyzer, spectrophotometer, conductivity analyzers, turbid meter, atomic absorption systems (furnace and flame), gas chromatographs, high performance liquid chromatography, and fluorometer.

Provides information on water sampling and preservation techniques,

Performs water quality analysis for governmental agencies.

Testifies in court regarding laboratory test procedures and results.

Restocks supplies and maintains supply inventories.

Assists in training and checking the work of other employees on various projects.

Maintains established departmental policies and procedures, objectives, recordkeeping in laboratory notebooks, reports and data charts, quality assurance program, safety, environment and infection control standards.

Performs other related duties as assigned or requested.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

MINIMUM QUALIFICATIONS

Competencies, Knowledge, & Skills:

Chemistry - Knowledge of the concepts, principles, and theories of the composition, structure, and properties of substances, and of the chemical processes and transformations, including uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Integrity/Honesty - Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; is trustworthy.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Reading - Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Attention to Detail - Is thorough when performing work and conscientious about attending to detail.

Writing - Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material that is appropriate for the intended audience.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Problem Solving - Identifies problems; determines accuracy and relevance of information; uses sound judgment to generate and evaluate alternatives, and to make recommendations.

Oral Communication - Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately.

Technology Application - Uses machines, tools, instruments, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Planning and Evaluating - Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.

Decision Making - Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, concern, and politeness to others; develops and maintains effective relationships with others; may include effectively dealing with individuals who are difficult, hostile, or distressed; relates well to people from varied backgrounds and different situations; is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.

Mathematical Reasoning - Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.

Physical Demands (Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs):

Sitting: remaining in the normal seated position.

Carrying: transporting and object, usually by hand, arm, or shoulder.

Stooping: Bending the body by bending the spine at the waist
Reaching: extending the hand (s) and arm (s) in any direction.
Handling: seizing, holding, grasping, or otherwise working with hand(s).
Fingering: picking, pinching, or otherwise working with fingers.
Feeling: perceiving attributes of objects by means of skin receptors.
Talking: expressing or exchanging ideas by means of spoken words.
Hearing: perceiving the nature of sounds by the ear.
Eye/hand/foot coordination: performing work through using two or more.
Near Acuity: ability to see clearly at 20 inches or less.
Color Vision: ability to distinguish and identify different colors.

Working Environment:

Extreme Heat: temperature hot enough to cause marked bodily discomfort.
Wet: Frequent contact with water or other liquid.
Hazards: conditions where there is danger to life, body, and/or health.
Atmospheric Conditions: conditions that affect the skin or respiratory system.
May be exposed to hazardous chemicals.
Exposed to hazardous anesthetic agents, body fluids and wastes.
Exposed to infection from disease-bearing specimens
Exposed to odorous chemical and specimens
Exposed to toxic chemicals
Exposed to infections and contagious disease.
Subject to burns and cuts
Subject to electrical and radiant energy hazards.

Education Requirement:

Bachelor's Degree in Chemistry, or in a related science with a minor in Chemistry.

Experience Requirement:

Three years of experience in a laboratory performing quantitative analysis and testing.

Education/Experience Equivalency:

Additional appropriate type and level of education may be substituted for two years of the minimum experience requirement.

CLASS DETAIL

FLSA CODE: Exempt

ESTABLISHED DATE: 09/16/1995

ESTABLISHED BY: Janell Flaig

REVISED DATE: 07/12/2009

REVISED BY: Blair Malloy

CLASS HISTORY This class was updated, added competencies, and revised into new template.