

ENVIRONMENTAL CHEMIST

This is either technical and limited supervisory work in the direction of regional water or air monitoring programs, the direction of surveillance programs for the operation and maintenance of waste water treatment facilities, and the provision of technical advice to other regional personnel on any matters requiring knowledge of chemistry; or technical work in the review of hazardous waste processing and storage facility plans and operating procedures for permitting purposes.

In directing regional air or water monitoring programs, employees provide input into the establishment of new monitoring stations, provide training to monitoring technicians, schedule and review their work, and assure the accuracy of data collected. In directing the compliance surveillance program for wastewater treatment facilities, employees schedule inspections, train inspectors, and review-completed reports and recommendations for enforcement actions. Work is performed under the general supervision of an Environmental Program Supervisor.

In the review of hazardous waste storage and processing facilities, employees research, interpret and apply applicable standards, discuss discrepancies with facility operators or owners, negotiate settlements of disagreements and prepare reports recommending the issuance or denial of permits.

I. DIFFICULTY OF WORK:

Variety and Scope - In hazardous waste work, employees provide technical assistance to industrial officials and other departmental employees, review permit applications, perform compliance inspections where a knowledge of professional chemistry is required, review requests for status changes and delisting, and monitor compliance schedules. In directing field environmental chemistry programs, employees establish schedules for inspections and monitoring, review the results of inspections and the monitoring program, perform inspections where a high degree of chemistry knowledge is required, and provide technical assistance to industry officials and other employees on chemistry matters. All employees are required to respond to emergency situations.

Intricacy - Regulations enforced are complex and difficult to interpret due to the variety of wastes, industrial processes, and hazardous waste storage, treatment and disposal systems. Changing technology impacts the work by rendering regulations obsolete especially in the area of hazardous waste.

Subject Matter Complexity - Employees must have considerable knowledge of the theory and practical application of chemistry to environmental monitoring and control, considerable knowledge of industrial processes and their potential for polluting the environment, considerable knowledge of the methods and techniques associated with environmental sampling, and considerable knowledge of federal and state regulations regarding the air, water or hazardous waste programs. In the hazardous waste program, employees must have considerable knowledge of current methods for storing, treating and disposing of hazardous materials.

Guidelines - Federal and/or state rules and regulations are available for many situations. However, they are highly complex, requiring considerable interpretation. In addition, the rules and regulations are constantly changing due to new technology and standards governing new pollutants.

II. RESPONSIBILITY:

Nature of Instructions - Tasks are generally outlined by giving the nature of the task, expected results and general timeframes. Within these guidelines, employees are expected to plan, schedule and complete assigned tasks.

NC 08606
30004355
OSP Rev. 10/11

Nature of Review - Work is conducted independently without supervisory review except upon request. The more complex or unusual problems are discussed with the immediate supervisor upon completion.

Scope of Decisions - Decisions affect plant owners, operators and their employees, local governmental officials, and members of the general public living in the vicinity of a plant, waste disposal site or downstream from a wastewater treatment plant.

Consequence of Decisions - Decisions made could increase operating expenses for the owners of plants and/or endanger the environment and people in areas surrounding a plant, hazardous waste disposal or storage site, or downstream from a wastewater treatment plant.

III. INTERPERSONAL COMMUNICATIONS:

Scope of Contacts - Employees have contacts with the owners and operators of plants, local governmental officials, members of the general public and civic or environmental groups.

Nature and Purpose - Contacts are made to explain regulations and/or violations to negotiate compliance schedules, and to provide technical assistance.

IV. OTHER WORK DEMANDS:

Hazards - Employees are exposed to moving machinery and a variety of potentially hazardous chemicals while inspecting plants, responding to emergencies or investigating illegal hazardous waste dump sites.

Work Conditions - Employees are exposed to inclement weather, noise, fumes and odors.

V. RECRUITMENT STANDARDS:

Knowledges, Skills and Abilities - Considerable knowledge of the theoretical principles of analytical chemistry. Considerable knowledge of laboratory techniques, equipment and terminology. Considerable knowledge of industrial processes and their potential to pollute the environment. Considerable knowledge of the types and properties of waste products. Skill in performing a variety of standardized titration, extraction, purification and related manual procedures. Ability to conduct field investigations and to prepare accurate and concise reports. Ability to handle with tact, consistency and sound judgment the diversity of public contacts demanded in consultative services and enforcement. Ability to communicate effectively in oral and written form.

Minimum Training and Experience - Bachelor's degree in chemistry from an appropriately accredited institution and two years of experience in the practical application of theoretical chemistry including one year in environmental work; or an equivalent combination of education and experience.

Special Note - This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA. Examples of work are primarily essential functions of the majority of positions in this class, but may not be applicable to all positions.