New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico87505-0127

Classification Description

GEOSCIENTISTS, EXCEPT HYDROLOGIST AND GEOGRAPHERS

Class Title	Class Code	Pay Band	Alt Pay Band*
Geoscientists, Xcpt Hydrologist & Geogrphr-B	**F2042B**	**60**	**65**
Geoscientists, Xcpt Hydrologist & Geogrphr-O	**F2042O**	**65**	**70**
Geoscientists, Xcpt Hydrologist & Geogrphr-A	**F2042A**	**70**	**75**

**In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.*

Occupation Description

Study the composition, structure and other physical aspects of the earth. May use geological, physics and mathematics knowledge in exploration for oil, gas, minerals or underground water, or in waste disposal, land reclamation or other environmental problems. May study the earth's internal composition, atmospheres, oceans and its magnetic, electrical and gravitational forces. Include mineralogists, crystallographers, paleontologists, stratigraphers, geodesists and seismologists.

Nature of Work

Geoscientists study the composition, structure, and other physical aspects of the Earth, and the Earth's geologic past and present by using sophisticated instruments to analyze the composition of earth, rock and water. Many geoscientists and hydrologists help to search for natural resources such as groundwater, minerals, metals, and petroleum. Others work closely with environmental and other scientists to preserve and clean up the environment. Geologists study the composition, processes, and history of the Earth. They try to find out how rocks were formed and what has happened to them since their formation. They also study the evolution of life by analyzing plant and animal fossils.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role review technical reports and documents for completeness, soundness, and compliance with regulations, policies, and procedures; research regulations and laws; maintain case files; monitor geological investigation and testing; develop, issue, and maintain permits for hazardous material treatment, storage, disposal facilities, etc. to ensure compliance with regulations; analyze hydrogeologic samples and data; review work plans and remedial action proposals; prepare technical reports.

Recommended Education and Experience for Full Performance
Bachelors of Science in Geology, Geochemistry, Hydrology, Hydrogeology, Chemistry or Environmental Science.

Minimum Qualifications
Bachelors of Science in Geology, Geochemistry, Hydrology, Hydrogeology, Chemistry or Environmental Science. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling four (4) years may substitute for the required education and experience.

Operational

- Employees in this Role plan, coordinate, and review the activities of technical personnel involved in the inspection of mining operations and enforcement of surface mining rules and regulations; evaluate and advise staff of propriety notices of violation; monitor the enforcement process; review and approve surface mining applications/plans for compliance with state and federal laws, regulations, and standards; explain and interpret policies and procedures to companies and interested parties; conduct inspections and prepare reports as required.

Recommended Education and Experience for Full Performance
Bachelors of Science in Geology, Geochemistry, Hydrology, Hydrogeology, Chemistry or Environmental Science and four (4) years of experience in water quality regulatory programs, ground water investigations and remediation and/or hazardous waste management.

Minimum Qualifications
Bachelors of Science in Geology, Geochemistry, Hydrology, Hydrogeology, Chemistry or Environmental Science and two (2) years of experience in water quality regulatory programs, ground water investigations and remediation and/or hazardous waste management. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Advanced

- Employees in this Role conduct field investigations, oversee field sampling and direct geological assessments; analyze data and participate in technical meetings; analyze oil and gas production variables and approve drill permits, plugging, and abandonment applications; prepare mineral resource protection exhibits; advise oil and gas operators; collaborate with industry, federal, and state personnel and examine well logs, reports, and printouts; design plugging and abandonment procedures; conduct studies of ownership and geology; train personnel in oil and gas compliance policies.

Recommended Education and Experience for Full Performance
Bachelors of Science in Geology, Geochemistry, Hydrology, Hydrogeology, Chemistry or Environmental Science and six (6) years of experience in water quality regulatory programs, ground water investigations and remediation and/or hazardous waste management.

Minimum Qualifications

Bachelors of Science in Geology, Geochemistry, Hydrology, Hydrogeology, Chemistry or Environmental Science, and five (5) years of experience in water quality regulatory programs, ground water investigations and remediation and/or hazardous waste management. Any

combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling nine (9) years may substitute for the required education and experience.

Knowledge and Skills

*Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET™ is a trademark of the U.S. Department of Labor, Employment and Training Administration.*

Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Geography — Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Law and Government — Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Skills

Written Comprehension — The ability to read and understand information and ideas presented in writing.

Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

Oral Expression — The ability to communicate information and ideas in speaking so others will

understand.

Written Expression — The ability to communicate information and ideas in writing so others will understand.

Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.

Near Vision — The ability to see details at close range (within a few feet of the observer).

Speech Clarity — The ability to speak clearly so others can understand you.

Category Flexibility — The ability to generate or use different sets of rules for combining or grouping things in different ways.

Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Statutory Requirements: N/A

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2011 **Revised:** 9/20/2011

**Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.*

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.