

PD Tracking Number 0000014

Incumbent of this position serves as a student trainee under the Student Career Experience Program. This program is designed to provide the student with work experience directly related to their academic field of study and to orient and expose the student to the mission and work of the U.S. Geological Survey and the benefits and conditions of Federal employment. It provides formal periods of work and study while the student is enrolled in school, the conditions of which are outlined in the Working Agreement that must be signed by the student, the school, and the employing Office.

Major Duties

Performs varied but relatively routine and limited chemical analyses and tests on samples submitted by bureau personnel to the laboratory. The analyses and tests are to determine the chemical composition of substances, presence, and identification of compounds in samples submitted to the laboratory. The results are used by bureau personnel for scientific investigations and research studies.

Based upon previous assignments or instructions as to the specific analyses and tests to be performed, selects the appropriate methods and procedures.

Performs the analyses and tests, which include physical tests, wet laboratory analyses and instrumental analyses.

Performs routine calculations. May perform computer programming used for the analysis and reduction of data.

Detects unusual reactions and instances when the established methods and procedures are not applicable. Recommends to the supervisor a minor modification to the method, extending examination, or alternate methods to use.

Writes a laboratory report identifying the sample, stating the methods and procedures used, and showing the results.

Factor Statements

FACTOR 1 - KNOWLEDGE REQUIRED BY THE POSITION (Level 1-6, 950 points) Professional knowledge of chemical principles, theories, and practices, a knowledge of common methods and procedures, and a skill in calibrating and operating analytical instruments sufficient to perform relatively routine and limited analyses and tests by applying established methods and procedures.

FACTOR 2 - SUPERVISORY CONTROLS (Level 2-2, 125 points)

The supervisor assigns individual samples with clear instructions as to the data to be obtained. For new or more difficult assignments, the supervisor also provides instructions as the methods and procedures to apply and the location of source material available for reference. The chemist is

responsible for independently completing recurring assignments, but refers all deviations and problems not covered by the instructions to the supervisor or a higher-level chemist for assistance. The work is reviewed for adherence to instructions and standard laboratory procedures and for technical soundness of the results. New or more difficult assignments are reviewed more closely including in-progress review.

FACTOR 3 - GUIDELINES (Level 3-2, 125 points)

The methods and procedures for performing the work are established. Specific guidelines such as established methodology manuals, precedents, and standard operating procedures are available for reference. For each sample, the chemist must exercise judgment to select the appropriate methods and procedures to carry out the analyses and tests. Situations in which the guides do not apply are referred, typically with a recommended action, to the supervisor or a higher level chemist.

FACTOR 4 - COMPLEXITY (Level 4-3, 150 points)

The assignments involve a variety of analyses and tests. To select the appropriate methods and procedures, the chemical identity of the sample, its physical state, and the data specified to be determined must be considered. The work is performed by applying established methods and procedures. Problems encountered can usually be solved by minor method modification or adaptation.

FACTOR 5 - SCOPE AND EFFECT (Level 5-2, 75 points)

The involves carrying out well established chemical analyses and tests of water and sediment samples and according to specific guidelines. The work efforts affect the accuracy and reliability of the chemical analytical services provided by the laboratory.

FACTOR 6 - PERSONAL CONTACTS (Level 6-1, 10 points)

The personal contacts are with chemists and physical science technicians within the laboratory.

FACTOR 7 - PURPOSE OF CONTACTS (Level 7-1, 20 points)

The personal contacts are to receive advice and assistance and to report the progress and results of the work.

FACTOR 8 - PHYSICAL DEMANDS (Level 8-2, 20 points)

The work involves prolonged standing.

FACTOR 9 - WORK ENVIORNMENT (Level 9-2, 20 points)

The work involves regular and recurring exposure to irritant chemicals. Special safety precautions are required and the chemist uses protective clothing and gear such as a laboratory coat, gloves, and safety glasses.

TOTAL POINTS - 1495

GRADE CONVERSION - GS-7

GS-1300, JFS for Professional Physical Science Work, 10/97

Introduction to the Position Classification Standards

Primary Standard (Source Document Std PD S0227)