Animal and Plant Health Inspection Service (APHIS)
Plant Protection and Quarantine (PPQ)
Center for Plant Health Science and Technology (CPHST)
Beltsville Laboratory

Biological Science Technician
GS-0404-04

Master Record Number: 2PQ705

INTRODUCTION

The incumbent serves as a Biological Science Technician at the PPQ, Center for Plant Health Science and Technology Laboratory in Beltsville, Maryland. The incumbent provides support to laboratory personnel working on various projects.

APHIS is an emergency response agency. This means that all Agency employees may be asked or assigned to participate in rotating temporary duty assignments away from their assigned duty station to support emergency programs at some time during their careers with APHIS.

DUTIES

Performs standardized routine assignments in support of various projects. Duties involve standardized test procedures, routines or operations which require general knowledge of basic biological science and the ability to know when and how to resolve problems encountered or to make adaptations in the sequencing of the tasks performed.

Duties are performed by any combination of the following:

- Assists in one or more phases of the scientific process by performing a variety of standardized or routine duties in a laboratory or greenhouse environment. These include collecting and weighing samples for laboratory tests, grinding and transferring samples to collection tubes, and mixing reagents for the staff.
- Performs routine and recurring techniques and studies using a variety of specialized equipment such as weigh balances, grinders, water baths, autoclaves, and printers.
- Records instrument readings and takes measurements of weight, temperature, time, etc.
- Makes detailed records of experimental data. Tabulates and summarizes data using personal computers and software packages. May enter routine data into electronic databases.

- Maintains inventory of chemicals; prepares solutions and reagents for use in the laboratory or greenhouse; and safely disposes of waste material (both chemical and biological).
- Performs tasks in greenhouse, including planting and transplanting woody and herbaceous plants, labeling plants, and assisting with inoculations designed to test for pathogens of quarantine significance.
- Perform lab maintenance including dishes, restocking, collecting waste, cleaning work benches, freezer defrosting, etc.
- Assist with office management; printing, shredding, binder assembly.

FACTORS

Knowledge Required by the Position:

Knowledge of the basic principles of biological science (e.g. plant pathology, plant physiology, entomology, biochemistry, microbiology, genetics, etc.), to perform routine or recurring techniques and studies, record instrument reading, collect samples, and take measurements.

Knowledge of processes, methods, and procedures necessary to perform the full range of duties of the assignment area.

Skill in the operation of basic equipment common to specific area of pathogen detection being conducted to perform routine tests or take measurements and readings.

Ability to keep exact and detailed records of data obtained from experiments.

Ability to operate a personal computer using word processing and/or other software programs.

Ability to recognize subtle variations in often repeated experiments.

Ability to schedule and independently carry out work assignments.

Supervisory Controls:

The incumbent works under the general supervision of the Laboratory Director, Assistant Laboratory Director, or designated person. Incumbent may receive work assignments from other laboratory personnel. The incumbent is given relatively clear instructions concerning project objectives and methods to be employed. The incumbent is expected to proceed with assigned duties independently, subject to occasional checks of work in progress. The supervisor or project leader ensures that tasks completed, data developed, and the methods used in securing and verifying data and application of guidelines, are technically accurate and in compliance with instructions and established procedures. The incumbent is expected to recognize and report deviations in the expected progress of projects.

Guidelines:

Work assignments, procedures, and some deadlines are pre-established and updated periodically. The incumbent must use sound judgment in applying these guidelines to the varying circumstances found in the day-to-day operation of the program. The incumbent will notify supervisor or project leader of deviations from established operating procedures as they occur.

Complexity:

Assignments consist of performing a variety of routine procedural tasks or one or more complex duties related to regular and recurring technical work, operating a variety of pieces of equipment or one or more complex equipment system commonly associated with the work site, and performing a full variety of standardized technical support and technical duties associated with the work.

Performance of the assignments requires making choices when executing a number of types of sequential, related steps or assembling several pieces of equipment. Incumbent exercises independence in recognizing differences, choosing the right course of action, and then selecting and executing the proper task sequences for completing the work.

Incumbent deals with facts (i.e., spots readings which are outside the normal range of tolerance or acceptability) or determines how best to present raw data. The employee determines what needs to be done to update or complete records and documents and initiates action to acquire needed information from others as indicated by situations encountered in the work.

Scope and Effect:

Completed assignments constitute a complete segment of assignments with broader scope (i.e. daily collects data for use by others involved in pathogen detection).

Work products affect the accuracy, reliability or acceptability of further procedures, processes or service (i.e., the ability of a supervisor or project leader to complete a phase of scientific process with accuracy).

Personal Contacts:

Contacts are primarily with other employees at the laboratory. The incumbent will also establish contacts with other PPQ personnel and with a variety of other Federal, state, and local government cooperators. The incumbent may also establish periodic contacts with university personnel, private citizens, and other cooperators.

Purpose of Contacts:

Contacts are made to exchange information, seek guidance in the performance of assigned duties, and to maintain participation in cooperative projects.

Physical Demands:

The work requires good dexterity of the hands and some moderate exertion, including digging in soil and lifting up to 40 pounds. The work may require extended periods of standing or sitting, and recurring periods of bending, crouching, stooping, stretching or similar activities. Extended walking and/or climbing to field locations may be required, often while carrying equipment.

Work Environment:

The work involves regular and recurring moderate risks or discomforts which require special safety precautions (i.e. irritant chemicals, or working in dusty environment). The incumbent is required to use protective clothing such as gowns, coats, boots, goggles, and gloves and follow all safety procedures established.

The incumbent may work at times in a Bio-safety Level 3 agriculture facility that will require changing clothes into work suites. APHIS and state policy requires changing clothing upon entry and showering prior to exit of the facility. Working with toxic chemical agents is common in a laboratory setting. The work may also require safe contact with pesticides.

Other Considerations:

The incumbent could encounter plant pathogens of high risk or Select Agents outlined in the 7 CFR 331 that will require the incumbent to submit to a FBI background investigation, in accordance with the USDA Policies and Procedures for BSL-3 facilities.