



LAW ENFORCEMENT ADVANCED PROTECTION (LEAP) | TSPID & WarPAD²

PROGRAM INTRODUCTION:

LEAP is a Department of Homeland Security (DHS) Office of Science and Technology sponsored, multi-agency program. This program spearheads a national effort to address multi-hazard protection in an integrated systems approach. The purpose of the program is to address related standards, system requirements and performance of an integrated protective ensemble for homeland operations. The project involves integrating current and developmental components, combined with appropriate respiratory protective equipment to act as a personal protective "system". The ensemble will provide respiratory and percutaneous protection and be designed to interoperate with other equipment.

As the demands for multi-hazard protection and mission enhancing integrated systems increase, we are challenged to identify and address issues associated with providing these technologies and systems for homeland security operations prior to allowing these systems to be promoted in the market. Engineering and testing must address the full life cycle from system performance to standards to fielding to maintenance. Project LEAP is a first phase in the full life cycle development of an enhanced protective system for homeland security operations.

As technology advances, Project LEAP, leveraging Future Force Warrior Program technology and concepts, will investigate the applicability of an Over-Under chemical/biological protective concept. As part of an overall system, the Over-Under concept will allow tactical units to become fully operational in a chemical attack in a minimal amount of time. This can be accomplished by providing a hybrid, permeable/non-permeable, ensemble whose upper body protection can be conveniently packaged as a sub-belt and utilized quickly upon encounter with a contaminant. Full testing of the system will be required before fielding.

The National Protection Center (NPC) maintains program management responsibility for this program. The Materials and System Integration Team, Individual Protection Directorate, oversees and executes all technical aspects of this program.

OBJECTIVE:

- Identify gaps between current technologies and performance standards.
- Develop standards for a prototype protective ensemble. The system will demonstrate baseline toxic industrial chemicals/materials and chemical warfare agent protection with decreased heat load over current HAZMAT gear, and minimize degradation of mission performance by optimizing component integration.

PROJECT TEAM:

Project Lead:

- National Institute of Standards and Technology - Office of Law Enforcement Standards (NIST-OLES)

Project Execution:

- U.S. Army Natick Soldier RD&E Center - National Protection Center
- U.S. Army Natick Soldier RD&E Center - WarPAD²

Support Team:

- U.S. Army Edgewood Chemical Biological Center (ECBC)
- National Institute of Justice (NIJ)
- Center for Technology Commercialization (CTC)
- Office of Law Enforcement Technology Commercialization (OLETC)

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