## **ISRP 1999 abstract**

Presenter/author	Title	Abstract
Gardner, Paul D. Kuhlmann, W. D. U.S. Army Edgewood Chemical Biological Center 5183 Blackhawk Road Attn: AMSSB- RRT-PR Aberdeen Proving Ground, MD 21010-5424 USA	U.S. Army SBCCOM Testing and Evaluation of Personal Protective Equipment for Civilian CB Defense	An overview is presented of the U.S. Army's Soldier and Biological Chemical Command (SBCCOM) role in the testing and evaluation of personal protective equipment (PPE) for civilian chemical and biological (CB) defense. SBCCOM has extensive expertise in the research, development, and test and evaluation of CB detection, decontamination, collective protection, and personal protection equipment. Numerous joint agency programs involving civilian CB-PPE applications have been supported by SBCCOM over the last several years. Among the major programs supported are the Chemical Stockpile Emergency Preparedness Program (CSEPP), Domestic Preparedness Program (DP), and the Technical Support Working Group (TSWG) on counter terrorism.
		At the Edgewood Chemical Biological Center (ECBC), SBCCOM, assessments have been performed on a variety of commercial respirators and protective clothing ensembles to characterize their performance against CB agents. These evaluations include both system and component level assessments and address specific performance needs for CB protection. Examples of system level tests include aerosol and vapor protection factor, system agent penetration/permeation, and human performance testing. Examples of component level tests include liquid/vapor permeation (swatch testing), filter gas-life, and filter aerosol efficiency testing. System testing is preferred since it involves the testing of the entire PPE assembly and can be used to augment or replace certain component level tests.

Test methods used by SBCCOM to evaluate PPE items for civilian applications have primarily been adopted from standard test procedures used to assess military PPE. Test protocols and criteria have been tailored to address key performance parameters based on the threat, intended use, and specific needs of the user. The lack of national standardized test procedures and criteria, however, currently preclude the certification of PPE for civilian CB applications. To help address this issue, SBCCOM, NIOSH and the Department of Justice have initiated an interagency agreement to develop and implement a national NIOSH certification standard for CB respiratory protection equipment used by local, state, and federal emergency first responders. The successful development of a national CB protection standard for respirators and other PPE will require a sound understanding of the potential use scenarios, limitations of equipment, and hazards associated with emergency response operations in a CB environment.