1st Responder CBRNE Protective Equipment Standards Development Program

presented by

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National Institute of Standards and Technology
Office of Law Enforcement Standards
OLES Mission

- Performance Standards
- Compliance Testing Programs
- Technical Reports
- User Guides
NIJ Body Armor Standard

**NIJ Standard 0101.04**
“Ballistic Resistance of Personal Body Armor”

**NIJ Standard 0115.00**
“Stab Resistance of Personal Body Armor”
NIJ Body Armor Standard
NIJ Body Armor Standard

2700+
A handful of OLES programs are specifically “Homeland Security” programs …

... but all OLES programs have potential to enhance Homeland Security.

Lines between Law Enforcement/Public Safety Technologies and Homeland Security Technologies are largely imaginary.
Performance Standards

How well it has to work

Design Standards

How it has to be built
CBRNE Standards Development Program

- Program has been in place since 1999
- $24 million invested in program to date
- Standards have been developed with testing currently on going
- Additional standards very close to implementation
- Program recognized and collaborating with IAB, EPA, OSHA, DoD, DHS and others
1st Responder Standards Threat Areas

- Chemical (Warfare Agents & TICs)
- Biological Warfare Agents
- Radiological Agents (RDD)
- Nuclear (IND, Weapon)
- Conventional Explosives/Incendiaries
1st Responder CBRNE Protective Equipment Program Areas

- CBRN Respiratory Protection Equipment Standards
- CBRNE Protective Clothing Standards
- 1st Responder CBRNE Detection Equipment Standards
- 1st Responder CBRN Decontamination Standards
- 1st Responder CBRNE Communication Equipment Interfaces
- 1st Responder CBRNE Operational Equipment Standards
- 1st Responder CBRNE Equipment Compendia
The Interagency Board for Equipment Standardization and Interoperability (IAB)

Standardized Equipment List (SEL)
Items essential for responding to CBRNE incidents
“Most commodity SubGroups have realized that equipment that falls in the individual equipment categories will not provide suitable levels of field performance.”

1999 IAB Annual Report

"It is critical that compatibility issues of equipment are addressed now, through nationally recognized standards, before the advent of multi-agency, multi-jurisdictional WMD incidents."

1999 IAB Annual Report
Team Formed to Tackle Top Priority

STANDARDS FOR CBRNE RESPIRATORY DEVICES

ANSI Annual Conference 2003
Homeland Security: Collaboration, Innovation and Standardization
Technical Issues

- Insufficient knowledge about threats and acceptable exposure limits
- Existing military equipment not suited for First Responder mission
- Existing commercial equipment untested against WMD agents
- Urgency
Achievements

- Identified types of threats and expected exposures
- Developed computer-based modeling tool
- Identified and analyzed related equipment standards
- Completed CBRN Standards for SCBA and APR
- Assisted NIOSH in establishing state-of-the-art testing lab
- Certification testing ongoing
Achievements – Equipment Guides

- Chemical Agent Detection Equipment
- Biological Agent Detection Equipment
- Personal Protective Equipment Guide
- Chemical & Biological Decontamination Equipment
- Communications Equipment
The Bottom Line

- NIST/OLES CBRNE Program is well established, recognized and is producing results
- Coordinating and facilitating standards development efforts between NIST and DHS
- Greater safety for first responders
- More effective technologies
- Raise performance bar for industry