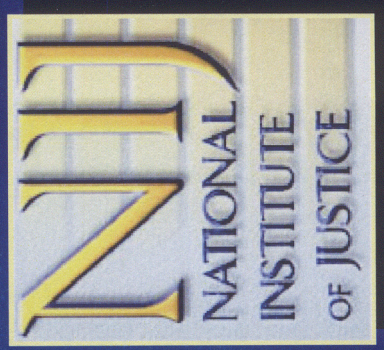


Office of Law Enforcement Standards
(OLES)

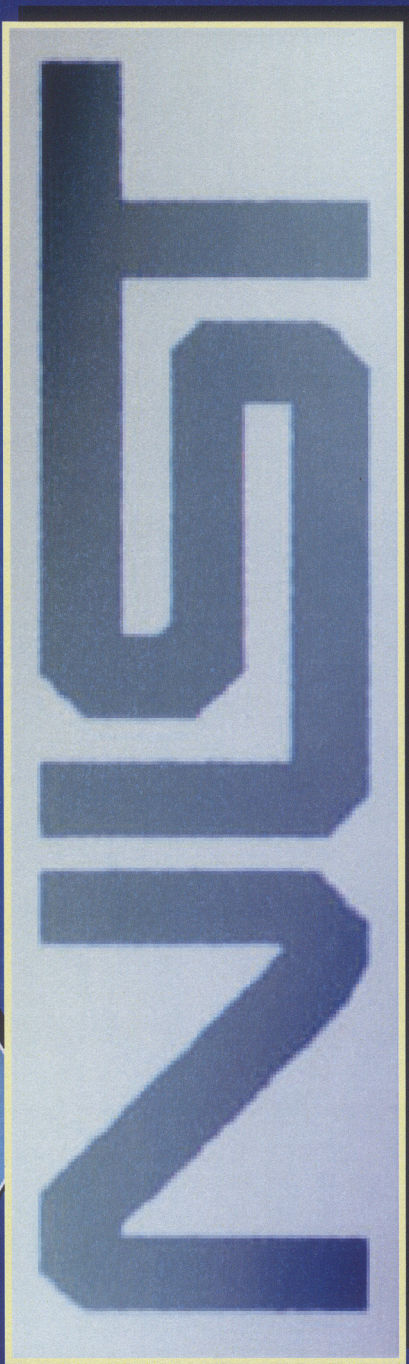
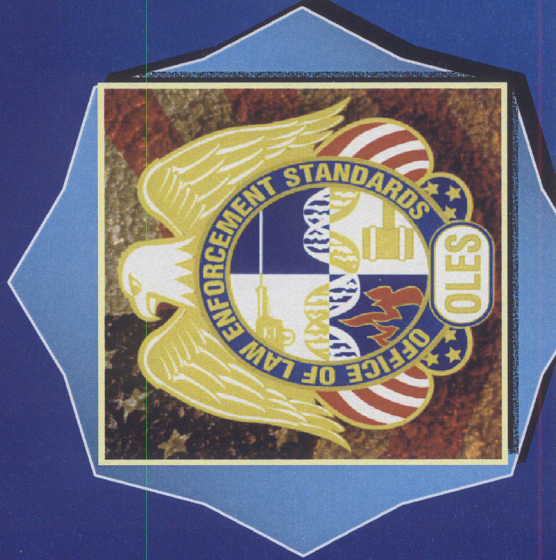


Introduction & Overview

A presentation for the
NIOSH Public Meeting
29 April 2003



Office of Law Enforcement Standards



**Crime
Rate**

**Public
Security**

**The Challenge of
Crime
in a Free Society**

**President's Crime Commission
Report
1967**

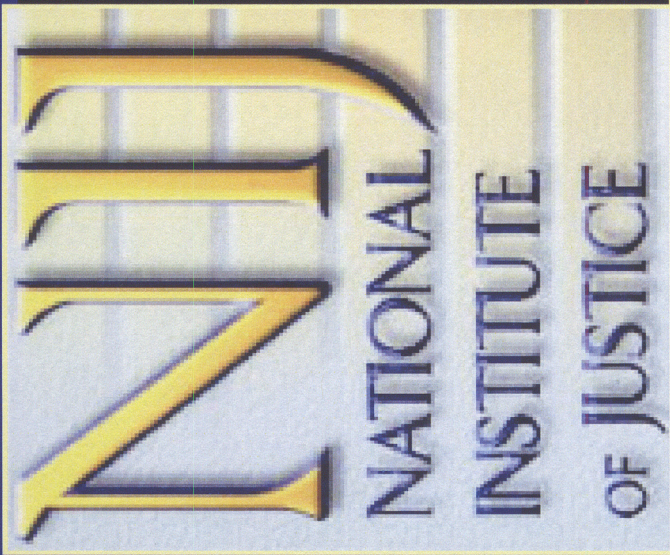
**Law Enforcement
inadequately
equipped**

**No reliable
information on
products or
equipment**

100% Reliability

Safest

The image is a promotional graphic for a car. It features a central collage of four photographs: a car's exterior, a hand holding a pen over a document, a car's interior dashboard, and another view of the car's exterior. Overlaid on this collage are four stylized green cars, each with a white roof and black wheels. Green dollar signs are scattered around the cars. The text '100% Reliability' is written in a large, orange, dotted font, and 'Safest' is written in a large, orange, dotted font. The entire graphic is set against a dark blue background.



NIJ
NATIONAL
INSTITUTE
OF JUSTICE



Performance Standards

**Compliance Testing
Programs**

Technical Reports

User Guides

Minimum Performance Standards

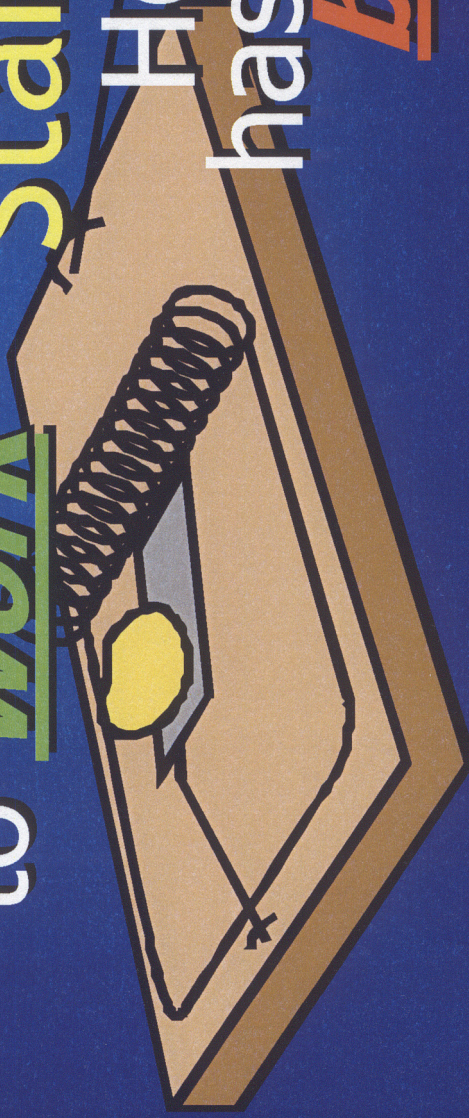
QUALITY

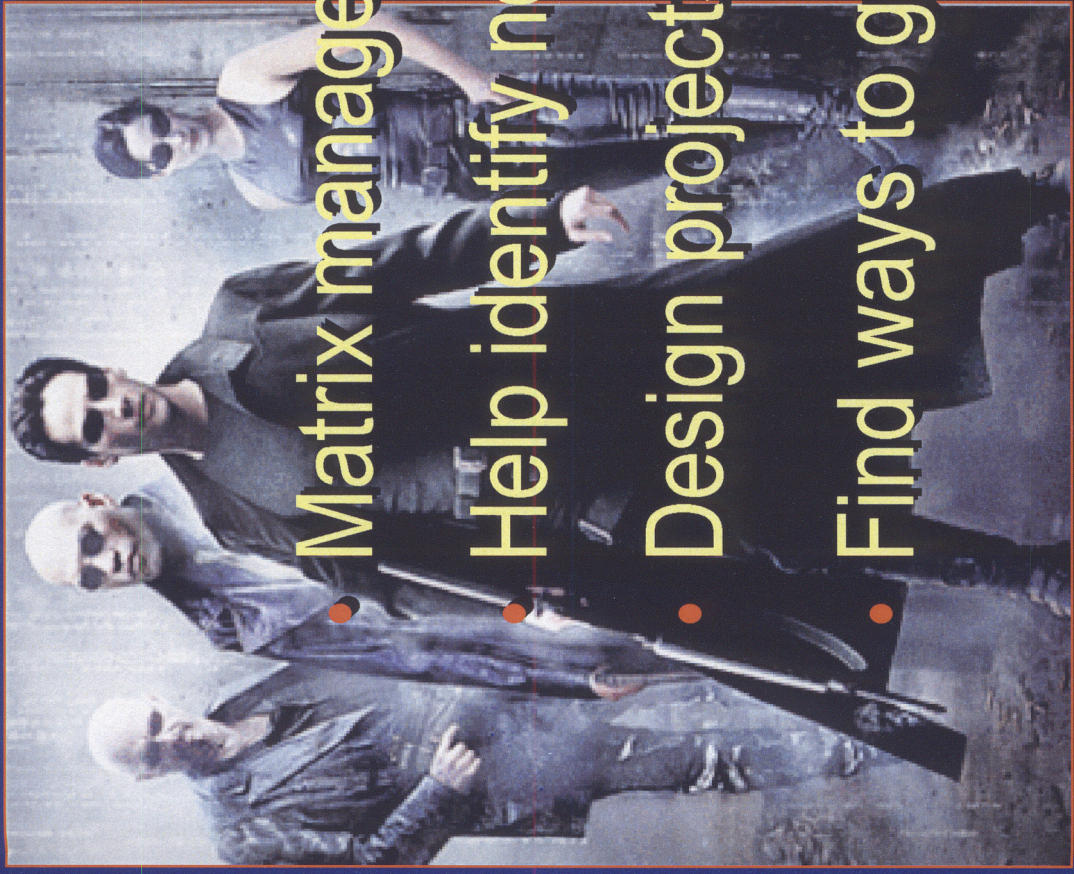
Performance Standards

How well it has to work

Design Standards

How it has to be built





• **Matrix management organization**

• **Help identify needs**

• **Design projects to meet needs**

• **Find ways to get projects done**

**Office of Law Enforcement Standards
(OLES)**

Forensic Sciences

**Detection, Inspection and Enforcement
Technologies**

Weapons and Protective Systems

Public Safety Communications Standards

Chemical Systems and Materials

Critical Incident Technologies

Critical Incident Technologies

Alim Fatah
Philip Mattson

- Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Protection and Detection Equipment Standards

FOCUS:

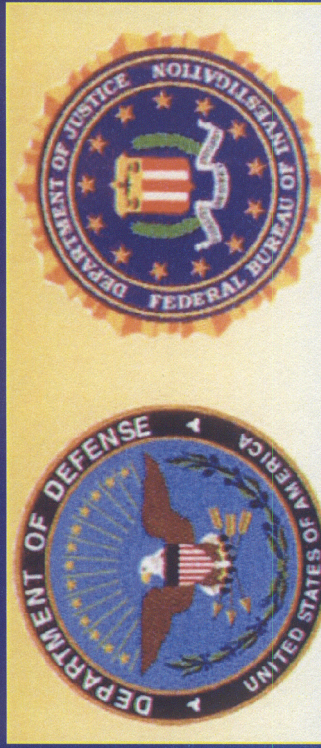
- CBRNE Protection and Detection Equipment Guides for First Responders

CBRNE Standards Functional Areas

- Chemical (Warfare Agents & TICs)
 - Biological Warfare Agents
 - Radiological (RDD)
 - Nuclear (IND, Weapon)
 - Conventional Explosives/Incendiaries
- *First Responder Communications Interfaces*

CBRNE Standards Functional Commodities

- **Personal Protective Equipment (PPE) Standards**
- **Detection Equipment Standards**
- **Decontamination Standards**
- **Equipment Guides**
- **Certification/Compliance Testing**
- **Technical Support & Management**



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 indivisible equipment categories will not provide suitable levels of field performance.”

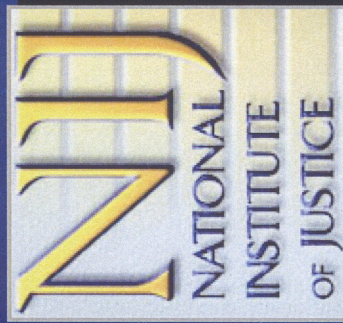
1999 IAB Annual Report

“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
CBRN RESPIRATORY DEVICES**

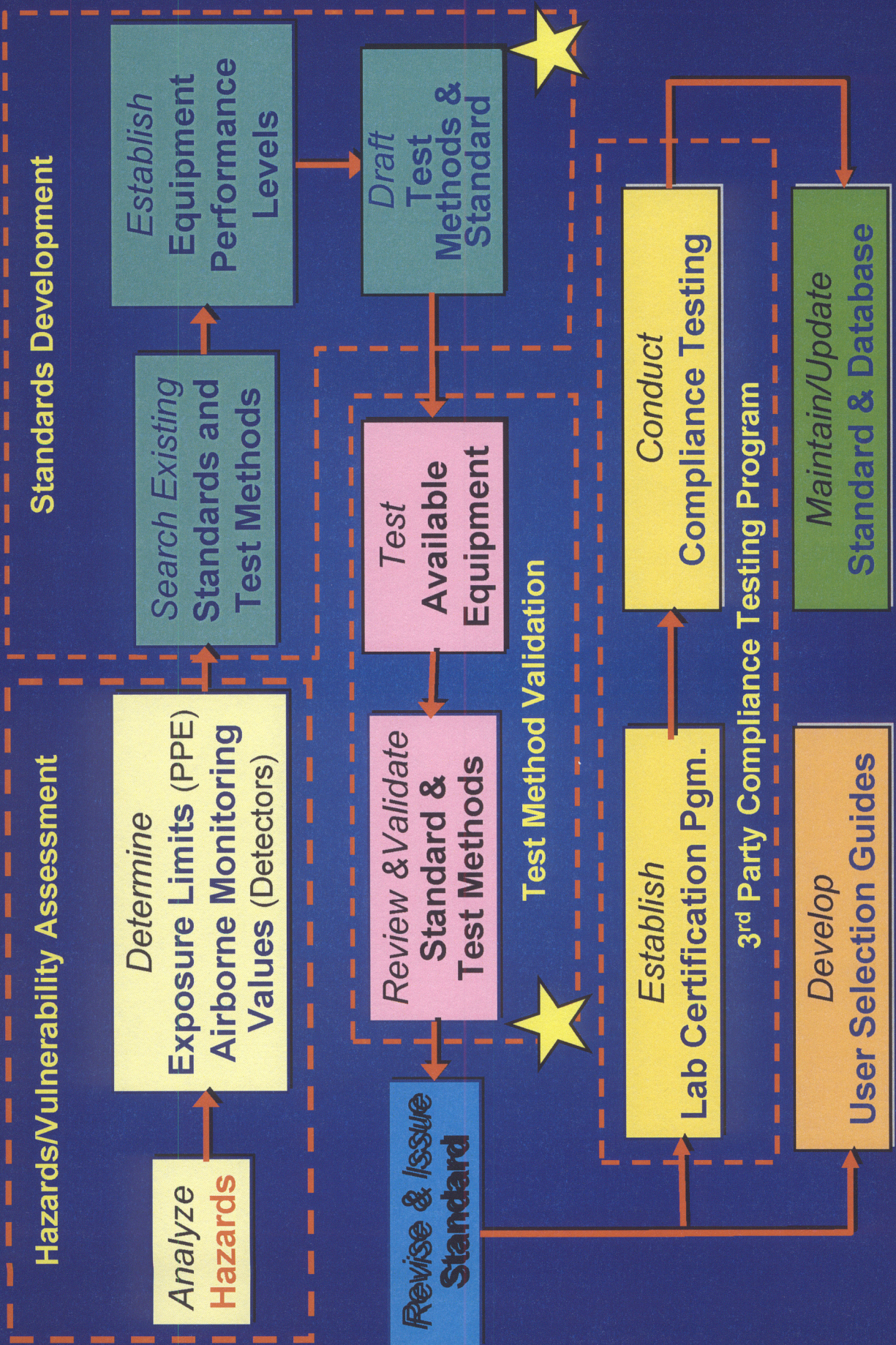
**Insufficient knowledge about threats
and acceptable exposure limits**

**Existing military equipment not suited
for First Responder mission**

**Existing commercial equipment untested
against WMD agents**

Urgency

CBRNE Equipment Standards



Achievements

Identified types of threats
and expected exposures

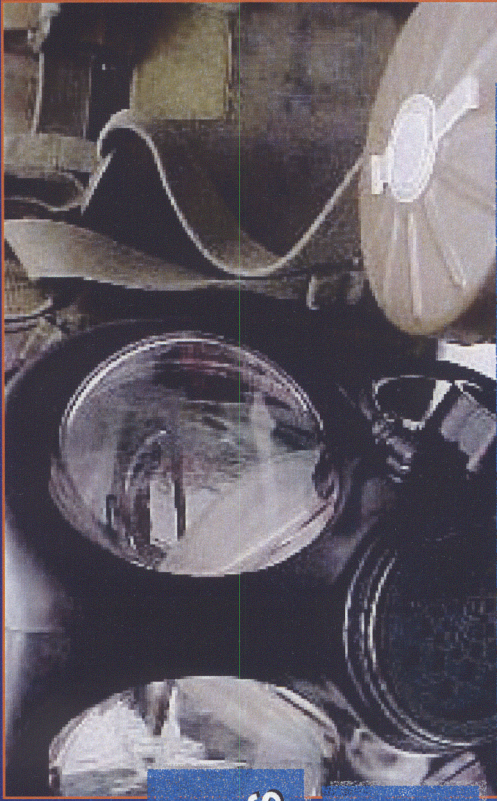
Developed computer-based
modeling tool

Identified and analyzed related equipment standards

Completed first CBRNE certification standard for SCBA

Assisted NIOSH in completing new state-of-the-art
testing lab

Have begun testing commercially available SCBAs

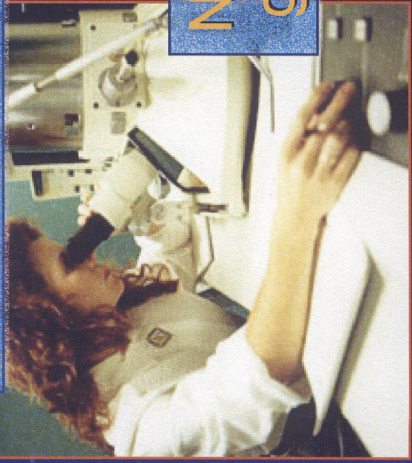


**STANDARDS FOR
CBRNE RESPIRATORY DEVICES**

CBRNE Equipment Standards Program FY 2003 Deliverables

Performance standards, test protocols,
testing programs & research milestones for:

- Escape masks
- Air-purifying respirators
- Chemical, biological, radiological protective ensembles
- Lightweight protective clothing systems
- Chemical and biological agent detection systems
- Decontamination equipment



New decision aids and CBRNE equipment
guides for First Responders

CBRNE Equipment User Guides

U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

National Institute of Justice Law Enforcement and Corrections Standards and Testing Program

Department of Justice Standards and Testing Program

Guide for the Selection of Chemical Agent and Toxic Industrial Material Detection Equipment for Emergency First Responders

NLJ Guide 100-00

Volume I
June 2000

3.3.3 High Performance Liquid Chromatography (HPLC)

High performance liquid chromatography is most useful in the detection and identification of larger molecular weight chemical agents such as BZ or LSD, and in the detection and identification of biological agents. With HPLC, those compounds that do not easily volatilize can be analyzed without undergoing chemical derivatization. HPLC instrumentation is available from a variety of vendors such as Hewlett Packard, Perkin-Elmer, Shimadzu, and Varian, and is shown in Figures 3-15, 3-16, 3-17, and 3-18. As with GCs, HPLC instruments can be equipped with a variety of detectors such as ultraviolet-visible (UV-Vis) spectrometers, mass spectrometers, fluorescence spectrometers, and electrochemical detectors. Two limitations to the fielding of HPLCs and their detectors are the need for power requirements (120V house current) and high purity solvents. Currently there is no portable HPLC unit available.

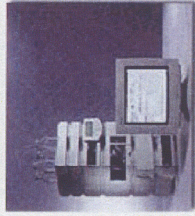


Figure 3-15. Hewlett Packard HP1100 HPLC System



Figure 3-16. Perkin-Elmer Turbo LC Plus HPLC System



Figure 3-17. Hewlett Packard HP1100 HPLC System



Figure 3-18. Perkin-Elmer Turbo LC Plus HPLC System

Table 5-3. Handheld Portable Detection Equipment (CA)
May 2000

Detector Name	Agents Detected	Type Detected	Density	Resistance to Interference	Response Time	Start-Up Time	Detection States	Alarm Capacity	Portability	Battery Needs	Power Capabilities	Environment	Durability	Unit Cost
May 2000														
GC Chemical Agent Detector	●	TBD	○	TBD	●	●	●	●	●	●	●	TBD	●	●
A Passport II PID Filter	●	○	○	TBD	●	●	●	TBD	TBD	TBD	TBD	TBD	○	○
Handheld Portable Detector (APD) 2000	●	○	○	●	●	●	●	●	●	●	●	TBD	○	○
TRON Individual Agent Detector	●	○	○	●	●	●	○	TBD	NA	NA	●	●	○	○

CBRNE Equipment Standards Program What's Ahead?

Funding Shift from



Now coordinating with

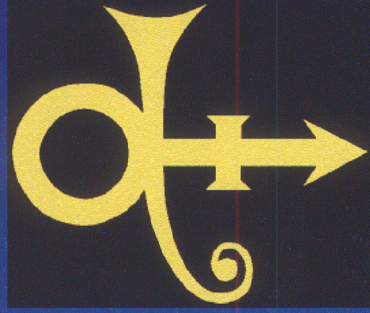
Department of
Homeland Security
(DHS)

Office of Law Enforcement Standards What's Ahead?

Office of Law Enforcement Standards
OLES



Changing Name To:



Technology Office for Public Safety
and Security Standards - TOPSSS

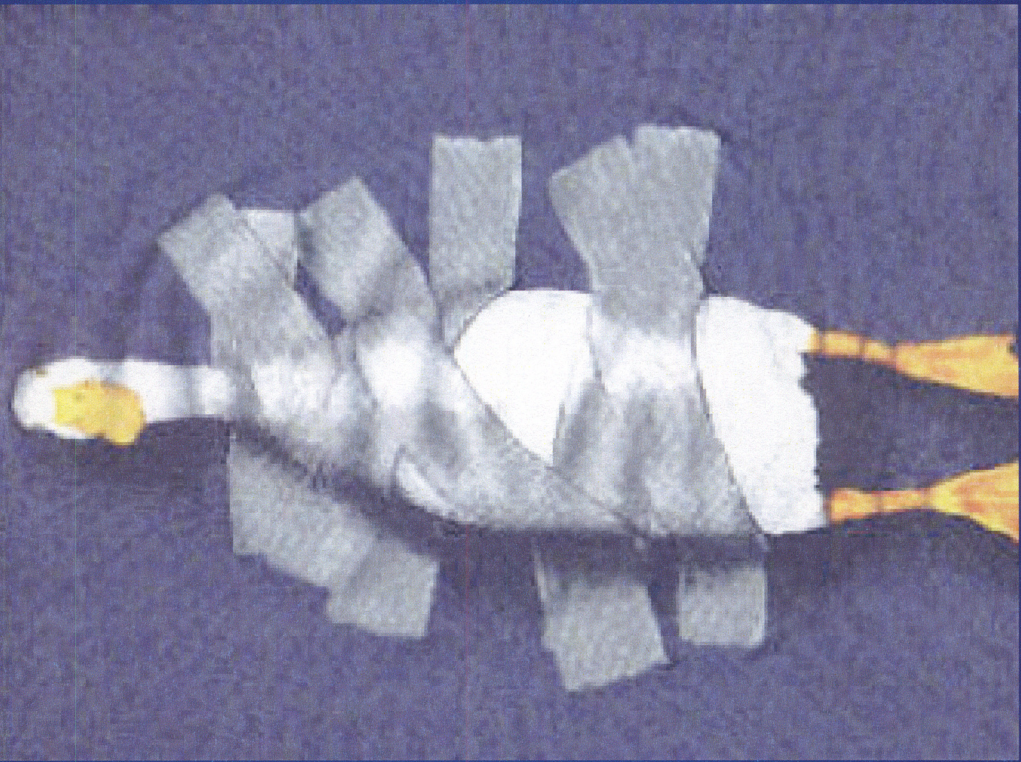
The Office Formerly
Known as
"OLES"

STANDARDS

stan' • dard (*n.*)

a conspicuous object (as a banner) carried at the top of a pole and used to mark a rallying point, especially in battle, or to serve as an emblem.

Dear Office of Homeland Security,
OK, I have my duck taped. Now what do I do?



**Office of Law Enforcement Standards
(OLES)**



**Office of Law Enforcement
Standards**

at the

**National Institute of Standards and
Technology**

Building 225, Room A323, Gaithersburg, MD 20899

(301) 975-2757 (voice)

(301) 948-0978 (fax)

<http://www.eeel.nist.gov/oles>