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Session 1B - TSWG Overview:
What is it, and what is its purpose?

Session 2B: New Technology and Training for Combating Chemical and Biological Terrorism:
Ongoing Development Efforts and Products
TSWG Mission

Conduct the national interagency research and development program for Combating Terrorism through rapid research, development, and prototyping

- Identify requirements, develop solutions, and fund and execute projects
- Customize technology to specific user needs
- Deliver capabilities to users within 18-36 months
“Countering terrorism requires close day-to-day coordination among many Executive Branch agencies…. Part of the challenge is to identify needs, seek common approaches, and coordinate development of new technologies…. This is accomplished through the interagency Technical Support Working Group.”
TSWG Structure

COORDINATOR FOR COUNTERTERRORISM

INTERAGENCY WORKING GROUP
ON COUNTERTERRORISM

PROGRAM MANAGEMENT
Combating Terrorism
Technology Support Office
DoD

MULTI-AGENCY MEMBER SUBGROUPS

Chemical Biological Radiological Nuclear Counter-Measures
FBI/IC

Explosives Detection & Defeat
FAA

Infrastructure Protection
FBI/DoD

Investigative Support & Forensics
FBI/USSS

Personnel Protection
USSS

Physical Security
DoD

Surveillance, Collection & Operations Support
IC

Tactical Operations Support
DoD

Updated 3-20-2001
TSWG Members

**Department of Defense**
- OASSD(SO/LIC) CTPS
- OATSD/CBDP
- ODUSD(P) PS/IP
- OUSD(A&T) DDR&E and S&TS/LW
- Defense Intelligence Agency
- Defense Threat Reduction Agency
- DoD Computer Forensics Laboratory
- DoD Polygraph Institute
- National Security Agency
- The Joint Staff
- Special Operations Command
- Unified Commands
  - European Command
  - Central Command
- US Air Force
  - Air Combat Command
  - Force Protection Battle Laboratory
  - Force Protection System Programs Office
  - Air Force Office of Special Investigation
- US Army
  - SBCCOM / ECBC
  - Medical Institute for Infectious Diseases
  - Office of the Chief of the Army Reserve
  - Special Forces
  - Technical Escort Unit
  - Consequence Management Integration Office
- US Marine Corps - CBIRF
- US Navy
  - JPO / STC
  - Naval Criminal Investigative Service
  - Naval Research Laboratory
  - Naval Special Warfare
  - NCCODT / DTRG
  - Naval Surface Warfare Center (Dahlgren)

**Department of State**
- Coordinator for Counterterrorism
- Diplomatic Security
- Foreign Building Operations

**Department of the Treasury**
- Bureau of Alcohol, Tobacco and Firearms
- US Customs Service
- US Secret Service
  - Forensic Services Division
  - Technical Security Division
  - Special Services Division

**Department of Justice**
- Drug Enforcement Administration
- Federal Bureau of Investigation
  - Counterterrorism Planning Section
  - WMD Operations Unit
  - Hostage Rescue Team
  - Laboratory Division
  - Bomb Data Center
  - Chemistry Unit
  - Computer Analysis and Response Team
  - Forensic Science Research and Training Center
  - Hazardous Material Response Unit
  - Questioned Documents Unit
  - National Domestic Preparedness Office
  - National Infrastructure Protection Center
  - Federal Bureau of Prisons
  - National Institute of Justice
  - US Marshals Service

**Department of Agriculture**
- Animal and Plant Health Inspection Service
- Food Safety and Inspection Service

**Department of Energy**
- Defense Programs Elements
- National Laboratories
- Office of Safeguards and Security
- Office of Energy Intelligence

**Department of Health and Human Services/USPHS**
- Centers for Disease Control & Prevention
- Food and Drug Administration
- Office of Emergency Preparedness

**Department of Commerce**
- National Telecommunications & Information Administration
- National Institute of Standards and Technology
- Office of Security

**Department of Transportation**
- Intelligence and Security Division
- U.S. Coast Guard
- Federal Aviation Administration
  - Office of Civil Aviation Security
  - FAA Technical Center
  - Office of Emergency Preparedness

**Department of Veterans Affairs**

**Department of Interior**
- US Bureau of Reclamation

**Other**
- Intelligence Community
- Environmental Protection Agency
- Federal Emergency Management Agency
- General Services Administration - Federal Protective Service
- US Postal Inspection Service
- Nuclear Regulatory Commission

Updated October, 2000
Requirements

• Threat/Operational Scenario - How the capability will be used.
• Research/Rationale - What systems are available today and specific shortcomings.
• Specific Requirements - size, weight, agents, cost.
• Logistics/Interoperability
• Users - DoD and others
• POC - User organization (Task Manager)
Business Process

- Users submit requirements to TSWG PM for Broad Agency Announcement (Competitive Solicitation for innovative ideas) – Due mid-Feb
- Advanced Program Briefing to Industry (3rd week in Feb)
- BAA advertised in Commerce Business Daily (March)
- Process begins (Quad Chart, White Papers, RFPs)
International Partners

Bilateral Combating Terrorism R&D Agreements

United Kingdom

Canada

Israel
Explosives Detection and Defeat
Investigative Support and Forensics
Personnel Protection
Physical Security
Surveillance, Collection, and Operations Support
Tactical Operations Support
CBRN Countermeasures
CBRNC Mission

• Identify interagency user requirements related to terrorist-employed chemical, biological, radiological, and nuclear material.

• Thrust areas include detection, protection, decontamination, containment, mitigation, and disposal.
CBRNC Threats

• Focus on Non-Battle Field Threats
  – Improvised Devices
    • Issues: Agent Purity, Ability to Protect and Detect
  – Toxic Industrial Chemicals Remain High Priority due to Costs and Availability

• Proliferation of “How to” Literature through the Internet

• Challenges of Urban Environment
Summary

• Forum to identify, prioritize, and fund needs/requirements
• National/interagency dimension
• International dimension - (Israel, UK, Canada)
• Dual use/commercialization
• Fast track and flexible program forum
• Successful equipment transitions to operational communities

Questions?
New Technologies and Training for Chemical and Biological Terrorism

Ms. Tracy Cronin and Mr. Erik Chuba
Combating Terrorism Technology Support Office
Technical Support Working Group
Arlington, VA
Program Thrust Areas

- Databases
- Personal Protective Equipment
- Detection
- Decontamination
- Training
Ongoing Projects
Hazardous Materials Database

Requirement:
Handheld system that contains critical data, including toxicity levels and standard-off distances, on chemical agents, precursors and other hazardous materials.

Status:
CWA data incorporated and porting to Windows CE complete. Available for purchase from AristaTek.
Requirement:
Low-cost, disposable Level A, B, and C protective suits which provide full body C/B/TIC protection for First Responders, i.e., Law Enforcement, Fire Fighters, and EMS.

Status:
Expanded scope of effort to include development of BL-2/3 protective suits for USDA.
Requirement:
Develop agent resistant (liquid and vapor) and durable overpack bags for safe transport of improvised CB devices and leaky military munitions.

Status:
Project completed. Overpacks will be available for purchase through GSA. Waiting for confirmation on listing.
Escape Hood and Quick Mask Testing

**Requirement:**
Provide interagency users and law enforcement agencies with an escape hood/mask that provides at least 15 minutes protection in a CB environment and is safe and easy to use.

**Status:**
Testing and modifying commercial and prototype mask designs. Initiating follow-on effort to develop low-profile CW escape mask.
Biocontaminant Detection and Identification Strategies

Requirement: Modify existing surface sampling and analysis protocols that will support federal agency response teams. Effort will identify ideal surface sampling areas inside residential and office buildings.

Status: Determined detection limits for a variety of surfaces using current surface sampling methodologies.
**Requirement:** Develop a small inexpensive sampler/detector for the law enforcement community. The sampler will provide timely indications (visual or auditory alert) for nerve agents.

**Status:** Identifying suitable technologies that meet user requirements for reliability, sensitivity, packaging, and costs. This effort is funded by NIJ.
**Mass Decontamination Protocols**

**Requirement:** Validated guidelines for response personnel to cover the range of ages, health status and physical capabilities of the civilian population.

**Status:** Expert panel formed and four scenarios developed (persistent Chemical agent, non-persistent chemical agent, toxic industrial chemical and biological agent.) Reviewing scientific and operational data to develop guidelines.
Products
Requirement:
Develop a database containing pertinent characteristics of terrorist employed biological agents.

Status:
Human pathogen database available.
Plant and animal pathogens completed.
Classified and unclassified versions exist.
Chemical Agent Detector

Requirement:
Modify DoD M22 (ACADA/GID3) IMS detector to include ID and specifications of expanded chemical threat agents (GF, AC, CK, CG, HN₃). Data archival and date/time stamp.

Status:
Prototypes delivered. Development of next generation system with reduced size and false alarm rate underway.
Chem/Bio EOD Suit

**Requirement:**
Modified commercially-available EOD Suit to provide protection against Chem/Bio Hazards.

**Status:**
Evaluation of SRS-5 systems is ongoing. Project is joint funded by NIJ/TSWG. Provides protection through incorporation of CB garment under garment.
Real-Time Portable X-Ray System

Requirement:
Develop a one-man portable, very low cost x-ray system for real-time inspection of suspect parcels.

Status:
Joint Service EOD Contract - 705 units.
Postal Service - 60 units operational.
FBI - 5 units operational.
UK - 1 unit for testing.
Nuclear Material Classification System

Requirement:
Ruggedized handheld detector to classify materials in a permissive environment.

Status:
Commercially available and Used by USCS, and Federal, State and Local Law Enforcement Agencies.
Training
Solving the Training Challenge

Initial, Sustainment, and Specialty Training

Consequence Management
Virtual University

Awareness
Certification

WMD Lab Tech Training
ADL Courseware Development

Management
Equipment

Satellite Broadcast Delivery
Vision

- Develop a state-of-the-art training delivery system/architecture to provide:
  - Synchronous, asynchronous, and on demand WMD response training at no/low cost to recipients
  - Integration of existing, disparate DL/ADL networks
  - Centralized access to WMD training
  - A means to minimize identified WMD training redundancy and shortfalls using DL/ADL
Goal

- Attain WMD response standardization and interoperability through:
  - Accredited WMD response training program
  - Shared use by Federal, State, and local WMD response elements across all disciplines
  - Ensuring a **unified effort** during operational response
Approach

- Integrate leading development activities from a number of agencies and institutions
- Establish a network of resources to train personnel anytime, anywhere
WMD Training Efforts

- WMD Response Training via Satellite
- WMD ADL Courseware Development
- WMD Laboratory Technician Course
- WMD Virtual University
Requirement:
Deliver accredited WMD response training via satellite and terrestrial distance learning networks to DOD, other federal, state, and local emergency response and management personnel.

Approach:
Leverage existing and evolving Government and civilian satellite and cable broadcast networks and computer based delivery systems and technologies.

Status:
Two monthly 60 minute programs in production co-sponsored by DOJ, FEMA, and DOD:
-“Live Response” topical expert panel discussion with viewer call-in.
Live Response (24 Jan 01)

January 2001 Live Response

No Picture
**WMD ADL Courseware Development**

**Requirement:**
Develop and deliver accredited WMD response training both on line and via CD-ROM.

**Approach:**
Produce the Weapons of Mass Destruction Psychological Impacts and Effects course as the model for future courseware development. Incorporate education industry instructional design best practices and standards and Advanced Distributed Learning Network (ADLNET) Sharable Content Object Reference Model (SCORM) standards.

**Status:**
WMD-PIE Version 1.0 in final production.
Initial fielding to occur in late March – early April.
Requirement:
Develop a training program designed to provide the novice, intermediate, apprentice, and advanced laboratory technician with knowledge, skills, and abilities comparable to those needed to work in a Chemical Surety or Biological Safety Level 3 laboratory.

Approach:
Design a modular training program focused on Chemical Surety and Biological Safety Laboratory fundamentals and procedures. Incorporate the use of standard and high end laboratory and field detection, identification, and analysis equipment.

Status:
Training requirements analysis in progress.
Develop an Internet based learning portal and virtual university to deliver WMD response training, training related products, and information to Federal, State, and local response and emergency management personnel.

**Approach:**
Identify a primary delivery system that incorporates the latest ADL technologies. Integrate new and existing ADL delivery systems and architectures. Provide centralized access to WMD training across disparate training delivery systems at low or no cost.

**Status:**
Delivery system requirements and architectures being identified and documented.
Training products being developed.
Virtual University
(Concept)
Interagency WMD Response Training Program and Delivery System

COMMON WMD TRAINING STANDARD

- Conventional Training
- Distance Learning
- Operational Application
- Advanced Distributed Learning
- Interactive Training
Summary

- Developing a common, integrated training delivery system and architecture
- Leveraging and bringing together similar Government initiatives/efforts
- Integrating current and evolving operational and training technologies
- Meeting the needs/requirements of Interagency users
QUESTIONS?