



CTTSO

Combating Terrorism Technical Support Office

Chemical, Biological, Radiological, and Nuclear Countermeasures



Advance Planning Briefing for Industry

17 February 2009



Mission

- Identify interagency user requirements related to terrorist-employed chemical, biological, radiological, and nuclear materials
- Rapid research, development, and prototyping
- Focus areas include:
 - Detection
 - Protection
 - Information Resources
 - Consequence Management



Subgroup Membership

- **DoD** (ATSC(NCBD), ATSL, DIA, DTRA, JCS, JIEDDO, NSA, PFPA, SOCOM, USA (20th SUPCOM-CBRNE, 22nd CML Bn-TE, AMEDD, CMLS, MANSCEN, NGIC, RDECOM-ECBC, REF), USAF (ACC), USMC (CBIRF, MARCORSYSCOM), USN (BUMED, NAVCENT, NAWC, NSWC)
- **DHS** (FEMA, FPS, S&T, TSA, USCG, USSS)
- **DOS** (DS, OBO, S/CT)
- **DOJ** (FBI, NIJ, USMS)
- **DOE** (HSS)
- **DHHS** (CDC, FDA, NIOSH)
- **DOT** (RITA-Volpe Center)
- **USDA** (APHIS, FSIS)
- **DOC** (NIST)
- **OGA** Intelligence Community, EPA, IAB, NRC, U.S. Capitol Police, U.S. Postal Inspection Service, U.S. Senate SAA, White House (HSC), Federal Reserve Board
- **State & Locals** Fairfax County (VA) Fire Department, New York City Police Department, Seattle (WA) Fire Department, Fire Department of New York.

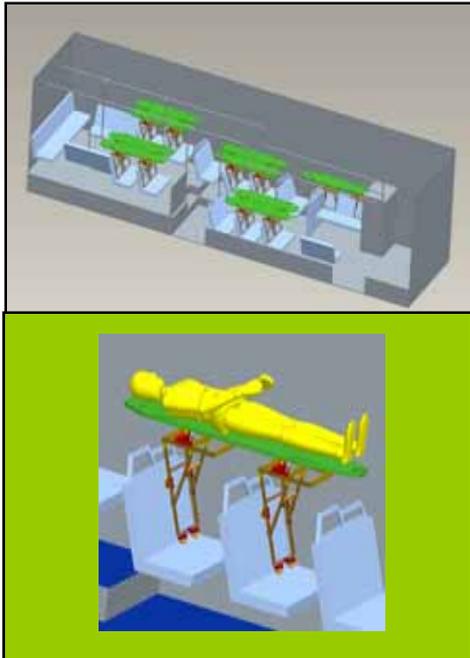


Terminology

CWA	Chemical Warfare Agent
COTS	Commercial-off-the-Shelf
IDLH	Immediately Dangerous to Life and Health
ITF	International Task Force
GPS	Geographical Positioning System
HVAC	Heating, Ventilation, and Air Conditioning
NFPA	National Fire Protection Association
PPE	Personal Protective Equipment
RF	Radio Frequency
RH	Relative Humidity
SCBA	Self-Contained Breathing Apparatus
TIC	Toxic Industrial Chemical



2008 Success Stories



Quick Response (City Bus)



Long-Distance (School Bus)

Quickly transform various transportation conveyances, including school buses and transit buses, into evacuation vehicles.



2008 Success Stories



Develop a filter for personal hydration systems that operates via in-line and gravity-fed modes and removes select toxic industrial chemicals, heavy metals, protozoa, bacteria, viruses, and petroleum products for use in a chemically or biologically contaminated environment.



2008 Success Stories



Develop a non-encapsulating suit that provides vapor, aerosol, and splash protection from CBR agents.



FY 2010 Requirements

- R2502 – Best Practices for Mail Screening and Handling
- R2506 – Mass Decontamination System Review and Design
- R2507 – Noise-Filtering Digital Technology for SCBAs
- R2508 – Single Detector for CWAs and TICs
- R000-CB – Unspecified Requirement



R2502 – Best Practices for Mail Screening and Handling

- **Product:** A best-practices guide on the most efficient and effective processes and procedures to handle and screen mail entering government facilities for biological, chemical, radiological, and explosive threats.
- **Specifications:**
 - Identify commonalities and include the collection, prioritization, and consensus of best-practices and lessons-learned from a group of government and industry experts.



R2502 – Best Practices for Mail Screening and Handling

- **Specifications (cont.):**

- Focus on strategies to reduce the risks of mail-borne threats to government personnel and facilities, including:
 - Analysis of incoming mail streams to determine what mail streams constitute the highest risk;
 - Recommended pre-coordination activities with local law enforcement, first responders, and routine shippers;
 - The value and implementation of screening technologies;
 - Case studies to identify lessons-learned and generate discussion;
 - Communication strategies such as personnel training recommendations, including those for mail-handling personnel, as well as general mail security awareness training for all employees;
 - Contamination reduction strategies including ventilation/HVAC or other infrastructure recommendations;
 - Post-incident recommendations such as “Evidence Do’s and Don’ts” and generic reporting requirements.



R2506 – Mass Decontamination System Review and Design

- **Product:** Review of current commercial-off-the-shelf (COTS) products. Provide recommendations for optimum system design.
- **Specifications:**
 - Conduct a needs analysis with representatives of the emergency response community to define the system requirements to achieve an optimum mass decontamination system capable of decontaminating 500 ambulatory victims and/or 50 non-ambulatory victims in one hour.



R2506 – Mass Decontamination System Review and Design

- **Specifications (cont.):**
 - The system requirements may contain, but shall not be limited to: portability, throughput, decontamination efficiency, maintenance costs, ease of operations, life cycle, decontamination solutions, flow rates, angle of incidence, spray pattern, training requirements, and severe weather capabilities.



R2507 – Noise-Filtering Digital Technology for SCBAs

- **Product:** A noise-filtering or noise-cancelling technology to allow for clear communications with individuals wearing SCBAs, for use by emergency responders.
- **Specifications:**
 - Improve the clarity of information provided via a microphone in the SCBA
 - Must not drastically increase weight of SCBA
 - Must not limit responder field of view
 - Must meet the appropriate NFPA standards
 - Earplugs or headphones are not desired



R2508 – Single Detector for CWAs and TICs

- **Product:** An orthogonal detector system for detection, identification, and quantification of chemical warfare agents (CWAs) and toxic industrial chemicals (TICs) (most common International Task Force (ITF)-40 threat permeators/penetrators) at Immediately Dangerous to Life or Health (IDLH) concentrations or lower.



R2508 – Single Detector for CWAs and TICs

- **Specifications:**

- System must be field-portable, self-calibrating, battery (COTS) operated, and capable of being decontaminated.
- The device shall be rugged, operate after repeated vibration cycles, and be able to withstand a drop onto concrete from a height of 5 feet.
- Must be able to use the device in Class 1 / Level A PPE.
- The system shall be optimized to ensure low cost and simplicity of maintenance and repair.



R2508 – Single Detector for CWAs and TICs

- **Specifications (cont.):**
 - Operate over a high dynamic temperature range (-20 to 120 °F) and humidity conditions (15 – 100% RH), where it will be exposed to chemicals, salt spray, and precipitation.
 - Capable of visual and audible alarms, a numerical display of concentration level and detected agent type, and GPS and RF data communications.
 - Must be intrinsically safe.



R2508 – Single Detector for CWAs and TICs

- **Specifications (cont.):**
 - The system must be a small, robust package approximately 18 in. (length) x 12 in. (height), with a thickness not to exceed 6 in.
 - Total system weight including batteries shall be no greater than 20 pounds.
 - The initial device cost shall not exceed \$40,000.
 - Consumables shall be less than \$50 per month with scheduled maintenance at monthly intervals or greater.
 - Lower explosive limit and oxygen concentration measurements as well as specific CWA and TIC measurements.



R-000-CB10 CBRNC Unspecified

- **Product:** New and improved technologies or emerging technological capabilities pertaining to Chemical, Biological, Radiological, and Nuclear Countermeasures (CBRNC).
- **Areas of particular interest:**
 - Personal protective equipment.
 - Collective protection.
 - Novel detection technologies for chemical and biological agents.



Contact Information

BAA-Specific Questions:

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