

The DoD Chemical and Biological Defense Program



***DoD Advanced
Planning Briefing
for Industry***

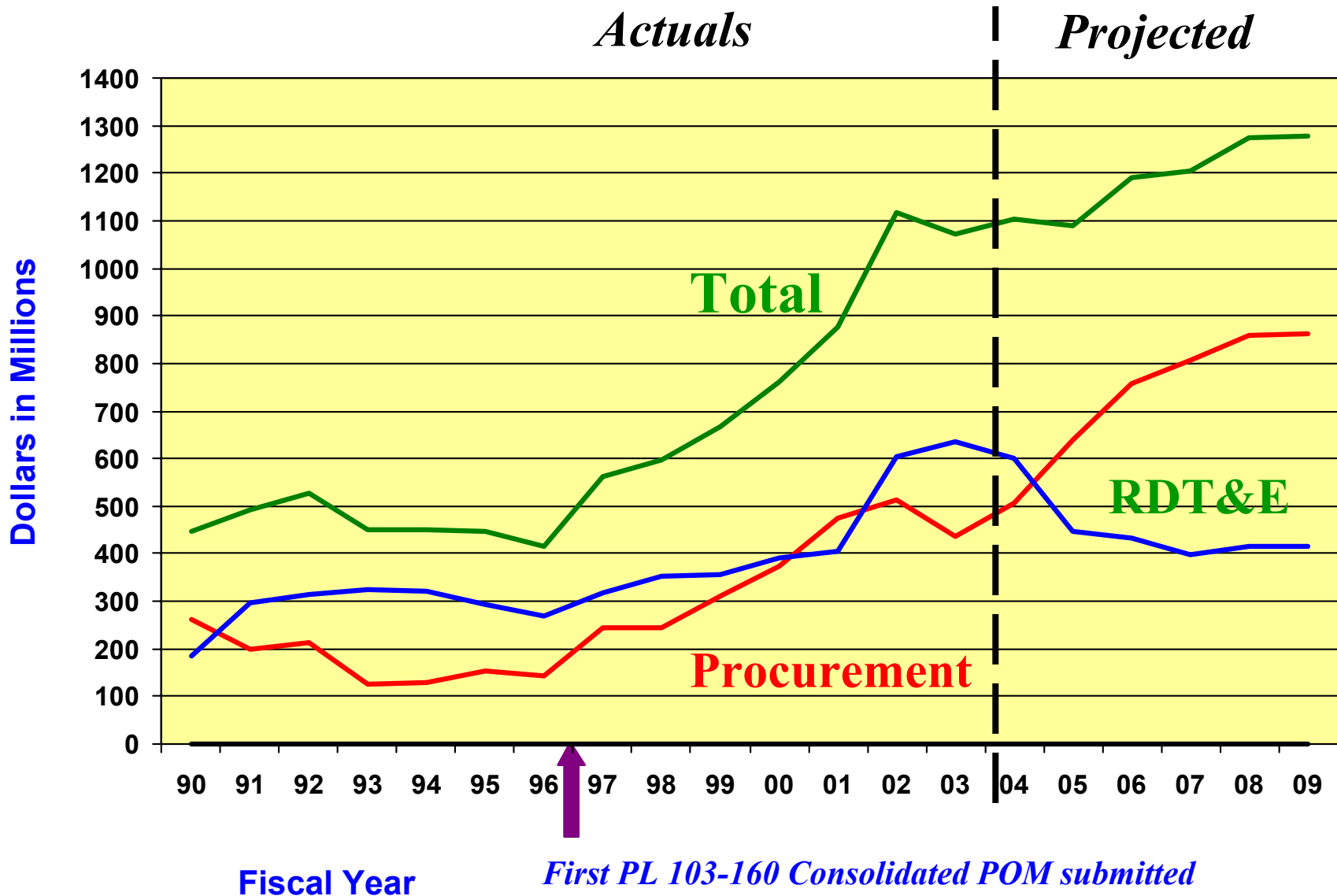


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April 8, 2003

DoD CB Defense Program Historical Perspective- Funding – FY04 PB

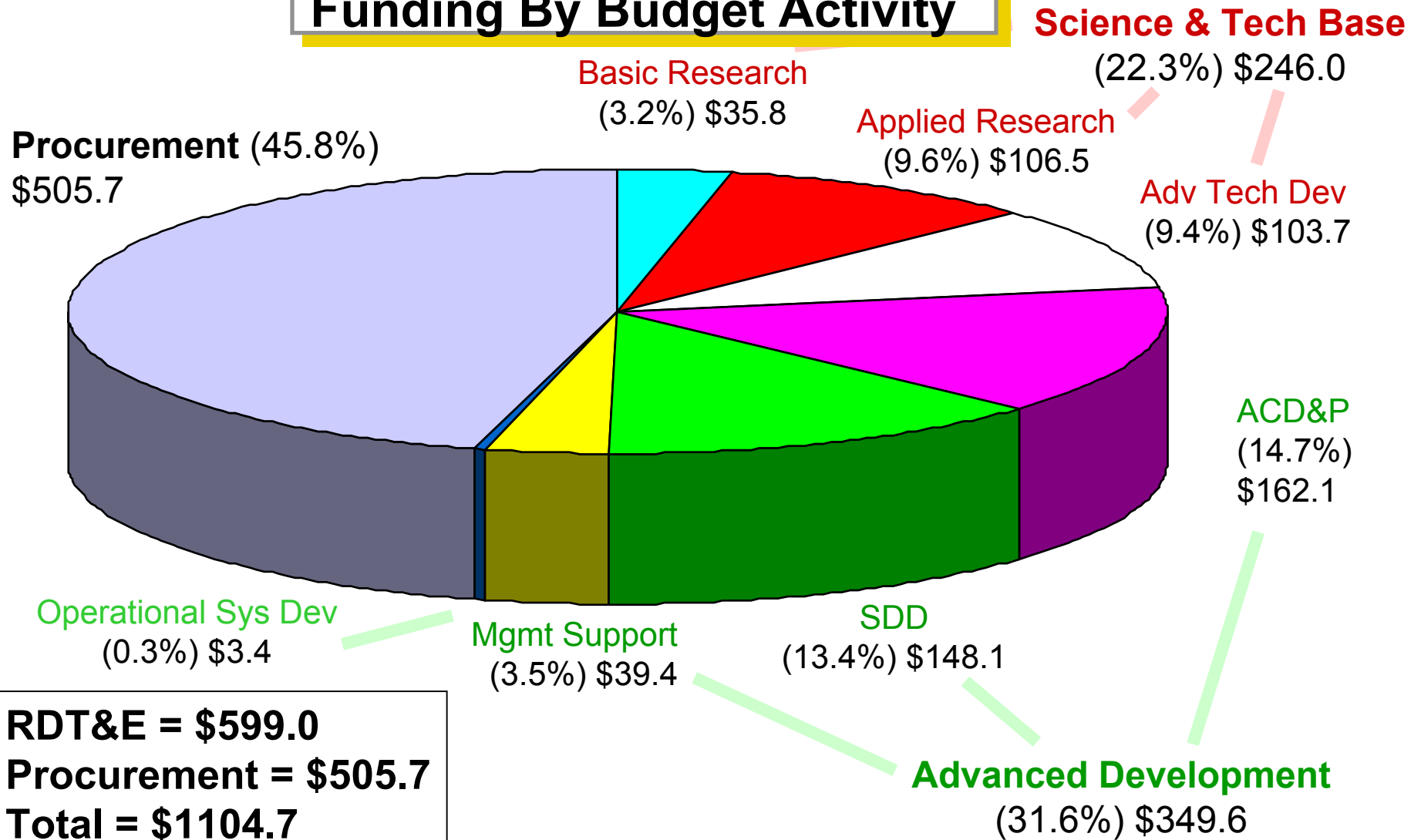
DATSD(CBD)



DoD Chemical/Biological Defense Program FY2004 PB (\$M)

DATSD(CBD)

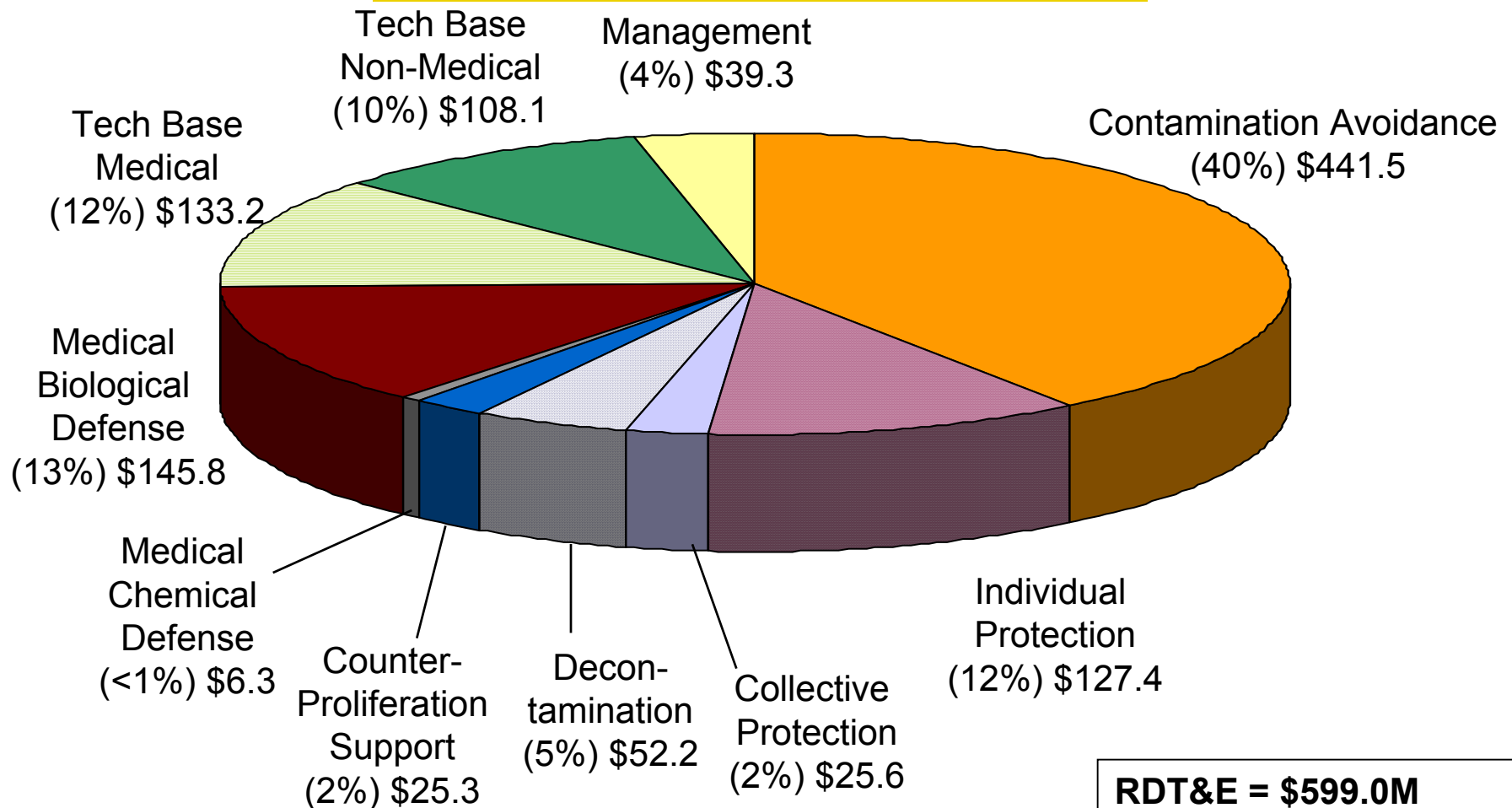
Funding By Budget Activity



DoD Chemical/Biological Defense Program FY2004 (\$M)- President's Budget Request

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Funding by Commodity Area



RDT&E = \$599.0M
Procurement = \$505.7M
Total = \$1104.7M

Highlights FY04 CBDP Budget Request

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- ◆ **Decrease in RDT&E from FY03 levels**
 - \$634M (FY03) to \$599M (FY04)
 - Overall decrease due to loss of approximately \$387M of Homeland Security funds- now transferred to Department of HLS.
 - Significant congressional adds to technology base for:
 - Chem and bio medical countermeasures
 - CB detection and sensors
 - Decontamination technologies
 - CB Initiative Fund (\$25M)

- ◆ **Increase in Procurement from FY03 levels**
 - \$437M (FY03) to \$506M (FY04)
 - Overall increase partly due to additional funding for:
 - CB Installation Protection (\$78M)
 - Joint Biological Point Detection System (\$66M)- supports fielding of additional Bio Detection Companies

Chemical/Biological Defense Program

Program Drivers: Joint Future Operational Capabilities

DATSD(CBD)

- *Derived from Joint Vision 2020 Strategy*
- *Developed by the Joint Staff and the Joint Requirements Office*

- Focused on the far-term (2007 to 2025)
- Built from Service Future Operational Capabilities
- Compiled into a common architecture
- Approved by Service representatives
- Provides major and sub-criteria capabilities required by users – guide S&T programs

- *Intelligence assessments provide critical input for developing CB defense warfighting capabilities that respond to validated threats*

◆ **Battlespace Management**

- Battlespace Information Management
- Battlespace Analysis & Planning

◆ **Contamination Avoidance**

- Early Warning
- Medical & Environmental Surveillance
- Point Detection

◆ **Individual Protection**

- Medical Prophylaxis
- Respiratory Protection
- Percutaneous Protection

◆ **Restoration**

- Equip/Facilities/Area Decon
- Medical Diagnosis
- Personnel/Casualty Decon
- Medical Treatment

◆ **Collective Protection**

- Transportable Collective Protection
- Fixed Site Collective Protection
- Mobile Collective Protection

Future Procurements Supporting Improved Warfighter Capabilities

An Integrated Approach to Counter the Threat

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Sustained Combat Power

CB Threats & Hazards

Agent
Delivery

Doses on
Target

Downwind
Dispersal

Doses
Absorbed

Symptoms



Medical Pretreatment



Contamination Avoidance
& NBC Battle Management
(Detection, Identification,
Reconnaissance & Warning)



Individual & Collective Protection



Medical Treatment



Decontamination,
Restoration

Contamination Avoidance: Key Capabilities To Be Procured FY04-09

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◆ *Biological Detection*

—Joint Bio Standoff Detector System (JBSDS)

- Standoff detector, ranging, tracking and discrimination (bio versus non-bio) of BW aerosol clouds for advanced warning, reporting and protection.



**JBSDS
Early
Prototype**

—Joint Biological Point Detection System (JBPDS)

- Modular Bio point detection suite integrated on service platforms to replace BIDS and IBAD
- Identify BW agent with 15 min or less after detection
- Full automated detect/identification operation



Contamination Avoidance: Key Capabilities To Be Procured FY04-09

DATSD(CBD)

◆ **Chemical Stand-Off/Remote Detection**

- Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD)
 - Range up to 5 km; Capable of remote, aerial, and on-the-move operation



◆ **ARTEMIS-Active CW Stand-off**

- Detection and quantification of chemical agents to 20 km



ARTEMIS

◆ **Warning and Reporting**

- Joint Warning and Reporting Network (JWARN).
Comprehensive analysis and response capability to:
 - Interface with all NBC detectors and sensors & interoperability with all service Command and Control (C2) systems
 - Generate NBC reports, and automatically transmit NBC alarm and data
 - Vehicle or man-portable operations



Contamination Avoidance: Key Capabilities To Be Procured FY04-09

DATSD(CBD)

◆ Chemical Point Detection/Monitoring/Recon

- Joint Chemical Agent Detector (JCAD)
 - Small, lightweight detector to detect, identify, quantify and warn of low levels of CW vapors

- NBC Recon Vehicle (NBCRV)
 - Armored NBC Recon with improved detection (JSLSCAD for stand-off chemical, CBMS for bio),
 - Equip Army future Brigade Combat Teams

- Joint Service Lightweight NBCRS
 - NBC recon/combat hazard information
 - Used by Marine Ground Task Forces, Air Force tactical forces, and Army Light Contingency forces
 - Two variants, HMMWV and LAV



JCAD



NBCRV



JSLNBCRS



Individual Protection: Key Capabilities To Be Procured FY04-09

DATSD(CBD)

♦ Respiratory Protection

- Joint Service General Purpose Mask (JSGPM)
- Joint Service Aviation Mask (JSAM)
 - Continuous CB protection for aviators in all Services
- Joint Service Mask Leakage Tester (JSMLT)
 - Check serviceability of masks in field, fit factor validation



JSAM



JSGPM

♦ Percutaneous Protection (Clothing)

- Joint Service Lightweight Integrated Suit Technology (JSLIST)
 - Multiservice efforts to provide improved chemical protection, including overgarments, boots, gloves, and other mission essential protective clothing
- Joint Protective Aircrew Ensemble (JPACE)



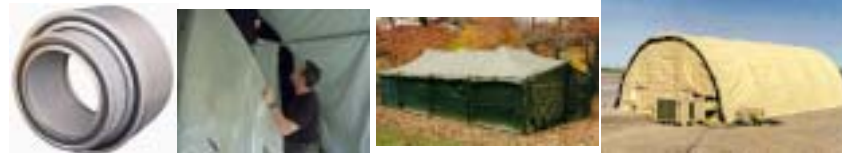
Overgarment



Collective Protection: Key Capabilities To Be Procured FY04-09

DATSD(CBD)

- ◆ **Collective Protection System Amphibious Backfit**
 - CPS is integrated with the ship's heating, ventilation, and air-conditioning (HVAC) systems and provides filtered supply air for over-pressurization of specified shipboard zones to keep toxic contamination from entering protected spaces. CPS eliminates the need for the ship's crew to wear protective gear (i.e., suits, masks)
- ◆ **Chemical/Biological Protective Shelter (CBPS)**
 - Highly mobile, rapidly deployable shelter system designed to be used for Echelon I and II forward area medical treatment facilities
- ◆ **Joint Collective Protection Equipment (JCPE)**
 - Provides insertion of technology improvements to existing equipment; filtration, shelter materials and environmental controls



JCPE

Medical Capabilities: Key Capabilities To Be Procured FY04-09

DATSD(CBD)

◆ Joint Vaccine Acquisition Program (JVAP)

- JVAP initiated to develop, ensure FDA licensure, produce, and store biological defense vaccines to protect U.S Forces against the threat of biological warfare.



◆ Joint Biological Agent Identification and Diagnostic System (JBAIDS)

- Rapidly confirm and identify BW and Infectious Disease agents in both environmental and clinical specimens.



JBAIDS

◆ Transition chemical defense products into Service O&M buys:

- ATNAA- Antidote Treatment-Nerve Agent Auto-Injector
- PB- Pyristogmine Bromide
- SERPACWA- Skin Exposure Reduction Past Against Chemical Agents



ATNAA



SERPACWA

Decontamination: Key Capabilities To Be Procured FY04-09

DATSD(CBD)

- ◆ **Modular Decontamination System (MDS)**

- Provides high pressure water for the primary wash process
- Mechanically dispense and scrub decontaminant



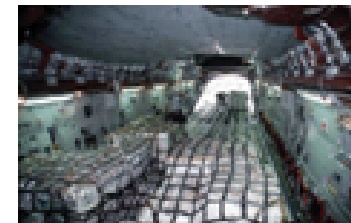
- ◆ **Joint Service Family of Decon Systems (JSFDS)**

- Capability to decontaminate large fixed site



- ◆ **Joint Service Sensitive Equipment Decontamination (JSSED)**

- Provides first-time capability to decon sensitive electronics, avionics, electro-optic equipment and vehicle interiors



JSSED

- ◆ **Sorbent Decontamination System (SDS)**

- Provides a reactive sorbent for immediate equipment wipedown



M100 SDS

Homeland Defense and Consequence Management Chemical/Biological Defense Initiatives



FY 03 Bio Defense Homeland Security Support Program

DATSD(CBD)

- ◆ **In FY03 Congress provided additional \$420M to support DoD Bio Defense Homeland Security Support Program**
 - Bio Counterterrorism Research Center – Fort Detrick
 - Biological Defense Initiative – DTRA

- ◆ **\$420M no longer in DoD CBDP account.**

- ◆ **DoD awaiting guidance from DHLS concerning execution and follow-on work to support original projects**

CB Installation Protection Initiative

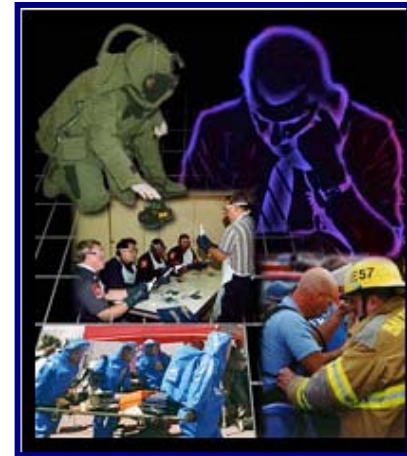
DATSD(CBD)

- ◆ **\$32.9M budgeted in FY03 for installation protection equipment**
 - Integrated suite of CB sensors and support equipment installed at 9 installations to support a “CONUS Pilot Protection Project”.

- ◆ **For FY04-09 the CB Installation/Force Protection Program (CBIFPP) funded: (FY04- \$76.6M, FY05-\$101.8M-procurement)**
 - Provides CBIFPP equipment for 15 installations in FY04

- ◆ **Bio-Detection Equipment consists of :**
 - Joint Biological Point Detection System
 - Portal Shield System
 - Manual Dry Filter Unit Samplers
 - Confirmatory Analysis Equipment

- ◆ **Chemical Detection Equipment consists of :**
 - Automatic Chemical Agent Detector and Alarm
 - Joint Chemical Agent Detector



CB Installation Protection Equipment

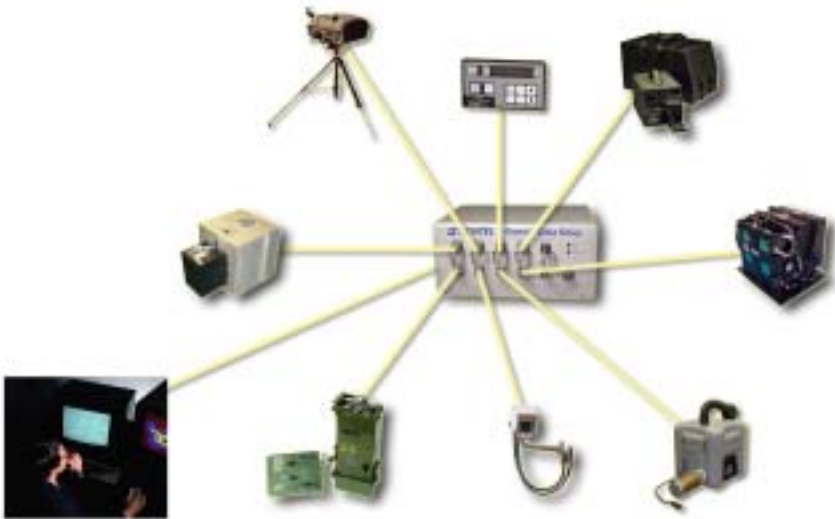
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Dry Filter Unit



JBPDS



Remote Data Relays (RDR)



Portal Shield Bio Detector



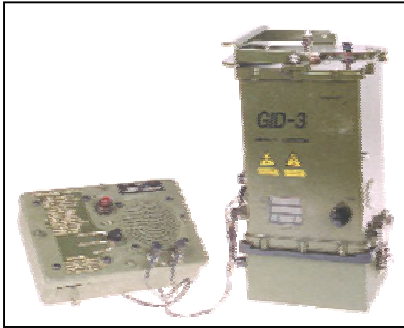
Ruggedized Advanced Pathogen Identification Device (RAPIDS)



Biological Sampling Kit



Hand Held Assays Kit



Automatic Chemical Agent Detector and Alarm (ACADA)

Consequence Management - WMD – Civil Support Teams

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- ◆ **Funding in the DoD CBDP provides resources to complete fielding and modernization of:**
 - 32 WMD- Civil Support Teams
 - Reserve Component (RC) Recon and Decon Teams

- ◆ **Program provides full funding for**
 - Type-classified protection, detection, and training equipment
 - Development and fielding of upgraded analytical platforms for the detection, identification, and characterization of CB and radiological agents used by terrorists in a civilian environment
 - Development and fielding of communication capabilities that are interoperable with other federal, state, and local agencies
 - Testing and evaluation to ensure that the systems are safe and effective
 - Program management funds to successfully execute the CBDP Consequence Management RDA program

- ◆ **Section 1403, FY03 NDAA directs establishment of 23 additional teams**
 - DoD currently preparing required Congressional report to provide schedule and budget requirements to man, train and equip new teams

Challenges Facing the CBDP

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- ◆ **Changing threat**
- ◆ **Maintaining current programs to respond to warfighter requirements:**
 - **Balance of competing priorities within current budget authority**
- ◆ **Evolving missions**
 - **Support to force protection & domestic preparedness**
 - **Enhancing CBD installation force protection**
 - **Executing homeland defense programs as strategy evolves**
- ◆ **Adapting to Power Projection needs**
 - **Less pre-positioning & logistical tail, but creates new vulnerabilities**
- ◆ **Acceleration of CB defense technologies**
 - **Spinning off appropriate technologies for civilian application**