



# Joint Service Collective Protection

---

## Commodity Area Overview

22 October 2002

Michael A. Pompeii, P.E.  
Commodity Area Manager, Collective Protection  
Joint Service Materiel Group (JSMG)

*OFFICE:*

NAVAL SURFACE WARFARE CENTER,  
DAHLGREN DIVISION (NSWCDD)  
Chemical / Biological Defense Division (B50)  
DAHLGREN VA 22448-5100  
Email: [pompeii@nswc.navy.mil](mailto:pompeii@nswc.navy.mil)

# Report Documentation Page

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

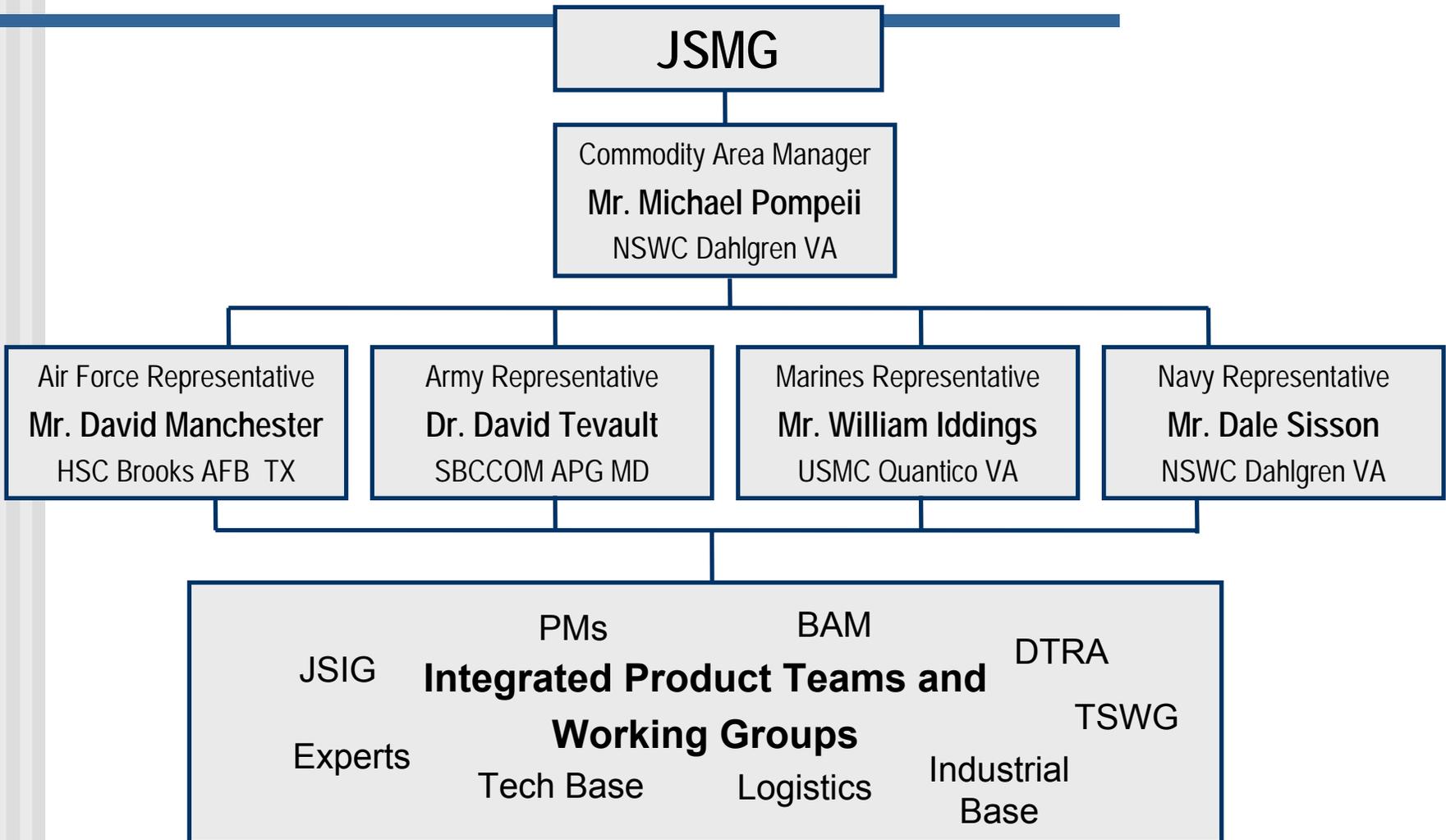
1. REPORT DATE <b>22 OCT 2002</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2002 to 00-00-2002</b>	
4. TITLE AND SUBTITLE <b>Joint Service Collective Protection. Commodity Area Overview</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Naval Surface Warfare Center,Dahlgren Division,17320 Dahlgren Road Building 1480,Dahlgren,VA,22448</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>The original document contains color images.</b>					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES <b>23</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

# Agenda

---

- Organization
- NBC Collective Protection (Colpro) Basics
- Colpro Mid- and Far-term Objectives
- Equipment and Program Info
- Industry Opportunities
- Summary

# Collective Protection Commodity Area Management



# ColPro Basics

---

- Provide filtered air at slight overpressure.
- No need to wear cumbersome protective clothing and masks.
- Use airlock vestibules to enter/exit during routine operations.
- Use a Contamination Control Area (CCA) to enter during chem-bio-radiological (CBR) conditions.

# Colpro Basics

---

- Where is colpro typically required?
  - Command/control areas
  - Medical areas
  - Rest/relief areas
- Colpro applications:
  - Mobile
    - Vehicles, ships, aircraft
  - Transportable
    - Portable shelters, tents, vans
  - Fixed Site
    - Buildings, permanent shelters
- Colpro applications can be permanent or temporary.

# Mid-term Collective Protection Objectives (2003-2007)

---

- ❑ Increased number of shelters for command & control, medical, and rest/relief areas.
- ❑ Improved shipboard systems.
- ❑ Rapid insertion of technology improvements to existing equipment.
- ❑ Begin fielding new technology shelter system.

# Far-term Collective Protection Objectives (2008-2017)

---

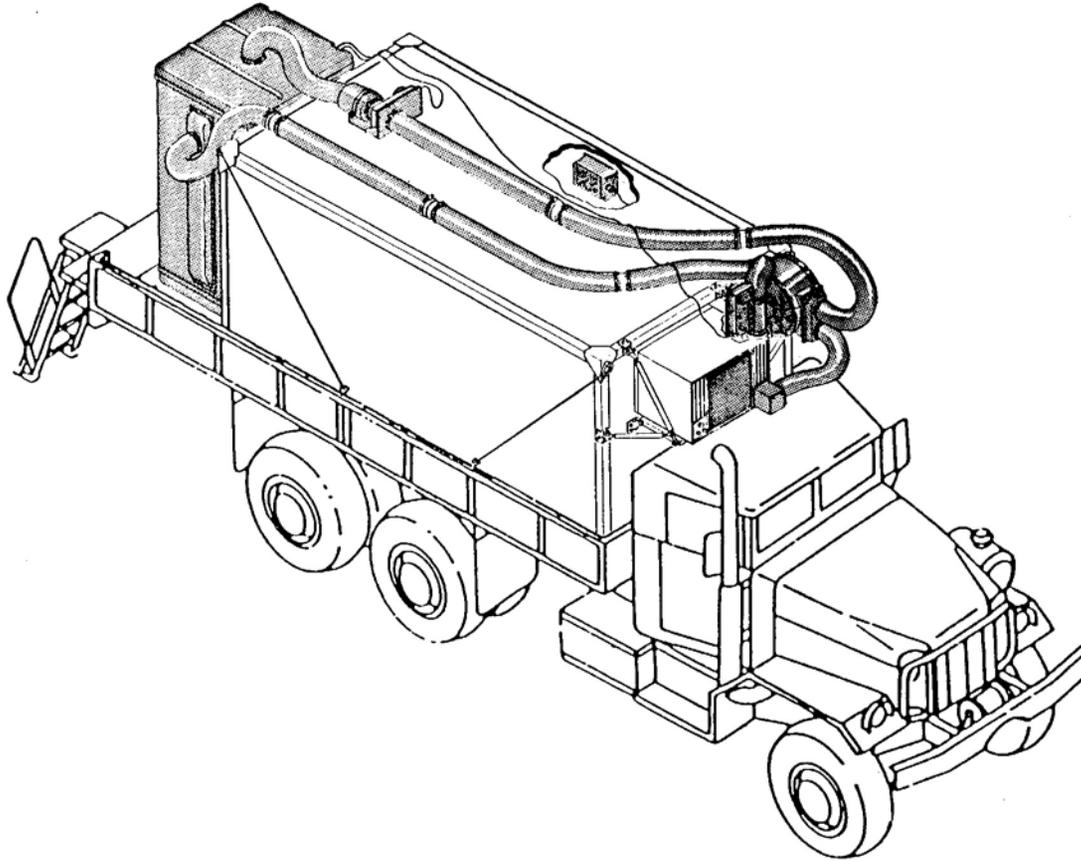
- ❑ Standardization of equipment.
- ❑ Fielding of technology improvements.
- ❑ Full integration of colpro into standard shelter systems.
- ❑ Fielding of novel filtration technologies.

# Colpro Equipment and Program Info

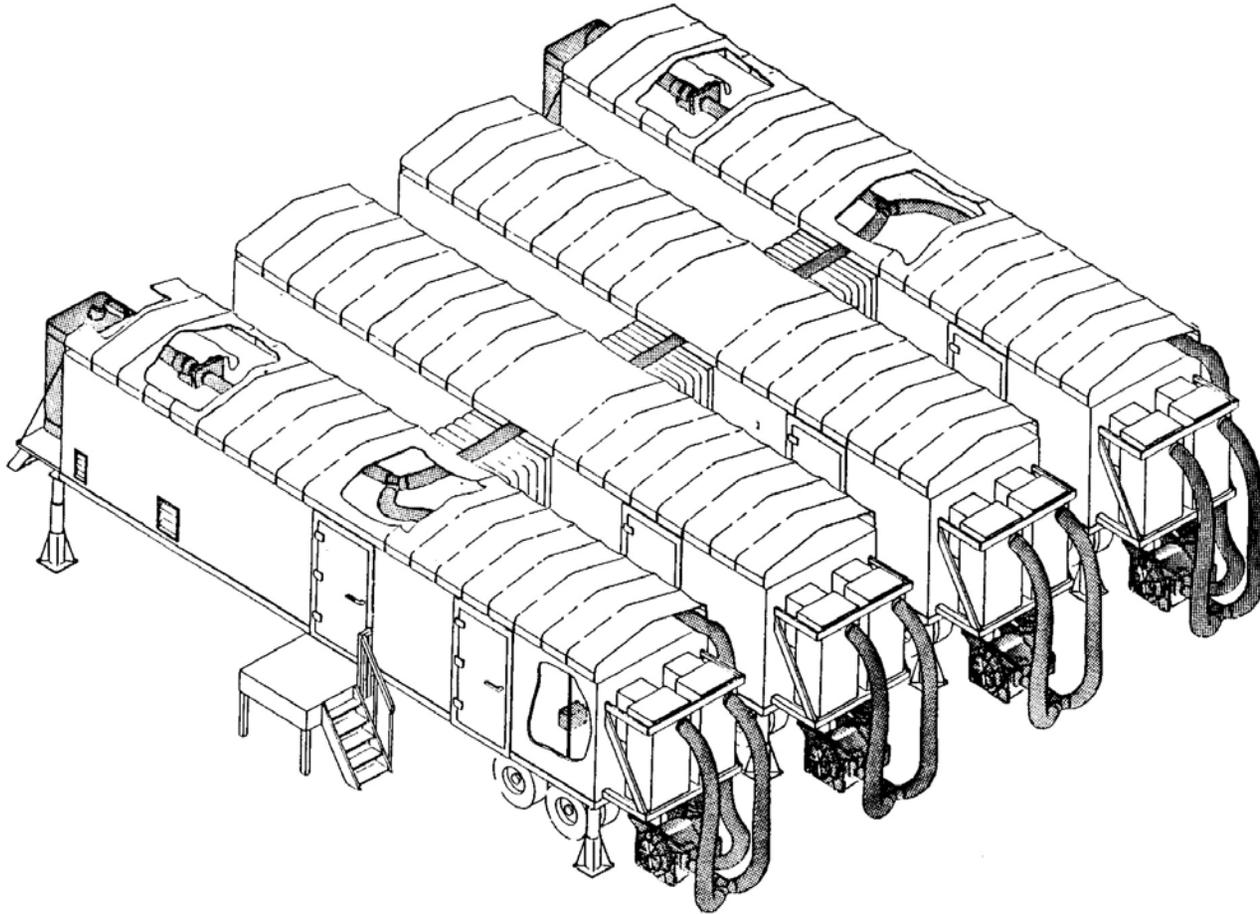
---

- Modular Collective Protection Equipment (MCPE)
- M28 series tent equipment
- M20A1 room liners
- CPS Ship Backfit
- Chem-Bio Protective Shelter (CBPS)
- CP for Deployable Medical System (CP DEPMEDS)
- Joint Collective Protection Equipment (JCPE) Program
- Joint Transportable Collective Protection System (JTCOPS) Program
- Building Collective Protection
- Technology Base Program

## Example 1 of an MCPE application.



## Example 2 of an MCPE application.



## M28 series Tent Liner & Equipment



# M20A1 Room Liner & Equipment



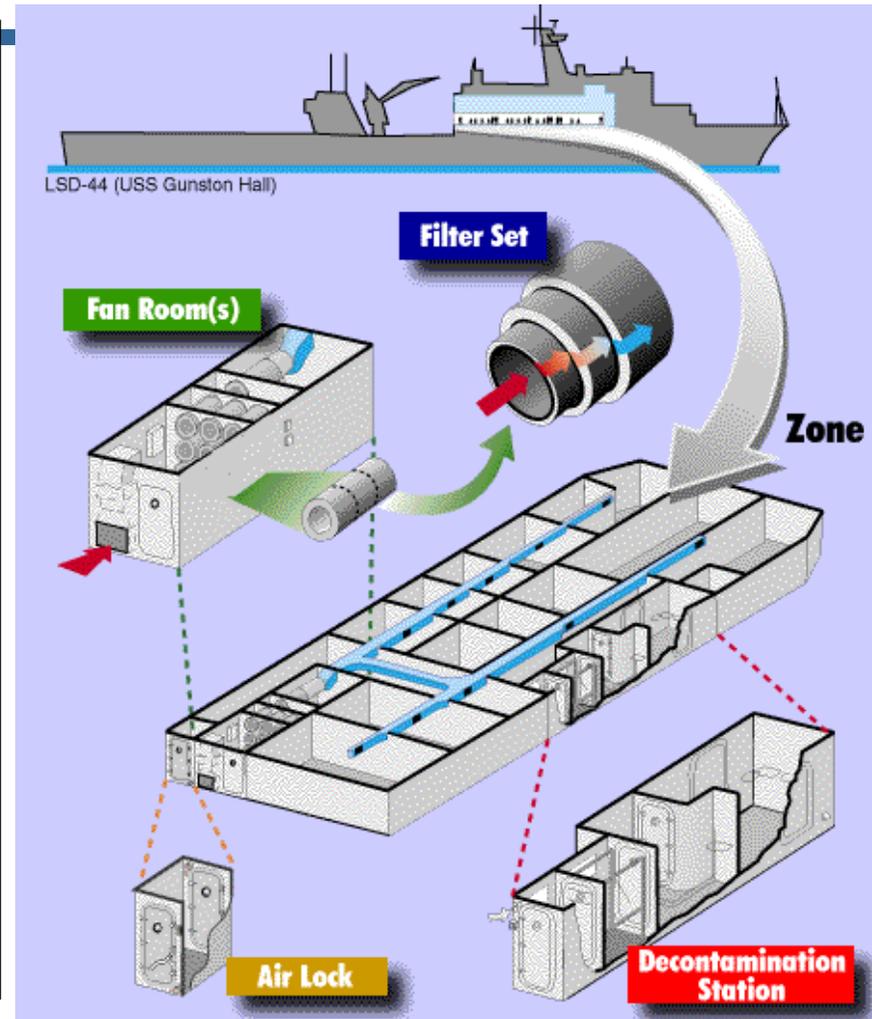


# CPS Backfit



Shipboard Collective Protection System

- Provides large, high value ships with colpro in critical shipboard spaces.
- Allows mission-critical operations in an NBC environment.
- Covers 15 Amphibious Class Ships:
  - Hospital areas (includes Casualty Decon Station)
  - Command/Control areas
  - Rest/relief areas
- CPS for new construction ships is covered by Navy shipbuilding funds.



# Chem Bio Protective Shelter (CBPS)

- Highly mobile, rapidly deployable, self-sustaining 300 sq ft system.
- Currently used by Army medics.
- Setup: 4 people, 20 min.
- Strike: 4 people, 40 min.
- Status: In production.



# CP DEPMEDS / CHATH



Collectively Protected Deployable Medical System (CP DEPMEDS)



Chemical Hardened Air Transportable Hospital (CHATH)

- Provide environmentally controlled collective protection kits to fielded Army DEPMEDS hospitals and USAF Air Transportable Hospitals (ATH).
- Perform medical treatment in a CB environment.
- Status: In production / fielded.

# Joint Collective Protection Equipment (JCPE) Program

- ❑ Provide needed improvements to currently fielded collective protection systems
  - ❑ Based on requirements of existing systems
  - ❑ Insert new technologies to reduce cost and logistics
- ❑ Provide cost saving standardization of equipment across Service lines



# Joint Collective Protection Equipment (JCPE)

## Shelter Backfit Kits

Provide collective protection kits using the latest technology and equipment to backfit these five tent systems, with availability starting in FY04:



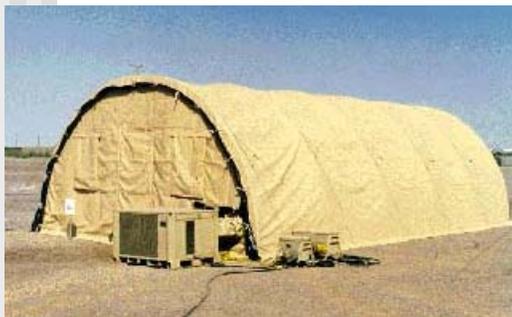
Tent, Extended, Modular, Personnel (TEMPER)



Modular General Purpose Tent System (MGPTS)



USAF Medium Shelter System (MSS)



USAF Small Shelter System (SSS)



Modular Command Post System (MCPS)

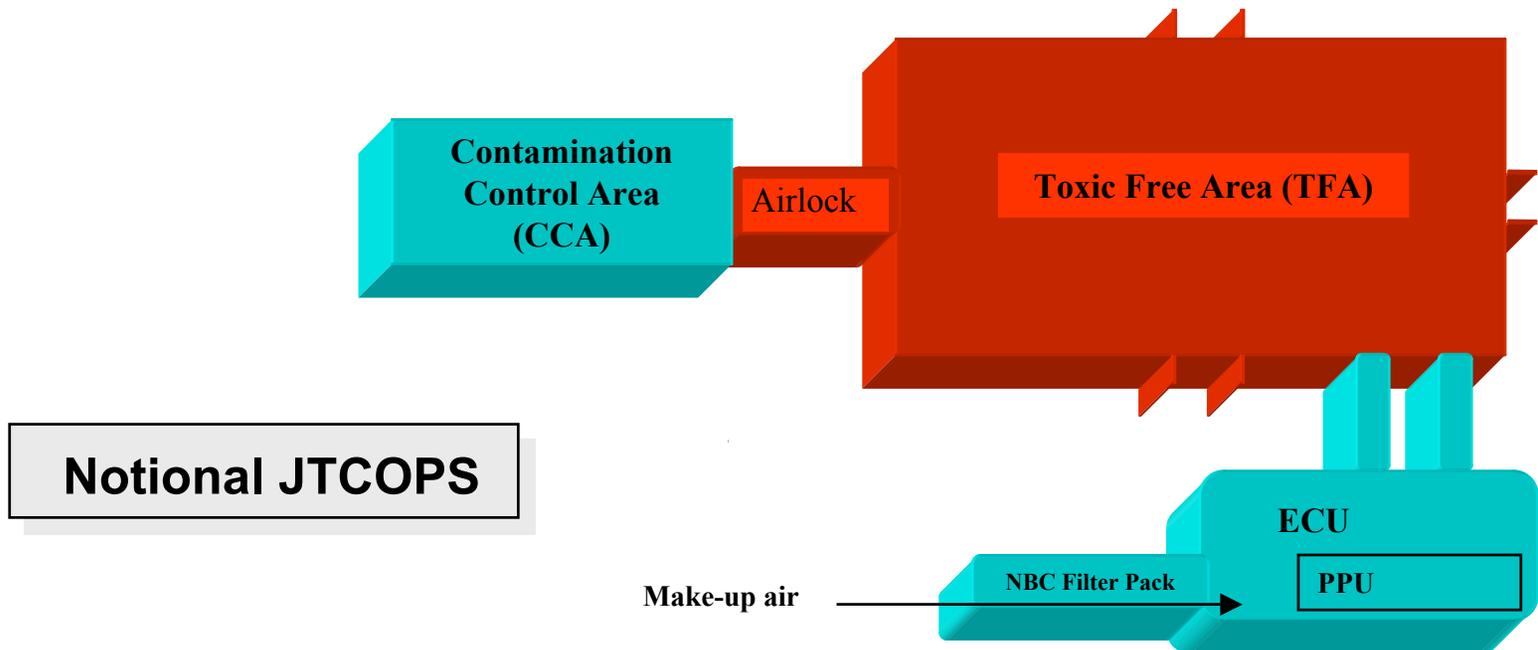
## JCPE Shelter Backfit Kits (cont.)

---

- Improved liner seams, liner durability, and connections.
- NBC hardening kits for Environmental Control Units (ECUs).
- Correction of motor blower reliability, noise, heat load problems.
- Improved airlocks with greatly reduced purge times.
- Improved filtration performance, filter life, and filter maintenance.
- Improved latrine capability.
- System life cycle engineering of all components.
- Basic kits available in 2004.

# Joint Transportable Collective Protection System (JTCOPS)

- Provide a collective protection capability that is totally integrated with standard military tents and transparent to the user.
- RDT&E start scheduled for 2004. Initial production scheduled for 2008.



# Building Collective Protection

- Proven systems available now for new construction and/or backfit of buildings and/or selected areas of buildings.

6000 cfm modular system



200 cfm filter

600 cfm filter housing



# Colpro Technology Base

---

Focusing on two major areas:

- New NBC Filtration Technology
  - Increased filter capacity and performance
  - Reduced logistics burden, reduced cost, weight, and power
  - Expanded protection capability (TICs, TIMs, new agents)
  
- Advanced NBC Tentage
  - Improved weight, volume, transportability (rapid deployability)
  - Reduced cost
  - Improved durability
  - Integration as standard tentage material

# Industry Opportunities

---

- Commerce Business Daily (CBD) announcements
- Technology Base: Partner with a DoD lab (SBCCOM Edgewood or Natick, NSWC Dahlgren, AFRL Tyndall, HSC Brooks, USMC Quantico, etc.)
- Joint Collective Protection Equipment (JCPE) program
- Advanced Concept Technology Demonstrations (ACTDs)
- Other government agencies

# Summary

---

- Increased CBR threat has heightened the need and importance of collective protection.
- Colpro must compete with other critical chem-bio programs for resources.
- DoD focus on future colpro equipment:
  - Rapid deployability
  - Cheaper
  - Easier to use
  - Reduced logistics burden
- Industry products and innovation are needed for future colpro equipment.