



# **JSLIST Chemical/Biological Coverall for Combat Vehicle Crewman (JC3)**

**24 October 2006**



# JC3 Background

- **JC3 is a developmental Chemical/Biological Coverall for Combat Vehicle Crewman**
  - **JC3 was initiated in January 2005 as an alternate material solution to the solution (JSLIST Type VII and JPACE)**
  - **The JC3 is constructed out of Selectively Permeable Membrane (SPM) technology**



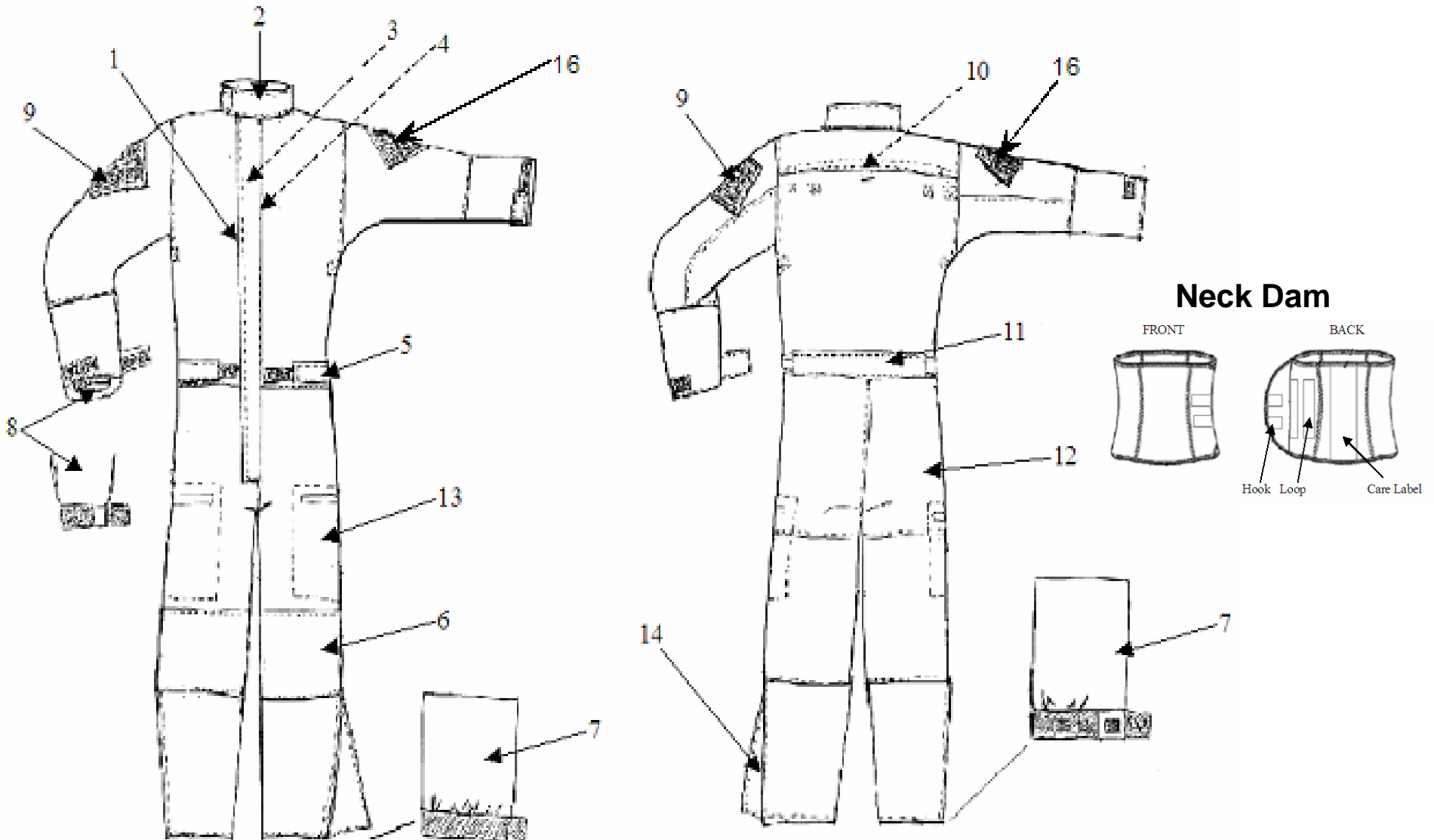
# JC3 Design

- **The JC3 design is based on the current CVC coverall**
- **Consistent sizing between CVC coverall & CB garment**
- **Government owned design**





# JC3 Design (Cont')





# Key JC3 Performance Properties

- **Provides Chemical Protection for up to 30 days of wear**
  - 480 hours
  - 4 laundering
- **POL Protection (JP-8, Hydraulic Fluid, etc.)**
  - JC3 provides approximately 99% improvement in chemical protection over current carbon based systems when exposed to POLs
- **Flame Resistance**
  - Protection against 2<sup>nd</sup> and 3<sup>rd</sup> degree burns
  - No melt or adhesion to skin
  - Resists ignition and if ignited self-extinguish



# JC3 Performance Properties (Cont')

- **Weight**

- Material weight is approximately 37% lighter than JSLIST
- Packaged weight is approximately 18% lighter than JSLIST

- **Package Volume**

- JC3 & JSLIST are similar



# JC3 Performance Properties (Cont')

- **Thermal Burden**

- JC3 & JSLIST performed similar
- JPACE performed slightly better
- Pursue reduction of thermal stress for next generation CB armor suit (micro-climate cooling, material technology advancement, etc.)

- **Human Factors**

- JC3 garments were found to be acceptable by CVC Personnel for conducting their missions.
- Integrated with all legacy and co-developmental CB protective equipment



# Additional JC3 Performance Testing

- **Live agent swatch testing**
- **Simulant MIST & Aerosol testing**
- **Operational Test at Camp Lejeune**
- **Field Durability Testing at Fort Knox**
- **Contaminated Doffing testing**
- **Fit & Size testing**





# JC3 Production

- **The JC3 fielding decision is planned for 2Q FY07**
  - **JC3, JPACE or JSLIST Type VII will be recommended for fielding to the USA and USMC armor communities**
  - **Initial fielding of the JC3 would be in FY08**



## **JC3 POC Information**

**JSLIST Program Manager, JPM-IP:**

**Deborah Singleton**

**deborah.singleton@usmc.mil**

**JC3 Program Lead, JPM-IP:**

**Nicholas Hanak**

**hanakns@jpmoip.org**



**QUESTIONS?**



# Acronym List

- **AFS: Alternative Footwear Solutions**
- **BVO: Black Vinyl Overboot**
- **CVC: Combat Vehicle Crewman**
- **GVO: Green Vinyl Overboot**
- **JPACE: Joint Protective Air Crew Ensemble**
- **JSGPM: Joint Service General Purpose Mask**
- **JSLIST: Joint Service Lightweight Integrated Suit Technology**
- **JB2GU: JSLIST Block 2 Glove Upgrade**
- **JC3: JSLIST Chemical/Biological Coverall for Combat Vehicle Crewman (JC3)**
- **MIST: Man In Simulant Test**
- **POL: Petroleum, Oils & Lubricants**
- **SPM: Selective Permeable Membrane**