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\textsuperscript{nd} and 3\textsuperscript{rd} 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

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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