Edgewood Area - Aberdeen Proving Ground, Maryland 21010-5424
U.S. Army Soldier and Biological Chemical Command

Joint Service Sensitive Equipment Decontamination (JSSED)

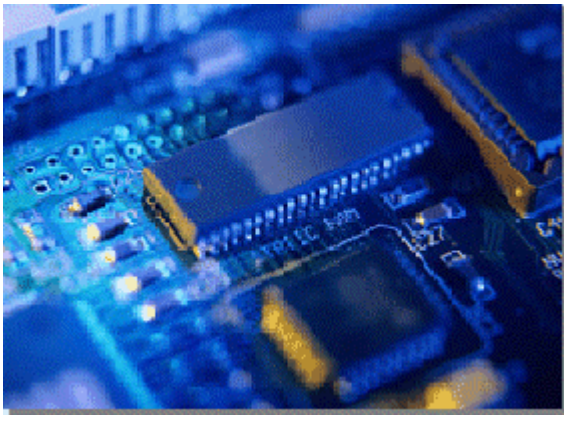
Background: The development of a sensitive equipment decontamination capability for the warfighter was in response to the Joint DOD Mission Needs Statement for Nuclear, Biological, and Chemical (NBC) Defense, 16 July 1999. To address this high priority, the Joint Service Integration Group published the JSSED Joint Operational Requirements Document (JORD). Two key performance parameters are identified in the JSSED JORD:

1. Decontamination of all sensitive equipment and aircraft/vehicle interiors "on-the-move" without affecting service life or operation, and

2. JSSED system operations compatible with all other aircraft/vehicle/ship servicing tasks, including refueling, rearming, and other decontamination operations.

System Overview: The JSSED system(s) will provide the ability to decontaminate chemical and biological agents from sensitive equipment (avionics, electronics, electrical, and environmental systems and equipment), aircraft/vehicle interiors (during flight/ground/shipboard operations), and associated cargo. SBCCOM/ECBC is the lead acquisition agency for this program. In order to fully assess the efficacy and feasibility of proposed decontamination technologies, JSSED performed a technology assessment to investigate candidate technologies from industry and other defense programs. Decontamination of sensitive equipment, aircraft/vehicle interiors, and associated cargo is broken down into three distinct capabilities: **Block I, Block II, and Block III.** The JSSED capabilities are broken down into these three, progressively increasing capability "blocks" to significantly reduce technology and financial risk during development and production.

The **Block I** system will address the ability to successfully decontaminate sensitive equipment without affecting operational readiness, reliability, or maintainability. Sensitive equipment includes avionics, electronics, environmental control systems, and life-support systems. Based on the technology assessment performed, a transportable, re-circulating solvent wash sonicated bath system to decontaminate sensitive equipment items with potential use as a parts cleaning system was determined most favorable for this application.



Key Events: Block I Milestone B - 1QFY01
Block I Milestone C - 4QFY06

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The **Block II** system will address the ability to decontaminate the interiors of aircraft/vehicles requiring unique volumetric processing for all aircraft/vehicles current or planned for U.S. inventory. Also, chemical and biological agents may penetrate porous materials, presenting residual agent off-gassing problems requiring periodic decontamination. Based on the technology assessment, the proposed Block II system solution would use high-output air heaters to produce the necessary temperature elevation and air-flow needed to facilitate thermal desorption for long-duration, in-place interior decontamination.

Key Events: Block II/III Milestone B - 1QFY04

The **Block III** system will address the ability to decontaminate aircraft and vehicle interiors during flight, ground, or shipboard operations (also known as decontamination "on-the-move"). This decontamination system/process will provide on-demand decontamination without adverse effects on crew, mission, or platform performance. Based on the technology assessment performed, the most feasible solution for Block III systems to date is spot decontamination "kits" for sensitive equipment and interiors that incorporate solvent wash and sorbent decontamination components. These "kits" would include one or more solvents compatible with electronics and sensitive materials for the dissolution of agent contamination, and sorbent decontamination materials for the removal of the dissolved agent from the surface.

For additional information, please contact Product Manager-Obscuration and Decontamination Systems, ATTN: AMSSB-PM-RNN-O, Aberdeen Proving Ground, MD 21010-5424. The Product Manager can also be contacted by E-mail (pm.ods@sbccom.apgea.army.mil), by telephone at (410) 436-2804 or DSN 584-2804, or by fax to (410) 436-8803.