

CONCURRENT SESSION 1 – BIOLOGICAL AGENT DECONTAMINATION

ClearDecon: A Novel Surface Decontamination Solution for Chemical and Biological Warfare Agents

Joseph Myers | *Combat Capabilities Development Command, Chemical Biological Center*

Funded by the Defense Threat Reduction Agency (DTRA), a novel decontamination solution, called ClearDecon, has been developed for hardened surfaces through a collaborative effort between U.S. Army Combat Capabilities Development Command Chemical Biological Center (DEVCOM CBC) and Clear Scientific (Cambridge, MA). The formulation is a paint-like substance which readily adheres to vertical surfaces and can be applied through a variety of commercial off the shelf (COTS) paint sprayers. The formulation contains two complimentary reactive chemistries, which provide high levels of efficacy against several types of contaminants, such as sulfur mustard, Soman, VX, carfentanil, and biological spores, such as B. A. Sterne, in a single formulation. The formulation also contains a proprietary solvent blend which promotes the extraction of contaminants from sorptive materials, so that the reactive species can access and detoxify absorbed contamination. The reactive components have been shown to rapidly detoxify contaminants without producing toxic by-products. Application of the formulation for a little as 30 min produces a 10x reduction in both contact transfer and vapor emission measurements and a 4 h application produces a 1000x reduction in remaining contaminant measurements in small scale panel studies. After decontamination, the formulation can be simply rinsed away with water.
