

## REPORT DOCUMENTATION PAGE

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1. REPORT DATE (DD-MM-YYYY) XX-12-2007	2. REPORT TYPE Summary Report	
4. TITLE AND SUBTITLE  Hazard Assessment of First Receivers In Medical Facilities Responding to a Toxic Industrial Chemical (TIC) or a Chemical Warfare Agent (CWA) Terrorism Incident		
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13. SUPPLEMENTARY NOTES		
14. ABSTRACT (Maximum 200 words)  The objective has been to identify likely avenues of exposure of emergency responders to vapor and liquid hazards from percutaneously effective chemical warfare agents when released indoors. Emphasis was placed on low-volatility liquid compounds. Most likely exposure scenarios for first responders to low-volatility liquids include pickup and transfer from walking through spills, brushing against or contacting contaminated surfaces, and by handling and carrying contaminated casualties. A computational methodology was devised for estimating probable contamination levels from non-respirable chemical agent challenges under operational conditions. For the selected scenarios, contamination levels on first responders could exceed 100 mg/m <sup>2</sup> on protective garments. Portions of the clothing system must be capable of protecting against a fully wetted condition. The personal protective equipment must take into account both respiratory and percutaneous routes of entry. Data needs and deficiencies were identified that include a requirement for toxicity estimates for the general civilian population and emergency response personnel. Other data needs include human toxicity estimates from exposures to short term, high vapor concentrations and for long term, low-level vapor concentrations for both inhalation and percutaneous routes of entry. Outdoor scenarios where chemical compounds have been released are assumed to be addressed using standard HAZMAT operational procedures. The results of this work can serve as input in the conduct of vulnerability analyses of first responders to terrorism incidents.		

15. SUBJECT TERMS

First Receivers, CWA, TIC, Hazard Analysis, Terrorism, Chemical Warfare Agent, Toxic Industrial Chemical, Hot-Zone, Warm-Zone, Vulnerability Assessment, WMD, Homeland Defense, First Responders, Emergency Department, Hospital Preparedness

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Thanks, Jon Szalajda

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