

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4	PE NUMBER AND TITLE 0603920D8Z - SO/LIC Humanitarian De-mining							
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate
PE NAME SO/LIC Humanitarian De-mining P920	13.631	14.294	14.687					

A. Mission Description and Budget Item Justification:
 The Humanitarian Demining Research and Development (HD R&D) program element develops, demonstrates and evaluates prototype demining systems for US forces and for indigenous, DoD supported, host nation conducted demining operations. The HD R&D Program focuses on development of technologies to improve the efficiency and safety of removing post-conflict landmines and UXO, which are a significant danger to U.S. forces performing peace and stability operations, as well as to civilians. The HD R&D Program adapts commercial-off-the-shelf equipment, integrates mature technologies, and leverages R&D activity within DoD, particularly in the Army Night Vision Electronic Sensors Directorate (NVESD) Tactical Countermines mission area. Equipment capabilities are assessed by host nation demining partners in actual demining conditions. The program aims to improve existing technologies for: individual mine/UXO and minefield detection, wide area survey, mechanical mine/UXO and vegetation clearance, mine neutralization, individual soldier/deminer protection, detection of explosives in buried mines, verification of the presence of mines, marking and mapping of mines/minefields, post clearance quality assurance (QA), and individual deminer tools. Areas of emphasis are identified and validated at an annual Requirements Workshop held by the Office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict (OASD SO/LIC). The Requirements Workshop involves representatives from the combatant commands and from mine affected nations. Under OASD SO/LIC, the HD R&D Program is a strong participant in the International Test and Evaluation Program (ITEP).

<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010	FY 2011
Previous President's Budget	14.013	14.373	14.778	
Current BES/President's Budget (FY 2010)	13.631	14.294	14.687	
Total Adjustments	-0.382	-0.079	-0.091	
Congressional Program Reductions				
Congressional Rescissions	-0.090	-0.079		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.265			
Other	-0.027		-0.091	

Remarks:

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C. Other Program Funding Summary: Not applicable for this item.

D. Acquisition Strategy: Following a rapid prototyping strategy, the program emphasizes the use/modification of existing, commercially available items and components to build functional prototype equipment suited for humanitarian demining operations. This approach is required due to the immediate need for new demining technologies in the face of ongoing US forces and host nation citizen casualties in mine-affected countries. The program evaluates prototype equipment by acquiring it off-the-shelf from industry using competition to the maximum extent possible by leveraging ongoing countermine R&D efforts in other US and foreign R&D activities, and by taking advantage of extensive in-house fabrication capabilities at the Army's Night Vision and Electronic Sensors Division (NVESD).

E. Performance Metrics:

Comment: Humanitarian Demining - 0603920D8Z

Long Term Strategies: Obtain adequate funding to support critical shortfalls; prioritize proposals that are deemed acceptable and allocate funding accordingly; and establish outreach programs to leverage institutional knowledge and expertise.

Performance Indicator and Rating:

FY 2009 Target:

70% of currently funded research projects are completed on time and within budget

Complete scheduled R&D project tasks

Transition scheduled projects to user communities

Conduct annual Humanitarian R&D Program Requirements Workshop

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70% of currently funded research projects are completed on time and within budget

Conduct annual Humanitarian R&D Program Requirements Workshop

Complete scheduled R&D project tasks

Transition scheduled projects to user communities

Basis of FY 2008 to Date Performance Rating: Currently the number of funded research projects are on track to be completed per the target.

Verification: The Humanitarian Demining Program performs program reviews and has oversight from OSD.

Validation: Completed R&D products increase the capabilities of the DoD to effectively perform demining missions.

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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate
P920 SO/LIC Humanitarian De-mining P920	13.923	14.373	14.687					

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B. Accomplishments/Planned Program:

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
	13.923	14.373	14.687	

FY08 Accomplishments: The HD R&D Program actively engaged in the operational field evaluations of 22 humanitarian demining (HD) technologies in 9 countries. As a result of requests made during the annual Requirements Workshop, OCONUS field assessments, and in-house developments in FY2007, the HD R&D program deployed many of its systems to humanitarian demining organizations overseas, including locations in Afghanistan and Iraq. The deployments initiated in FY2008 included the STORM to Cambodia, the Uni-Disk and Peco to Thailand, Sifting Buckets to Iraq, and MANTIS to Afghanistan. In addition, the HD R&D Program continued its deployments of the Tempest, Maxx, Maxx+, Survivable Demining Tractor, Explosive Harvesting System, Multi-Tool Excavator, Air-Spade, Improved Backhoe, Beaver, HSTAMIDS, Sifting Attachments, and the Rotary Mine Comb to countries in Africa, South America and Asia. The HD R&D Program continued final development, test and evaluation of prototype technologies in the following areas: detection discrimination and confirmation, vegetation clearance, mechanical mine excavation and clearance, individual deminer/soldier tools, and aerial survey area reduction. The HD R&D Program supported the combatant commands and Embassy staffs by conducting site surveys, country assessments and technology development and evaluations. The Program performed surveys and assessments in Ecuador, Vietnam, Angola, Cambodia and at the former Vieques Naval Training Range in Puerto Rico to determine whether HD equipment could be effectively utilized. In addition, data from the HD R&D Program's intensive evaluation of

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HSTAMIDS in the humanitarian demining context continued to provide critical training and operation techniques to the US Army's Tactical Countermining HSTAMIDS program. In FY2008 prototype development, program engineers completed several prototypes, including the remotely controlled Peco and Beaver vegetation clearing vehicles, which transitioned to evaluations in the field. In FY2008 the program tested 10 mine detection and clearance systems at Fort AP Hill, Yuma Proving Grounds, and Aberdeen Proving Grounds. Lastly, the HD R&D Program conducted its FY2008 Requirements Workshop, in which 53 participants from nine mine action organizations, seven non-governmental organizations (NGOs), and six US government entities discussed demining equipment needs. Countries represented included Cambodia, Chile, Nicaragua, Colombia, Peru, Thailand, Ecuador, Afghanistan, Iraq, Lebanon, Vietnam, and Angola. Representatives from the Department of State and the Combatant Commands (SOUTHCOM, AFRICOM and EUCOM) attended. Several international organizations active in mine action also participated, including representatives from the United Nations Mine Action Service (UNMAS), the Geneva International Centre for Humanitarian Demining (GICHD), and the Organization of American States (OAS).

FY09 Plans: The HD R&D Program will complete ongoing equipment developments/modifications and operational evaluations from FY2008. The HD R&D Program will support the combatant commands and Embassy staffs by conducting site surveys, country assessments and technology development and evaluation. The program will continue development, test and evaluation of prototype technologies in the following areas: detection discrimination and confirmation, vegetation clearance, mechanical mine excavation and clearance, and individual deminer/soldier tools.

FY10 Plans: The HD R&D Program will complete ongoing equipment developments/modifications and operational evaluations from FY2009. The HD R&D Program will support the combatant commands and Embassy staffs by conducting site surveys, country assessments and technology development and evaluation. The program will continue development, test and evaluation of prototype technologies in the following areas: detection discrimination and confirmation, vegetation clearance, mechanical mine excavation and clearance, and individual deminer/soldier tools.

<u>C. Other Program Funding Summary:</u>	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015

Comment: Not applicable for this item.