Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Office of Secretary Of Defense	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603920D8Z: *Humanitarian De-mining*

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	14.273	14.544	13.231	-	13.231	11.779	11.681	10.563	10.755	Continuing	Continuing
920: *Humanitarian De-mining*	14.273	14.544	13.231	-	13.231	11.779	11.681	10.563	10.755	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Humanitarian Demining Research and Development (HD R&D) program element develops, demonstrates and evaluates prototype mine/unexploded ordnance (UXO) clearing technologies for U.S. 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's Night Vision and Electronic Sensors Directorate (NVESD) Tactical Countermine mission area. Equipment capabilities are assessed by host nation demining partners (foreign military, non-governmental organizations and mine action centers) in actual demining conditions. Since 1995 the Program has fielded technology for 130 evaluations in 36 countries, including Iraq and Afghanistan. The program aims to improve existing technologies for: mine/UXO detection, technical survey/area reduction, mechanical mine/UXO and vegetation clearance, mine neutralization, individual deminer protection, and post-clearance quality assurance (QA). Areas of emphasis are identified and validated at a biennial 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 Department of State (DoS), U.S. combatant commands (COCOMS) and mine-affected nations. Under OASD SO/LIC, the HD R&D Program works closely with the COCOMS and the Humanitarian Demining Training Center (HDTC) to “support the Warfighter” by reducing insurgent access to explosives, providing engagement opportunities for DoD personnel, and speeding improvements to detection and clearance technologies used by U.S. forces in support of USG operations.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	14.735	14.996	15.372	-	15.372
Current President's Budget	14.273	14.544	13.231	-	13.231
Total Adjustments	-0.462	-0.452	-2.141	-	-2.141
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.327	-0.352			
• Economic Assumptions	-0.075	-	-	-	-
• Other Adjustments	-0.060	-0.100	-2.141	-	-2.141

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Change Summary Explanation

The FY 2013 baseline budget was reduced due to fiscal constraints and higher priorities within the Department.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: 0603920D8Z - SO/LIC Humanitarian De-mining	14.273	14.544	13.231

Description: The Humanitarian Demining Research and Development (HD R&D) program element develops, demonstrates and evaluates prototype mine/unexploded ordnance (UXO) clearing technologies for U.S. 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's Night Vision and Electronic Sensors Directorate (NVESD) Tactical Countermine mission area. Equipment capabilities are assessed by host nation demining partners (foreign military, non-governmental organizations and mine action centers) in actual demining conditions. Since 1995 the Program has fielded technology for 130 evaluations in 36 countries, including Iraq and Afghanistan. The program aims to improve existing technologies for: mine/UXO detection, technical survey/area reduction, mechanical mine/UXO and vegetation clearance, mine neutralization, individual deminer protection, and post-clearance quality assurance (QA). Areas of emphasis are identified and validated at a biennial 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 Department of State (DoS), U.S. combatant commands (COCOMS) and mine-affected nations. Under OASD SO/LIC, the HD R&D Program works closely with the COCOMS and the Humanitarian Demining Training Center (HDTC) to “support the Warfighter” by reducing insurgent access to explosives, providing engagement opportunities for DoD personnel, and speeding improvements to detection and clearance technologies used by U.S. forces in support of USG operations.

FY 2011 Accomplishments:

The HD R&D Program completed ongoing equipment developments/modifications and continued operational field evaluations from FY2010. New evaluations included the Raptor mine clearance system in Afghanistan, Improved Backhoe mine and vegetation clearance system in Sri Lanka, Mine Stalker Anti-Tank (AT) and Handheld Standoff Mine Detection System (HSTAMIDS) mine detection systems in Angola, Orbit Screen mine clearance system in Mozambique and Mine Disruptor, Portable UXO Drilling and Cutting neutralization system, Nemesis M3 vegetation clearance system, Rex vegetation clearance system and Luxor UXO detection system in Cambodia. The HD R&D Program supported the combatant commands and Embassy staffs by conducting site surveys or country assessments in Mozambique, Vietnam, Laos, Macedonia, eastern Cambodia, Sri Lanka, northern Tajikistan, and Guadalcanal. The program continued development, test and evaluation of prototype technologies

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
in the following areas: individual mine/UXO and minefield detection, mechanical mine/UXO and vegetation clearance, mine neutralization, individual soldier/deminer protection, and post-clearance quality assurance (QA). ***FY 2012 Plans:*** The HD R&D Program will complete ongoing equipment developments/modifications and continue operational evaluations from FY2011. New evaluations will include the Badger vegetation and mine clearance system in Guadalcanal; the Rex vegetation and mine clearance system in Sri Lanka; HSTAMIDS mine detection system and the Mini MineWolf mine and vegetation clearance system in Mozambique; the Minehound, Luxor, Scorpion, and Scout mine/UXO detection systems and Wolverine quality assurance tiller in Cambodia; the Pac-Mag UXO detection system in Laos; excavator mine sifting attachments and Terrapin mine clearance system in Lebanon; the Mine Stalker AT mine detector in Angola; and the Portable UXO Cutting System in Vietnam. The HD R&D Program will support the combatant commands and Embassy staffs by conducting site surveys or country assessments. The program will continue development, test and evaluation of prototype technologies in the following areas: individual mine/UXO and minefield detection, mechanical mine/UXO and vegetation clearance, mine neutralization, individual soldier/deminer protection, and post-clearance quality assurance (QA). ***FY 2013 Plans:*** The HD R&D Program will complete ongoing equipment developments/modifications and continue operational evaluations from FY2012. The HD R&D Program will support the combatant commands and Embassy staffs by conducting site surveys or country assessments. The program will continue development, test and evaluation of prototype technologies in the following areas: individual mine/UXO and minefield detection, mechanical mine/UXO and vegetation clearance, mine neutralization, individual soldier/deminer protection, and post-clearance quality assurance (QA).			
Accomplishments/Planned Programs Subtotals	14.273	14.544	13.231

D. Other Program Funding Summary ($ in Millions)

N/A

E. 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 U.S. 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 extent possible, by leveraging ongoing countermine R&D efforts in other U.S. 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).

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F. Performance Metrics

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 2011 Target:
70% of currently funded research technologies are completed on time and within budget
Complete scheduled R&D project tasks
Transition field-ready technologies to host nation demining partners

FY 2012 Target:
70% of currently funded research technologies are completed on time and within budget
Complete scheduled R&D project tasks
Transition field-ready technologies to host nation demining partners
Conduct biennial Humanitarian R&D Program Requirements Workshop

Basis of FY 2011 to Date Performance Rating: Currently the number of funded research technologies is on track to be completed per the target.

Verification: The Humanitarian Demining Program performs program reviews with other USG agencies (DOS PM WRA, DTRA SA/LW, DSCA, HDTC, CENTCOM, PACOM, SOUTHCOM, AFRICOM, EUCOM) and has oversight from OSD SO/LIC.

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