Exhibit R-2a, RDT&E Project Justification							February 2003	
Appropriation/Budget Activity RDT&E. BA 4				Project Name and Number Humanitarian Demining 0603920D8Z				
Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY 2007	FY 2008	FY 2009
Humanitarian Demining/P920	13.220	12.893	13.299	13.771	14.010	14.236	13.746	14.083

A. Mission Description and Budget Item Justification:

The Humanitarian Demining R&D program element focuses on the testing, demonstration and validation of equipment for immediate use in various international humanitarian demining missions and environments. The goal is to provide equipment to the international demining community that assesses the equipment's capabilities in actual demining conditions. The equipment developed under this program also has military applications and several pieces of equipment are being evaluated under the Joint Area Clearance Advanced Concept Technology Demonstration (JAC ACTD). This program focuses on R&D technology development to reduce the time and cost associated with demining while improving overall safety for the operator. This is accomplished through adaptation of commercial-off-the-shelf equipment, the integration of mature technologies, and leveraging past and current R&D project activity in the Army's Night Vision and Electronic Sensor's Directorate's (NVESD's) tactical Countermine and Science and Technology mission areas. The program aims to improve existing technologies for: individual mine and minefield detection; wide area survey; mechanical/mine and vegetation clearance; individual deminer/soldier protection; detection of explosives in buried mines (biosensors); verification of the presence of mines; marking and mapping of mines/minefields; post clearance quality assurance (QA); mine awareness training; and individual deminer hand tools. Areas of emphasis are determined/validated at annual Humanitarian Demining Workshops that bring the international Non-Governmental Organizations (NGOs) and Mine Action Centers (MACs) together to assist in this process.

B. Accomplishments/Planned Program

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/ Effort/Subtotal Cost	13.220	12.893	13.299	13.371

Continued to develop and demonstrate detection technologies for discrimination and confirmation to include leveraging existing technology from the tactical countermine area. Continued to develop wide area detection, improved handheld detection, mine/minefield marking capabilities and individual mine neutralization. Evaluated an area reduction system based on vapor detection in a cooperative endeavor with international partners. Continued to develop vegetation and mechanical clearance and neutralization systems suitable for removing dense vegetation from mined areas, and for excavating and clearing landmines for large area reduction and QA operations. Continued development and demonstration of individual deminer protective equipment. Continued development and fielding of equipment suitable for area reduction and quality assurance operations. Initiated/fielded operational evaluations of detection, mine/vegetation clearance, neutralization and personal deminer protection systems in mine infested regions of the world. This includes the Mine Clearing Cultivator and the Mine Clearing Sifter in Angola, the MEDDS and Nomatics Fido explosive detector in Croatia, the MAXX mini-mulcher in Namibia, a Tempest vegetation clearer in Cambodia, a Tempest and the Survivable Demining Tractor in Thailand, and another Tempest in Mozambique. Completed the 2002 Humanitarian Demining R&D Program video to assist with the global demining effort. Continued to develop and demonstrate individual deminer protective equipment. Continued development of equipments suitable for area reduction and quality assurance operations. Conducted site surveys/country assessments for Azerbaijan, Honduras, Angola and Mozambique to provide advice on specific prototype items developed under the program would be best suited based on the situation in the country and also assist in future development efforts. Conducted the annual HD Workshop to determine/validate areas of emphasis for technology development.

	FY 2002	FY 2003	FY 2004	FY 2005
Accomplishment/ Effort/Subtotal Cost	13.220	12.893	13.299	13.371

FY 2003 Plans:

Continue to develop and demonstrate detection technologies for discrimination and confirmation to include leveraging technology from the tactical countermine area. Continue to develop wide area and improved handheld detection technologies, and mine/minefield marking. Continue to develop vegetation and mechanical clearance and neutralization systems suitable for removing dense vegetation from mined areas and excavating and clearing landmines for large area reduction and quality assurance operations. Continue to develop and demonstrate individual deminer protective equipment. Conduct site survey(s), country assessment(s) and initiate operational field evaluations of prototypes developed under the program in the area of detection, mine/vegetation clearance, neutralization and personal deminer protection systems in mine-infested regions of the world. Continue on-going operational field evaluations of mine/vegetation clearance systems in heavily mined regions throughout the world. Continue to develop and demonstrate individual deminer protective equipment. Continue development of equipments suitable for area reduction and quality assurance operations. Continue wide area detection cooperative endeavor with international partners. Complete and distribute the 2003 Humanitarian Demining R&D Program Developmental Technologies video to assist with the global demining effort. Conduct the annual HD Workshop in July.

FY 2004 Plans:

Continue to develop and demonstrate detection technologies for discrimination and confirmation to include leveraging technology from the tactical countermine area. Continue to develop detection technologies to improve detection capability and reduce false alarms. Continue to conduct site survey(s), country assessment(s) and operational field evaluations of detection, mine/vegetation clearance and neutralization systems in mine infested regions of the world. Continue to develop and demonstrate individual deminer protective equipment. Continue development of equipment suitable for area reduction and quality assurance operations. Continue wide area detection cooperative endeavor with international partners. Complete and distribute the 2004 Humanitarian Demining R&D Program Developmental Technologies catalog to assist with the global demining effort. Conduct an annual HD Workshop.

FY 2005 Plans:

Continue to develop and demonstrate detection technologies for discrimination and confirmation to include leveraging technology from the tactical countermine area. Continue to develop detection technologies to improve detection capability and reduce false alarms. Continue to conduct site survey(s)/country assessment(s) and operational field evaluations of detection, mine/vegetation clearance and neutralization systems in mine infested regions of the world. Continue to develop and demonstrate individual deminer protective equipment. Continue development of equipment suitable for area reduction and quality assurance operations. Continue wide area detection cooperative endeavor with international partners. Complete and distribute the 2005 Humanitarian Demining R&D Program Developmental Technologies video to assist with the global demining effort. Conduct an annual HD Workshop.

C. Other Program Funding Summary: NA

Acquisition Strategy. Following a rapid prototyping, spiral development process, 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 humanitarian demining technologies in the face of ongoing casualties in mine-affected countries. The program develops prototype equipment by acquiring off-the-shelf equipment from industry using competition to the maximum 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 developmental capabilities at the Army's Night Vision Laboratory.