Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604808A: Landmine Warfare/Barrier - Eng Dev

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	113.590	72.380	95.577	0.000	95.577	30.460	21.334	29.382	26.002	Continuing	Continuing
016: Close Combat Capabilities ENG DEV	71.691	39.427	59.305	0.000	59.305	10.474	2.945	2.941	1.984	Continuing	Continuing
415: MINE NEUTRAL/DETECTION	39.108	32.953	36.272	0.000	36.272	19.986	18.389	26.441	24.018	Continuing	Continuing
443: APL-A (MIXED SYSTEMS)	2.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides for System Development and Demonstration of networked munitions and countermine systems. This PE implements the National Landmine Policy to develop alternatives to the non-self-destructing anti-vehicle and anti-personnel landmine systems. Project 016, Close Combat Capabilities Engineering Development, provides for the development of the anti vehicle mine replacement, Scorpion (previously the Intelligent Munitions System (IMS)) supports the current force in accordance with the landmine policy. Project 415, Mine Neutralization/Detection provides for development of next generation standoff detection capability programs such as the Airborne Counter Explosive Reconnaissance and Targeting System (ACERTS), Ground Vehicle Sub Surface Sensor System (GVS4), and the Advanced Mine Detection System (AMDS). It also supports development of training devices for Military Working Dogs involved in mine/IED detection. Project 443, APL-A (Mixed Systems) provides for a variety of demolition efforts to include development of Magneto-Inductive Remote Activation Munition System (MI-RAMS), and for performance enhancing product improvements to demolitions, grenades, pyrotechnics and non-lethal systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0604808A: Landmine Warfare/Barrier - Eng Dev

BA 5: Development & Demonstration (SDD)

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	116.687	82.260	40.481	0.000	40.481
Current President's Budget	113.590	72.380	95.577	0.000	95.577
Total Adjustments	-3.097	-9.880	55.096	0.000	55.096
 Congressional General Reductions 		-9.880			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.079	0.000			
 SBIR/STTR Transfer 	-3.176	0.000			
 Adjustments to Budget Years 	0.000	0.000	55.096	0.000	55.096

Change Summary Explanation

Change Summary Explanation: FY 2010: \$9.5 million Congressional decrement for Mine Neutralization/Detection (Project 415) for FCS program termination.FY 2011: \$40.0 million increase for Close Combat Capabilities ED (Scorpion - Project 016) and \$15.0 million increase for Mine Neutralization/Detection (Project 415).

Exhibit R-2A, RDT&E Project Justif	ication: PB 2	011 Army							DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTI 2040: Research, Development, Test & E BA 5: Development & Demonstration (NOMENCLA A: Landmine	_	PROJECT 016: Close Combat Capabilities ENG DEV							
COST (\$ in Millions)	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost		
016: Close Combat Capabilities ENG DEV	71.691	39.427	59.305	0.000	59.305	10.474	2.945	2.941	1.984	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Intelligent Munitions System (IMS) Scorpion is an anti-vehicular weapons system that provides highly responsive terrain-shaping and protection capabilities to the unit commander. Trained operators remotely control ground-emplaced munitions via a portable control station out to distances of 1.5 kilometers. The commander integrates IMS Scorpion into his scheme of maneuver and fires in order to attack the enemy's freedom of maneuver while maintaining full friendly freedom of maneuver. He directs the emplacement of the munitions on the ground in building block fashion to achieve the desired effects against mounted threats ranging from single light wheeled vehicles to large armored formations. IMS Scorpion is a full spectrum weapons system effective in offensive, defensive, and stability operations. IMS Scorpion supports the National Landmine Policy by serving as a far superior alternative to the non-self-destructing anti-vehicular mines being removed from the U.S Inventory by 31st December 2010.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	21.883	2.896	2.584	0.000	2.584
FY09-FY12: Complete IMS/Scorpion Increment-I system development.					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
2040: Research, Development, Test & Evaluation, Army	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrie</i> <i>Dev</i>	r - Eng	PROJECT 016: Close C	ilities ENG D	EV	
B. Accomplishments/Planned Program (\$ in Millions)			I			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #2		17.390	14.277	28.426	0.000	28.426
FY10-FY11 Fabricate hardware for Government Qualification testing						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #3		7.765	2.250	0.537	0.000	0.537
FY09-FY11: Continues to conduct IMS/Scorpion Increment-I modeling and	simulation.					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/E Dev	Barrier - Eng	PROJECT 016: Close C	Combat Capabilities ENG DEV			
B. Accomplishments/Planned Program (\$ in Millions)			1				
•		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #4		15.295	7.741	0.000	0.000	0.00	
FY09-FY10: Conduct IMS/Scorpion Increment-I system contract	tor development testing.						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #5		5.940	7.304	24.581	0.000	24.58	
FY10-FY11: Conduct IMS/Scorpion Increment-I Government D	evelopment and Operational Testing						
FY 2009 Accomplishments: FY 2009							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Bark Dev	rier - Eng	PROJECT 016: Close Combat Capabilities ENG DEV			
B. Accomplishments/Planned Program (\$ in Millions)			1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6		3.418	3.855	3.177	0.000	3.177
FY09-12 Develop IMS Trainer in coordination with PEO STRI						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #7 Small Business Innovative Research/Small Business Technology Transfe	r Programs	0.000	1.104	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0604808A: Landmine Warfare/Barrier - Eng	016: <i>Close C</i>	Combat Capabilities ENG DEV
BA 5: Development & Demonstration (SDD)	Dev		

B. Accomplishments/Planned Program (\$ in Millions)

			FY 2011	FY 2011	FY 2011
	FY 2009	FY 2010	Base	OCO	Total
FY 2009 Accomplishments:					
FY 2009 Accomptistments.					
F1 2009					
FY 2010 Plans:					
FY 2010					
1 1 2010					
FY 2011 Base Plans:					
FY 2011 Base					
11 2011 2 1100					
FY 2011 OCO Plans:					
FY 2011 OCO					
Accomplishments/Planne	d Programs Subtotals 71.691	39.427	59.305	0.000	59.305

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	<u>OCO</u>	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• Ord. #1: PAA E96901 - Intelligent	0.000	19.447	10.246	0.000	10.246	93.474	58.840	103.168	48.234	Continuing	Continuing
Munitions System											
• Ord. #2: OPA2 B55503 - Intelligent	0.000	9.227	6.603	0.000	6.603	73.667	73.301	69.227	68.338	Continuing	Continuing
Munitions System (IMS) Remote											

Control Unit

D. Acquisition Strategy

The IMS Scorpion is being developed as an evolutionary acquisition program utilizing an incremental approach. This strategy will address all IMS Scorpion capabilities in the requirements document. The first increment supports National Landmine Policy and provides full spectrum weapons system effectiveness in offensive, defensive, and stability operations. In June 2006, a competitive Engineering and Manufacturing Development (EMD) Contract was awarded to Textron Defense Systems of Wilmington, MA. This contract has two Low Rate Initial Production (LRIP) Options which will be exercised in FY12 and FY13. Increment I will serve as the baseline design for the follow-on increments and enabling technology development will be conducted to ensure all requirements can be rapidly achieved with the follow-on increments at the lowest cost possible. Increment II will

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
2040: Research, Development, Test & Evaluation, Army	PE 0604808A: Landmine Warfare/Barrier - Eng	016: Close Combat Capabilities ENG DEV
BA 5: Development & Demonstration (SDD)	Dev	
provide a networked munitions reload capability, enhanced ground JTRS radio when it becomes available, common control station, FB		
E. Performance Metrics		
Performance metrics used in the preparation of this justification ma	terial may be found in the FY 2010 Army Performance Budget	Justification Book, dated May 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604808A: Landmine Warfare/Barrier - Eng Dev 016: Close Combat Capabilities ENG DEV

BA 5: Development & Demonstration (SDD)

Product Development (\$ in Millions)

				FY 2	FY 2010				FY 2011 F OCO				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Scorpion System Development & Demonstration	C/CPIF	Textron Defense System Corp. Wilmington, MA	165.455	28.000		28.500		0.000		28.500	Continuing	Continuing	0
Scorpion - MITRE provide C4 support	С	MITRE McLean, VA	3.996	0.500		0.500		0.000		0.500	Continuing	Continuing	0
		Subtotal	169.451	28.500		29.000		0.000		29.000			0.000

Remarks

Support (\$ in Millions)

				FY	2010	FY 2 Ba	2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IMS Engineering Support	С	ARDEC Picatinny Arsenal NJ	23.737	3.870		5.605		0.000		5.605	Continuing	Continuing	0
Modeling and Simulation	С	NVESD Ft Belvoir VA Location could not be determined.	0.500	0.450		0.500		0.000		0.500	Continuing	Continuing	0
C4ISR and IA	С	CECOM Ft Monmouth NJ	0.519	0.180		0.200		0.000		0.200	Continuing	Continuing	0
Simple Key Loader (SKL)	С	PEO C3T	0.200	0.000		0.000		0.000		0.000	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)

PE 0604808A: Landmine Warfare/Barrier - Eng Dev 016: Close Combat Capabilities ENG DEV

Support (\$ in Millions)

				FY	2010	FY : Ba	2011 ase	FY 2	2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location Ft Monmouth NJ	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IMS Engineering Support - 2	С	Various Location could not be determined.	8.062	0.201		0.795		0.000		0.795	Continuing	Continuing	0
IMS - PM HMS	С	Fort Monmouth NJ	4.144	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PEO STRI	С	Orlando FL Location could not be determined.	0.000	0.070		0.250		0.000		0.250	Continuing	Continuing	0
	<u>, </u>	Subtotal	37.162	4.771		7.350		0.000		7.350			0.000

Remarks

Test and Evaluation (\$ in Millions)

				FY 2	2010		2011 ase	FY 2	2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SLAD, AMSAA, AEC, DTC, ERDEC, CRTC, TRTC, NTS, FLW	С	SLAD AMSAA, AEC, DTC, ERDEC, CRTC, TRTC, NTS, FLW	2.869	1.225		6.284		0.000		6.284	Continuing	Continuing	0
DT-G & Live Fire	С		0.000	1.500		3.550		0.000		3.550	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)

PE 0604808A: Landmine Warfare/Barrier - Eng Dev 016: Close Combat Capabilities ENG DEV

Test and Evaluation (\$ in Millions)

				FY 2	2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Yuma Proving Grounds AZ Location could not be determined.											
Risk Reduction, Environmental	С	White Sands Missile Range. MN Location could not be determined.	0.575	0.350		0.950		0.000		0.950	Continuing	Continuing	0
Operational Test	С	OTC Location could not be determined.	0.000	0.100		2.400		0.000		2.400	Continuing	Continuing	0
Live Fire, Limited User Test	С	TMO Location could not be determined.	0.000	0.000		5.656		0.000		5.656	Continuing	Continuing	0
Arena Frag Testing	С	ARDEC Picatinny NJ	0.000	0.000		1.515		0.000		1.515	Continuing	Continuing	0
		Subtotal	3.444	3.175		20.355		0.000		20.355			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army
BA 5: Development & Demonstration (SDD)

PROJECT

016: Close Combat Capabilities ENG DEV

Dev

Management Services (\$ in Millions)

				FY 2	2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IMS	С	PM CCS Picatinny Arsenal, NJ	7.207	1.000		2.000		0.000		2.000	Continuing	Continuing	0
IMS - 2	С	Robbins-Goia Alexandria, VA	2.503	0.350		0.000		0.000		0.000	Continuing	Continuing	0
IMS - 3	С	BRTRC Alexandria, VA	1.624	0.450		0.600		0.000		0.600	Continuing	Continuing	0
IMS TSM Spt	С	MTS Alexandria VA	0.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LCCE	С	Tecolote Fort Monmouth, NJ	0.000	0.077		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	С	Nothing entered for Activity and Location. Location could not be determined.	0.000	1.104		0.000		0.000		0.000	Continuing	Continuing	0
		Subtotal	11.834	2.981		2.600		0.000		2.600			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY:	FY 2	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	221.891	39.427	59.305	0.000		59.305			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010 **R-1 ITEM NOMENCLATURE** PROJECT

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army PE 0604808A: Landmine Warfare/Barrier - Eng

BA 5: Development & Demonstration (SDD)

Dev

016: Close Combat Capabilities ENG DEV

]	FY	20	09]	FY	201	0]	F Y :	201	1	J	F Y	201	2	J	F Y 2	201	3	I	Y :	201	4	I	Y 2	2015	5
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
User Jury III	#																											
System Verification Test	#	#																										
IMS Critical Design Review (CDR)		#																										
Risk Reduction Testing			#	# #																								
Government Development Testing						#	#	#	#																			
Limited User Test									#																			
Facilitization Decision								#																				
LRIP 1 Contract Award													#															
IMS Milestone C												#																
IMS Initial Operational Capability																			#									
LRIP 2 Contract Awd																	#											
IOT&E																		#										
Full Rate Production Decision																		#										
Full Rate Production Award																					#							
INCREMENT II IMS													#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	
Milestone B													#															

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0604808A: Landmine Warfare/Barrier - Eng	016: Close C	Combat Capabilities ENG DEV
BA 5: Development & Demonstration (SDD)	Dev		

Schedule Details

	Sta	art	E	nd
Event	Quarter	Year	Quarter	Year
User Jury III	1	2009	1	2009
System Verification Test	1	2009	2	2009
IMS Critical Design Review (CDR)	2	2009	2	2009
Risk Reduction Testing	3	2009	4	2009
Government Development Testing	2	2010	1	2011
Limited User Test	1	2011	1	2011
Facilitization Decision	4	2010	4	2010
LRIP 1 Contract Award	1	2012	1	2012
IMS Milestone C	4	2011	4	2011
IMS Initial Operational Capability	3	2013	3	2013
LRIP 2 Contract Awd	1	2013	1	2013
IOT&E	2	2013	2	2013
Full Rate Production Decision	2	2013	2	2013
Full Rate Production Award	1	2014	1	2014
INCREMENT II IMS	1	2012	3	2015
Milestone B	1	2012	1	2012

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Exhibit R-2A, RDT&E Project Justif	ication: PB 2	011 Army							DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTI 2040: Research, Development, Test & E BA 5: Development & Demonstration (Evaluation, Ar	ту			NOMENCLA A: Landmine	_	ier - Eng	PROJECT 415: MINE N	NEUTRAL/DE	ETECTION	
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
415: MINE NEUTRAL/DETECTION	39.108	32.953	36.272	0.000	36.272	19.986	18.389	26.441	24.018	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This Project provides for Engineering Manufacturing and Development (EMD) for the next generation of technologies to detect, identify and neutralize explosive hazards such as Improvised Explosive Devises (IEDs) and landmines. As a consequence of the Acquisition Decision Memorandum that terminates the Future Combat Systems (FCS) platforms (TUAV and MULE), these next generation programs are undergoing significant changes. Research and development of the next generation capabilities must be preserved because Engineer Mobility requirements still persist while the divestiture from FCS is completed. The next generation of standoff detection capabilities is a Family of Systems (FOS) encompassing handheld, vehicle mounted, small robotic mounted, aerial platform mounted and area clearance systems operating in manned, remotely controlled, semi-autonomous or fully autonomous modes. Continued development of this FOS is necessary to support the Army's Brigade Combat Team Modernization program as well as Overseas Contingency Operations (OCO). The Handheld Standoff Mine Detection System (HSTAMIDS) develops explosive hazard detection systems for individual Soldiers. The Autonomous Mine Detection System (AMDS) will develop explosive hazard detection and neutralize packages on a small robotic platform. The Advanced Mine Detection System (AMDS) that will develop the next generation of explosive hazard detection systems for dismounted Soldiers. The Airborne Counter Explosive Reconnaissance and Targeting System (ACERTS) uses Multi-Spectral Imaging (MSI) and visible/Near Infrared sensors mounted on manned or unmanned aerial vehicles to detect and locate explosive hazards, IEDs and other obstacles that impede maneuver forces. The Ground Vehicle Sub Surface Sensor System (GVS4) is a payload with detection and neutralization equipment mounted and integrated on manned or unmanned platforms to support Army Heavy and Infantry BCTs. This package may include downward looking, forward looking and side-looking radars, articulating crane arms with digging attachments and standoff optical and thermal viewing capabilities. The Husky Mounted Detection System (HMDS) is a development to provide next generation ground penetrating radars (GPR) and semi-autonomous operations for the current fleet of Husky route clearance vehicles. This project will also fund development of training devices for Military Working Dogs involved in explosive hazard detection. This project will provide improved capabilities for area clearance of explosive hazards including remote control kits for the medium mine clearing flails and an Area Mine Proofing System (AMPS) that a integrates a proofing mechanism with the prime mover.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	6.903	0.000	0.000	0.000	0.000
FY09: ACERTS - Completes Critical Design Review.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barr Dev	ier - Eng	PROJECT 415: MINE N	/EUTRAL/DE	ETECTION	
B. Accomplishments/Planned Program (\$ in Millions)			1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2		4.700	3.577	0.000	0.000	0.000
FY09-FY10: ACERTS - Initiates Spiral 3 Gimbal/Prototype Fabrication						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #3		7.852	2.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			PROJECT 415: MINE N	VEUTRAL/DE		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09-FY10: ACERTS - Complete Spiral 3 Prototype Fabrication AP#5, #6	6, #7					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4		2.200	2.000	0.000	0.000	0.000
FY09: ACERTS - Deliver Spiral 2 & 3 Prototypes for Test						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier Dev	- Eng	PROJECT 415: MINE N	PROJECT 115: MINE NEUTRAL/DETECTION		
B. Accomplishments/Planned Program (\$ in Millions)			1			
	F	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5		1.500	0.750	0.000	0.000	0.000
FY09: ACERTS - Complete all SDD Contract Data Deliverables						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6		2.000	1.500	0.000	0.000	0.000
FY09-FY10: ACERTS - Prepare MS C IPR Package						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

UNCLASSIFIED

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev PROJECT 415: MINE			NEUTRAL/DETECTION			
B. Accomplishments/Planned Program (\$ in Millions)			,				
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #7		1.000	0.750	0.000	0.000	0.000	
FY09-FY10: ACERTS - Prepare LRIP Procurement Package							
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #8		0.000	1.100	2.200	0.000	2.200	
FY10-11: ACERTS Initiates Support to Flight Integration & Test							
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrie Dev	0604808A: Landmine Warfare/Barrier - Eng 415: MINE		NEUTRAL/DE			
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #9		0.000	0.000	2.900	0.000	2.900	
FY10-11: ACERTS Initiate Algorithm Detection Enhancement Developme	ent						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #10		0.000	0.000	4.200	0.000	4.200	
FY10-11: ACERTS Initiate Algorithm False Alarm Reduction Developmen	nt						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			PROJECT 415: MINE	NEUTRAL/DE		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11		0.000	1.531	2.045	0.000	2.045
FY10-11: ACERTS Initiate Change Detection Algorithm Development						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #12		0.000	0.908	1.055	0.000	1.055
FY10-11: ACERTS Initiate Next Generation Workstation (NGWS) Development	opment					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/B Dev	PE 0604808A: Landmine Warfare/Barrier - Eng 415: MINE NEUTRAL/DETECTION			TECTION	
B. Accomplishments/Planned Program (\$ in Millions)	·					
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #13		3.750	0.000	0.000	0.000	0.000
FY09: GSV4 - Continue development of the Mine Neutralization S	Subsystem					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #14		1.850	0.000	0.000	0.000	0.000
FY09: GSV4 - Complete integration and testing of the Mine Detec	ction Subsystem on surrogate platform					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev PROJECT 415: MINE			NEUTRAL/DETECTION		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #15		3.300	0.000	0.000	0.000	0.000
FY09: GSV4 - Complete integration and testing of the Lane Marking subs	ystem on surrogate platform					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #16		2.950	0.000	0.000	0.000	0.000
FY09: GSV4 - Complete Integration and testing of the GSV4 Computer Su	ıbsystem on surrogate platform					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev		PROJECT 415: MINE NEUTRAL/DE		TECTION	
B. Accomplishments/Planned Program (\$ in Millions)			'			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #17		1.103	0.000	0.000	0.000	0.000
FY09: GSV4 - Complete Test Review for Final Prototype and conduct C Systems Integration Laboratory and on the Surrogate Test Vehicle.	ontractor Verification Testing in the					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #18		0.000	11.249	16.231	0.000	16.231
FY10: GSV4 Product Development						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						

			DATE: Febr	uary 2010	
R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev PROJECT 415: MINE 1			NEUTRAL/DETECTION		
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
	0.000	3.577	4.556	0.000	4.556
	0.000	0.435	1.455	0.000	1.455
	PE 0604808A: Landmine Warfar	PE 0604808A: Landmine Warfare/Barrier - Eng Dev FY 2009	PE 0604808A: Landmine Warfare/Barrier - Eng 415: MINE N	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev 415: MINE NEUTRAL/DE	PE 0604808A: Landmine Warfare/Barrier - Eng 415: MINE NEUTRAL/DETECTION FY 2011 FY 2011 Base OCO

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev	PROJECT 415: MINE	PROJECT 415: MINE NEUTRAL/DETECTION		
B. Accomplishments/Planned Program (\$ in Millions)		'			
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #21	0.0	00 2.653	1.630	0.000	1.630
FY10: GSV4 Program Management					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #22	0.0	00 0.923	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology	Fransfer Programs				
FY 2009 Accomplishments: FY 2009					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0604808A: Landmine Warfare/Barrier - Eng	415: <i>MINE I</i>	NEUTRAL/DETECTION
BA 5: Development & Demonstration (SDD)	Dev		

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2	2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
	Accomplishments/Planned Programs Subtotals 3	39.108	32.953	36.272	0.000	36.272

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	<u>oco</u>	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• Ord. #1: PE 0603619A, Project 606,	13.789	17.445	15.596	0.000	15.596	19.293	19.724	17.433	17.901	Continuing	Continuing
Countermine/Barrier Advanced Dev											
• Ord. #2: OPA 3, R68102, GSV4	197.885	50.064	35.002	0.000	35.002	70.868	28.767	55.215	39.650	Continuing	Continuing
• Ord. #3: OPA 3, S11500, ACERTS	12.735	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: <i>OPA 3, MA7700</i> ,	3.183	3.468	3.655	0.000	3.655	3.167	3.153	3.269	3.352	Continuing	Continuing
C											

Countermine Equipment, Less than \$5 Million

D. Acquisition Strategy

The ACERTS competitively selected Prime System contractor was awarded Cost Plus Incentive Fee (CPIF) System Development and Demonstration (SDD) in FY03 after MDA Milestone B approval. Milestone C is scheduled for 4QFY10. GSV4 entered the SDD Phase in June 2004 with MDA approval of MS B and competitively awarded a SDD Cost Plus Fixed Fee (CPFF) contract. Remaining effort includes completion of product development and integration with a surrogate platform and a technical demonstration of capabilities on surrogate platform in FY12.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
2040: Research, Development, Test & Evaluation, Army	PE 0604808A: Landmine Warfare/Barrier - Eng	415: MINE NEUTRAL/DETECTION
BA 5: Development & Demonstration (SDD)	Dev	
E. Performance Metrics		
Performance metrics used in the preparation of this justification material	may be found in the FY 2010 Army Performance Budget	Justification Book dated May 2010
remainded interiors used in the proparation of this Jastinoation material	may be found in the FF 2010 Filmy Fortoniance Budget	vasarrearion Book, autoa may 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604808A: Landmine Warfare/Barrier - Eng Dev 415: MINE NEUTRAL/DETECTION

BA 5: Development & Demonstration (SDD)

Product Development (\$ in Millions)

				FY :	FY 2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GSV4	C/CPFF	BAE Systems Austin,TX	68.470	12.673		16.482		0.000		16.482	Continuing	Continuing	17.869
ACERTS	C/CPIF	Northrop Grumman Location could not be determined.	49.740	11.741		1.500		0.000		1.500	Continuing	Continuing	0
		Subtotal	118.210	24.414		17.982		0.000		17.982			17.869

Remarks

Support (\$ in Millions)

				FY	2010	FY 2 Ba	2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GSV4	С	Various OGAs Location could not be determined.	2.763	1.510		1.651		0.000		1.651	Continuing	Continuing	0
GSV4 Engineering Support	С	NVESD/CECOM Ft Belvoir, VA	5.469	1.692		2.705		0.000		2.705	Continuing	Continuing	0
GSV4 Support	С	Various Contractors Location could not be determined.	0.970	0.375		0.200		0.000		0.200	Continuing	Continuing	0
ACERTS Engineering Support	С	NVESD/CECOM Fort Belvoir, VA	4.082	1.243		3.887		0.000		3.887	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604808A: Landmine Warfare/Barrier - Eng Dev 415: MINE NEUTRAL/DETECTION

BA 5: Development & Demonstration (SDD)

Support (\$ in Millions)

				FY	2010		2011 ase	FY :	2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ACERTS (Change Detection)	С	NVESD/CECOM Fort Belvoir, VA	0.000	0.000		2.000		0.000		2.000	Continuing	Continuing	0
ACERTS Support	C/Various	Various Location could not be determined.	0.283	0.500		1.500		0.000		1.500	Continuing	Continuing	0
		Subtotal	13.567	5.320		11.943		0.000		11.943			0.000

Remarks

Test and Evaluation (\$ in Millions)

				FY	FY 2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GSV4 Test Support	С	ATEC Alexandria, VA	1.749	0.435		1.455		0.000		1.455	Continuing	Continuing	0
ACERTS	С	ATEC Alexandria, VA	2.300	0.050		1.500		0.000		1.500	Continuing	Continuing	0
		Subtotal	4.049	0.485		2.955		0.000		2.955			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD) PATE: February 2010 R-1 ITEM NOMENCLATURE PE 0604808A: Landmine Warfare/Barrier - Eng Dev Dev

Management Services (\$ in Millions)

				FY	FY 2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	С	PM-CCS Picatinny Arsenal, NJ	3.516	0.853		1.908		0.000		1.908	Continuing	Continuing	0
Program Management Contractor Support	С	USFALCON Location could not be determined.	5.650	0.958		1.484		0.000		1.484	Continuing	Continuing	0
SIBR/STTR	С	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.923		0.000		0.000		0.000	Continuing	Continuing	0
		Subtotal	9.166	2.734		3.392		0.000		3.392			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2	FY 2	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	144.992	32.953	36.272	0.000	36.272			17.869

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604808A: Landmine Warfare/Barrier - Eng

Dev

PROJECT

415: MINE NEUTRAL/DETECTION

	FY 2009			I	Y 2	201	0]	FY	201	1		FY	201	2]	FY:	201	3]	FY	201	4]	FY 2	201	5	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Preliminary Design Review - Neutralization			#																									
Critical Design Review - Neutralization						#																						
Test Readiness Review						#																						
Contracting Testing			#	#	#	#	#																					
Delivery of Prototype											#																	
Test Readiness Review - 2								#																				
Critical Design Review					#																							
Milestone C/LRIP							#																					
Integration and Testing on Air Platform(s)									#	#	#	#	#	#	#													
Full Rate Production Decision																		#										
Milestone B															#													
Preliminary Design Review																#												
Test Readiness Review - 3																	#											
Critical Design Review - 2																		#										
Contractor Testing																					#							
Operational Testing																						#						
Milestone C																												#

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army
BA 5: Development & Demonstration (SDD)

PE 0604808A: Landmine Warfare/Barrier - Eng
Dev

Dev

DATE: February 2010

PROJECT

415: MINE NEUTRAL/DETECTION

Schedule Details

	Sta	art	En	ıd
Event	Quarter	Year	Quarter	Year
Preliminary Design Review - Neutralization	3	2009	3	2009
Critical Design Review - Neutralization	2	2010	2	2010
Test Readiness Review	2	2010	2	2010
Contracting Testing	3	2009	3	2010
Delivery of Prototype	3	2011	3	2011
Test Readiness Review - 2	4	2010	4	2010
Critical Design Review	1	2010	1	2010
Milestone C/LRIP	3	2010	3	2010
Integration and Testing on Air Platform(s)	1	2011	3	2012
Full Rate Production Decision	2	2013	2	2013
Milestone B	3	2012	3	2012
Preliminary Design Review	4	2012	4	2012
Test Readiness Review - 3	1	2013	1	2013
Critical Design Review - 2	2	2013	2	2013
Contractor Testing	1	2014	1	2014
Operational Testing	2	2014	2	2014
Milestone C	4	2015	4	2015

DATE: February 2010

Eximole R-2/1, RD 1 CE 1 Toject susti	ication. 1 D 2	O11 / Milly							D/1112.1 CO	uary 2010	
APPROPRIATION/BUDGET ACTI	VITY			R-1 ITEM N	NOMENCLA	TURE		PROJECT			
2040: Research, Development, Test & I	Evaluation, Ar	my		PE 0604808.	A: Landmine	Warfare/Barr	ier - Eng	443: <i>APL-A</i>	(MIXED SYS	TEMS)	
BA 5: Development & Demonstration (Dev									
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
443: APL-A (MIXED SYSTEMS)	2.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army

This project was to provide alternatives to the anti-personnel submunitions used within mixed anti-tank (AT)/anti-personnel (AP)munition systems or the entire mixed AT/AP system. Alternative Beginning in FY 05, funding for this effort has transitioned to Project 016 within this Program Element. This line subsequently has been used for Congressional Adds for the Magneto Induction - Remote Activated Munition System (MI-RAMS).

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	1.900	0.000	0.000	0.000	0.000
MI RAMS Development and prototype assembly					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #2	0.814	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	arch, Development, Test & Evaluation, Army PE 0604808A: Landmine Warfare/Barrier		PROJECT 443: APL-A (MIXED SYSTEMS)			
B. Accomplishments/Planned Program (\$ in Millions)	,		1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Provide general engineering support.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #3		0.077	0.000	0.000	0.000	0.000
Program Management Support						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT		
2040: Research, Development, Test & Evaluation, Army	PE 0604808A: Landmine Warfare/Barrier - Eng	443: APL-A (MIXED SYSTEMS)		
BA 5: Development & Demonstration (SDD)	Dev			

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4	0.000	0.000	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Programs					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	2.791	0.000	0.000	0.000	0.000

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	<u>OCO</u>	Total	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• Ord. #1: MA9200 Explosive	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	3.200
Ordanance Disposal Equipment											

D. Acquisition Strategy

The Magneto Induction - Remote Activated Munition System (MI-RAMS) program has been a Congressionally funded program. The acquisition has been sole source to Ultra Electronics, Magnito Induction Systems.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.