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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	35.046	41.039	251.104	-	251.104	99.363	90.571	71.012	74.649	Continuing	Continuing
194: ENGINE DRIVEN GEN ED	1.354	7.166	4.199	-	4.199	1.601	0.238	0.022	-	Continuing	Continuing
H01: COMBAT ENGINEER EQ ED	5.414	7.044	5.480	-	5.480	5.483	2.976	2.952	2.937	Continuing	Continuing
H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	12.980	8.741	55.160	-	55.160	24.118	23.385	3.503	3.661	Continuing	Continuing
H14: MATERIALS HANDLING EQUIPMENT - ED	0.074	0.955	1.056	-	1.056	1.194	1.208	1.218	1.232	Continuing	Continuing
L39: Field Sustainment Support ED	4.349	5.804	4.230	-	4.230	2.523	2.452	2.392	2.304	Continuing	Continuing
L41: WATER AND PETROLEUM DISTRIBUTION - ED	2.405	2.734	2.079	-	2.079	3.912	3.749	3.771	3.804	Continuing	Continuing
L43: ENGINEER SUPPORT EQUIPMENT - ED	0.939	0.874	1.096	-	1.096	1.895	1.190	1.182	1.272	Continuing	Continuing
L46: Maintenance Support Equipment	3.138	3.178	3.165	-	3.165	3.657	1.689	1.759	1.778	Continuing	Continuing
L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED	4.393	4.543	-	-	-	-	-	-	2.937	Continuing	Continuing
L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD	-	-	172.093	-	172.093	53.254	52.049	52.488	52.863	0.000	382.747
VR7: COMBAT SERVICE SUPPORT SYSTEMS	-	-	2.546	-	2.546	1.726	1.635	1.725	1.861	Continuing	Continuing
Note Change Summary Explanation: Funding - FY 2012: Adjustment for Joint Light Tactical Vehicle (JLTV) move from Advanced development to Engineering development.											
A. Mission Description and Budget Item Justification This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.											

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>
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Increase from FY 2011 to FY 2012 reflects Joint Light Tactical Vehicle(JLTV) move from Advance Development to Engineering Development.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	37.023	41.039	106.236	-	106.236
Current President's Budget	35.046	41.039	251.104	-	251.104
Total Adjustments	-1.977	-	144.868	-	144.868
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-1.977	-	144.868	-	144.868

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
194: <i>ENGINE DRIVEN GEN ED</i>	1.354	7.166	4.199	-	4.199	1.601	0.238	0.022	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note
Not applicable for this item.

A. Mission Description and Budget Item Justification
This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY10 will fund completion of DT/OT (Development Test/Operational Test) for AMMPS in preparation for MSC. FY12 will fund the performance specification preparation and will award Engineering and Manufacturing Development(EMD) contract for Large Advanced Mobile Power Sources (LAMPS).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Complete DT/OT for AMMPS. Articles: Description: Complete DT/OT for AMMPS. Complete Documentation for Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g., TM's (technical manuals) , sustainment test, fielding plans. FY 2010 Accomplishments: Complete DT/OT for AMMPS. Complete Documentation for Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g., TM's, sustainment test, fielding plans.	1.330 0	-	-	-	-
Title: LAMPS Systems Engineering, Manufacturing, and Demonstration (EMD) Articles: Description: Prepare LAMPS performance specification;. begin Pase I EMD FY 2011 Plans:	-	6.000 0	4.199	-	4.199

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army				DATE: February 2011							
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT 194: ENGINE DRIVEN GEN ED							
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total			
Begin preparing LAMPS performance specification;. begin Phase I EMD FY 2012 Base Plans: Continue preparing LAMPS performance specification; continue Phase I EMD											
Title: STEP Systems Engineering, Manufacturing, and Development (EMD) Articles: Description: Prepare STEP performance specification; begin Phase I of EMD FY 2011 Plans: Prepare STEP performance specification; begin Phase I of EMD				-	1.166 0	-	-	-			
Title: Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR) Articles: Description: Small Business Innovative Research/Small Business Technology Transfer Program FY 2010 Accomplishments: Small Business Innovative Research/Small Business Technology Transfer Program				0.024 0	-	-	-	-			
Accomplishments/Planned Programs Subtotals				1.354	7.166	4.199	-	4.199			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 0603804A: Logistics and Engineer Equipment - Adv Dev G11	2.547	2.618	7.679		7.679				1.534	Continuing	Continuing
• MA9800: Generators and Associated Equipment	212.600	151.052	31.897		31.897		61.950	121.118	163.704	Continuing	Continuing
D. Acquisition Strategy Perform Developmental Testing (DT)/Operational Testing (OT) for the AMMPS family; perform phase II contract award through a down select. Developmental test and evaluation of technologies that transition into procurement after Milestone C. Complete Delivery of Technical Drawing Packages, Repair Parts and Special Tools List											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>
(RPSTL), Technical Manuals and Training Packages in preparation of Milestone C and Phase III-Production and Fielding. Prepare performance Specification for LAMPS (Large Advanced Mobile Power Sources). Begin Phase I SDD for LAMPS.		
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.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604804A: Logistics and Engineer Equipment - Eng Dev				194: ENGINE DRIVEN GEN ED					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
AMMPS(5-60kW)	Various	CECOM:Ft. Monmouth, NJ	2.977	-		-		-		-	Continuing	Continuing	Continuing
IECU	Various	CECOM:Ft. Monmouth, NJ	0.015	-		-		-		-	Continuing	Continuing	Continuing
LAMPS (100-200kw)	Various	CECOM:Ft. Monmouth, NJ	-	-		-		-		-	Continuing	Continuing	Continuing
Small Business Innovative Research/Small Business Technology Transfer Program	Various	Various:Various	-	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			2.992	-		-		-		-			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
AMMPS(5-60kW)	Various	Various:Various	28.755	-		-		-		-	Continuing	Continuing	Continuing
Follow-on 2kW Improvement Program	Various	Various:Various	3.300	-		-		-		-	Continuing	Continuing	Continuing
STEP	Various	Various:Various	-	0.900		-		-		-	Continuing	Continuing	Continuing
IECU	Various	Various:Various	0.613	-		-		-		-	Continuing	Continuing	Continuing
LAMPS (100-200kw)	Various	Various:Various	-	5.181		4.199		-		4.199	Continuing	Continuing	Continuing
Subtotal			32.668	6.081		4.199		-		4.199			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
AMMPS(5-60kW)	Various	CECOM:Fort Monmouth, NJ	2.635	-		-		-		-	Continuing	Continuing	Continuing
Follow-on 2kW Improvement Program	Various	CECOM:Fort Monmouth, NJ	0.065	-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT 194: ENGINE DRIVEN GEN ED					
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
IECU	Various	CECOM:Ft Monmouth NJ	0.372	-		-		-		-	Continuing	Continuing	Continuing
STEP	Various	CECCOM:Fort Monmouth, NJ	-	0.485		-		-		-	Continuing	Continuing	Continuing
Subtotal			3.072	0.485		-		-		-			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
AMMPS(5-60kW)	Various	Various:Various	6.873	-		-		-		-	Continuing	Continuing	Continuing
Follow-on 2kW Improvement Program	Various	CECOM:Fort Monmouth, NJ	0.216	-		-		-		-	Continuing	Continuing	Continuing
STEP	Various	CERDEC:Fort Belvoir, VA	-	0.600		-		-		-	Continuing	Continuing	Continuing
Subtotal			7.089	0.600		-		-		-			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			45.821	7.166		4.199		-		4.199			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
MS C-AMMPS																												
Production Release																												
Transition to Production																												
Proof of Principle Milestone B																												
Award SDD Contract Phase I-STEP																												
SDD Phase I																												
Award SDD Contract Phase II																												
SDD Phase II-STEP																												
MS C-STEP																												
LAMPS (Large Advanced Mobile Power Systems)																												
Prepare Performance Spec																												
Award EMD Contract - LAMPS																												
EMD - LAMPS																												
MS C-LAMPS																												
Prepare Production RFP and Source Solicitation																												
Award Production Contract - LAMPS																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer</i> <i>Equipment - Eng Dev</i>	PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MS C-AMMPS	1	2011	1	2011
Production Release	1	2011	2	2011
Transition to Production	2	2011	2	2011
Proof of Principle Milestone B	1	2011	1	2012
Award SDD Contract Phase I-STEP	1	2013	1	2013
SDD Phase I	1	2013	1	2014
Award SDD Contract Phase II	1	2014	1	2014
SDD Phase II-STEP	1	2014	2	2015
MS C-STEP	2	2015	2	2015
LAMPS (Large Advanced Mobile Power Systems)	2	2010	3	2010
Prepare Performance Spec	3	2010	3	2011
Award EMD Contract - LAMPS	3	2011	3	2011
EMD - LAMPS	3	2011	2	2014
MS C-LAMPS	3	2014	3	2014
Prepare Production RFP and Source Solicitation	3	2014	3	2015
Award Production Contract - LAMPS	2	2015	2	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: COMBAT ENGINEER EQ ED			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
H01: COMBAT ENGINEER EQ ED	5.414	7.044	5.480	-	5.480	5.483	2.976	2.952	2.937	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports the System Development and Demonstration(SDD) of military Construction Equipment used in support of horizontal and vertical engineer construction tasks; required in order to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) modular forces. This project also supports the SDD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground (A/G) Line of Communication (LOC) and Rapid Tactical Earthmoving (RTE) repair and construction which increase the operational reach of modular forces. The BCT and CSB systems include: High Mobility Engineer Excavators (HMEE); Scrapers, Scoop Loaders, Skid Steer Loaders, Dozers, Cranes and Graders. This project will also support the Research into the Deuce Replacement and the Energy Productivity Study per Assistant Secretary of the Army for Aquisition, Logistics & Technology (ASA(ALT) memo dated 4 June 2009.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Family of All Terrain Cranes							-	-	2.500	-	2.500
Description: System Pre-Award requirements, Key Performance Parameters (KPP), selection criteria development. Testing of systems.											
FY 2012 Base Plans: System Pre-Award requirements, KPP, selection criteria development. Testing of systems.											
Title: CE Armor Kits							1.056	0.500	-	-	-
Articles:							0	0			
Description: Design armor kits for Combat Engineer Equipment.											
FY 2010 Accomplishments: Design armor kits for Combat Engineer Equipment.											
FY 2011 Plans: Design armor kits for Combat Engineer Equipment.											
Title: CE Robotics Research							0.100	0.100	0.100	-	0.100
Articles:							0	0			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army				DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Development of Robotics Research FY 2010 Accomplishments: Development of Robotics Research FY 2011 Plans: Development of Robotics Research FY 2012 Base Plans: Development of Robotics Research								
Title: CE Simulators Description: Labor, software, and hardware simulator development FY 2010 Accomplishments: Labor, software, and hardware simulator development FY 2011 Plans: Labor, software, and hardware simulator development FY 2012 Base Plans: Labor, software, and hardware simulator development				Articles: 1.000 0	1.500 0	2.880	-	2.880
Title: Heavy Scraper Ballistic Testing Description: FY10: Heavy Scraper Ballistic Testing FY 2010 Accomplishments: Heavy Scraper Ballistic Testing				Articles: 0.800 0	-	-	-	-
Title: Forced Entry (Airborne/Air Assault) HMEE, Grader and Loader Type 1 Study/Development Description: FY10: Forced Entry (Airborne/Air Assault) HMEE, Grader and Loader Type 1 Study/Development FY 2010 Accomplishments:				Articles: 1.164 0	4.894 0	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Forced Entry (Airborne/Air Assault) HMEE, Grader and Loader Type 1 Study/Development													
FY 2011 Plans: Forced Entry (Airborne/Air Assault) HMEE, Grader and Loader Type 1 Study/Development													
Title: Survivability Enhancements and Armor for Combat Engineer Equipment Articles: Description: FY10: Survivability Enhancements and Armor for Combat Engineer Equipment FY 2010 Accomplishments: Survivability Enhancements and Armor for Combat Engineer Equipment									0.550 0	-	-	-	-
Title: Non Nuclear Soil Density Set Testing Articles: Description: FY10: Test non nuclear soil density test sets. FY 2010 Accomplishments: Test non nuclear soil density test sets. FY 2011 Plans: Test non nuclear soil density test sets.									0.744 0	0.050 0	-	-	-
Accomplishments/Planned Programs Subtotals									5.414	7.044	5.480	-	5.480
C. Other Program Funding Summary (\$ in Millions)													
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost		
• HMEE I: High Mobility Engineer Excavator I	41.497	60.253	16.907		16.907					0.000	119.349		
• HMEE 3: High Mobility Engineer Excavator III	11.339	8.456	2.067		2.067					0.000	21.862		
• Grader: Grader, Mtzd, Hvy	44.157	51.769	2.201		2.201					0.000	98.127		
• Light Loader: Loader, Scoop Type, 2 1/2 CU YD	13.493	8.362								0.000	21.855		
	8.365									0.000	8.365		

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Heavy Loader: <i>Loader, Scoop Type, 4 - 5 CU YD</i>											
• HYEX: <i>Hydraulic Excavator</i>	19.016	8.458								0.000	27.474
• AMP: <i>Plant, Asphalt Mixing</i>	15.374	10.783	8.314		8.314					0.000	45.312
• Dozer: <i>Tractor Full Tracked, Med T-9</i>	49.944	64.032	59.534		59.534		65.024	60.305	43.977	Continuing	Continuing
• Cranes: <i>All Terrain Cranes</i>	101.445		21.859	1.800	23.659					0.000	125.104
• SSL: <i>Skid Steer Loaders</i>	18.330		8.584		8.584					0.000	26.914

D. Acquisition Strategy

Conduct research, development, and investigations on future Construction Equipment (CE) and identify the path forward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliability, survivability, transportability, availability, maintainability and reduce the logistical footprints for future CE equipment.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604804A: Logistics and Engineer Equipment - Eng Dev				H01: COMBAT ENGINEER EQ ED					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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 Mgt	Various	PM CE/MHE:various	0.856	-		-		-		-	Continuing	Continuing	Continuing
SBIR/STTR	Various	Small Business:Warren, Michigan	0.236	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.092	-		-		-		-			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Continue development of engineer and acquisition documents	Various	various:various	1.642	-		-		-		-	Continuing	Continuing	Continuing
System Pre-Award requirements, KPP, selection criteria development. Testing fo systems	Various	TACOM & TARDEC:Warren, MI	-	-		2.500		-		2.500	0.000	2.500	0.000
Market Research, Studies, Update Specs for future engineer	Various	various:various	1.693	-		-		-		-	Continuing	Continuing	Continuing
Design armor kits for Combat Engineer	Various	TARDEC:Warren, MI	4.192	0.500		-		-		-	Continuing	Continuing	Continuing
Development of Robotic Research for Combat Engineer	Various	TBD:TBD	1.419	0.100		0.100		-		0.100	Continuing	Continuing	Continuing
Survivability Enhancements and Armor for Combat Engineer	Various	various:various	-	-		-		-		-	Continuing	Continuing	Continuing
Development of Simulator	Various	PEO Stricom:PEO, Stricom, Orlando, FL	3.409	1.500		2.880		-		2.880	Continuing	Continuing	Continuing
Forced Entry Airborne(Air Assault) HMEE Type II, Grader and Loader Type I Study/Development	Various	TARDEC:Warren, MI	3.128	4.894		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: COMBAT ENGINEER EQ ED					

Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Subtotal			15.483	6.994		5.480		-		5.480			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Matrix Support	Various	TACOM & TARDEC,;Warren, MI	10.718	-		-		-		-	Continuing	Continuing	Continuing
Engineering Operational Integrator Support	Various	HQDA:Washington, DC	0.156	-		-		-		-	Continuing	Continuing	Continuing
Construction Equipment Lease Study	Various	TACOM & TARDEC,;Warren, MI	0.200	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			11.074	-		-		-		-			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Future Engineer Equipment (various)	Various	ATEC:Virginia	2.882	-		-		-		-	Continuing	Continuing	Continuing
Heavy Scraper Ballistic Test	Various	TARDEC:Warren, MI	0.800	-		-		-		-	Continuing	Continuing	Continuing
Test Nuclear soil density test sets.	Various	TARDEC:Warren, MI	0.736	0.050		-		-		-	Continuing	Continuing	Continuing
Subtotal			4.418	0.050		-		-		-			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			32.067	7.044		5.480		-		5.480			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
HMEE Type II Development Phase I																												
Survivability Enhancements for Construction Equipment																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer</i> <i>Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
HMEE Type II Development Phase I	1	2010	3	2012
Survivability Enhancements for Construction Equipment	1	2010	3	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	12.980	8.741	55.160	-	55.160	24.118	23.385	3.503	3.661	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include the integration and testing of forty-six meter capability for the Dry Support Bridge (DSB) as well as the development, integration and testing for float capabilities for the Dry Support Bridge (DSB). Other efforts include the development, integration and testing of the Bridge Erection Boat (BEB) and testing of the Program of Record (POR) Line of Communication (LOC) bridge. This project also includes the development and testing of light assault gap crossing capability, a remote controlled automatic launch for the REBS and integrate and test the Rapidly Emplaced Bridge System (REBS) on a Stryker chassis, various bridging product improvements such as upgrade of Armored Vehicle Launch Bridge (AVLB), to higher Military Load Classifications, development of a health monitoring system, and testing of failure modes for composite bridges. Additionally, these funds support the development and testing of the Joint Assault Bridge (JAB) system.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: LOC Bridge POR Testing Articles: Description: LOC Bridge POR Testing FY 2010 Accomplishments: LOC Bridge POR Testing FY 2011 Plans: LOC Bridge POR Testing	3.000 0	1.800 0	-	-	-
Title: JAB Testing Articles: Description: JAB Testing FY 2011 Plans: JAB Testing FY 2012 Base Plans:	-	2.541 0	49.810	-	49.810

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army				DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continues development and begins testing of the Joint Assault Bridge.						
Title: Assault Breacher Vehicle (ABV) Tests Description: ABV Tests FY 2010 Accomplishments: ABV Tests		0.200 0 Articles:	-	-	-	-
Title: AVLB Upgrade Test Selfridge Air National Guard Base (SANG) Description: Funding is provided for the following effort FY 2010 Accomplishments: AVLB Upgrade Test (SANG)		0.300 0 Articles:	-	-	-	-
Title: BEB Testing Description: BEB Testing FY 2010 Accomplishments: BEB Testing FY 2011 Plans: BEB Testing FY 2012 Base Plans: Completion of operational and development testing and logistics demonstration of the Bridge Erection Boat.		9.330 0 Articles:	3.500 0	4.250	-	4.250
Title: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT) Description: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)		-	0.500 0 Articles:	1.100	-	1.100

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2011 Plans: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)												
FY 2012 Base Plans: Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).												
Title: Light Assault Gap Crossing Development and Testing Articles: Description: Light Assault Gap Crossing Development and Testing FY 2011 Plans: Light Assault Gap Crossing Bridge development and testing								-	0.400 0	-	-	-
Title: Advanced Modular Composite Bridge Testing Articles: Description: Advanced Modular Composite Bridge Testing FY 2010 Accomplishments: Advanced Modular Composite Bridge Testing								0.150 0	-	-	-	-
Accomplishments/Planned Programs Subtotals								12.980	8.741	55.160	-	55.160
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
• Tactical Bridging: OPA3, MX0100	53.739	62.817	77.428	15.000	92.428		39.735	11.577	10.462	Continuing	Continuing	
• Tactical Bridge - Float Ribbon: OPA3, MA8890	148.113	109.057	49.154	26.900	76.054		50.571	46.330	46.831	Continuing	Continuing	
• Assault Breacher Vehicle: WTCV, G82925	63.055	77.930	99.904		99.904		126.020	118.548	103.356	Continuing	Continuing	
	70.419	44.133					46.179	79.840	111.686	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<ul style="list-style-type: none"> • Joint Assault Bridge: <i>WTCV, GZ3001</i> 											
D. Acquisition Strategy											
Limited RDT&E effort to support testing and follow-on production.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army				PE 0604804A: Logistics and Engineer				H02: TACTICAL BRIDGING - ENGINEERING					
BA 5: Development & Demonstration (SDD)				Equipment - Eng Dev				DEVELOPMENT					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
ABV Tests	Various	ATEC:APG	0.550	-		-		-		-	Continuing	Continuing	Continuing
AVLB Upgrade Test	Various	Tardec:Warren, MI	-	-		-		-		-	Continuing	Continuing	Continuing
BEB Development	Various	TBS:TBD	4.193	-		-		-		-	Continuing	Continuing	Continuing
Light Assault Gap Crossing Development and Testing	Various	TBS:TBD	-	0.400		-		-		-	Continuing	Continuing	Continuing
JAB Development	Various	TBS:TBD	-	-		49.810		-		49.810	Continuing	Continuing	Continuing
REBS Auto Launch-Retrieve	Various	GDELS:Germany, DE	-	0.500		1.100		-		1.100	Continuing	Continuing	Continuing
Subtotal			4.743	0.900		50.910		-		50.910			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Other Government Agencies	Various	various:various	0.140	-		-		-		-	0.000	0.140	0.000
Subtotal			0.140	-		-		-		-	0.000	0.140	0.000
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
LOC Testing	Various	ATEC:APG/Ft. Leonardwood	-	1.800		-		-		-	Continuing	Continuing	Continuing
JAB Testing	Various	TBS:TBD	-	2.541		-		-		-	Continuing	Continuing	Continuing
BEB Testing	Various	Various:Various	1.000	3.500		4.250		-		4.250	Continuing	Continuing	Continuing
Advanced Modular Composite Bridge Testing	Various	TARDEC,:Warren, MI	-	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.000	7.841		4.250		-		4.250			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army								DATE: February 2011						
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT						
				Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals				5.883	8.741		55.160		-		55.160			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
LOCB POR Testing																												
JAB Testing																												
AVLB Upgrade Test																												
REBS Auto Launch-Retrieve																												
Light Assault Gap Crossing Testing and Development																												
Advanced Modular Composite Bridge Testing																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LOCB POR Testing	1	2010	3	2012
JAB Testing	1	2011	3	2014
AVLB Upgrade Test	1	2010	3	2011
REBS Auto Launch-Retrieve	2	2010	3	2013
Light Assault Gap Crossing Testing and Development	1	2011	3	2013
Advanced Modular Composite Bridge Testing	1	2010	3	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H14: MATERIALS HANDLING EQUIPMENT - ED			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
H14: MATERIALS HANDLING EQUIPMENT - ED	0.074	0.955	1.056	-	1.056	1.194	1.208	1.218	1.232	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports system development and demonstration of Material Handling Equipment (MHE) that support Combat Service Support units with MHE for world wide rapid movement of supplies including container handling equipment, forklifts, and other cargo handling related items. Necessary efforts include simulator development, validating requirements, developing acquisition strategies, developing performance specifications, and test and evaluation planning.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Material Handling Equipment (MHE) Training Aids Articles: Description: Funding is provided for the following effort FY 2010 Accomplishments: Develope and Integrate 5 Channnel Simulators for MHE systems. FY 2011 Plans: Development and Integration of 5 Channnel Simulators for MHE systems. FY 2012 Base Plans: Continue to Develope and Integrate 5 Channnel Simulators for MHE systems.							0.054	0.955	1.056	-	1.056
							0	0			
Title: Rough Terrain Container Handler (RTCH) CPK Testing Articles: Description: Funding is provided for the following effort FY 2010 Accomplishments: RTCH Crew Protection Kit Testing at Aberdeen Proving Grounds							0.010	-	-	-	-
							0				
Title: RTCH CPK MWO's (based off testing) Articles: Description: Funding is provided for the following effort							0.010	-	-	-	-
							0				

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>	

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2010 Accomplishments:</i> Engineering for Modification Work Orders required (based off testing)					
Accomplishments/Planned Programs Subtotals	0.074	0.955	1.056	-	1.056

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPA3, M41200: <i>Rough Terrain Container Handler (RTCH)</i>	95.469	34.022								0.000	129.491
• OPA3, M41800: <i>All Terrain Lifting Army System (ATLAS)</i>	94.075	73.961	21.859	1.800	23.659					0.000	191.695
• OPA3, G41002: <i>Light Capacity Rough Terrain (LCRT) Forklift</i>		12.936	10.944		10.944		5.595	9.489	25.230	Continuing	Continuing

D. Acquisition Strategy RDT&E Engineering - Engineering efforts will be conducted: Programmatic Pre-Milestone C support of 5,000 LB Light Capacity Rough Terrain Forklift; Rough Terrain Container Handler Crew Protection Kit Development; Rough Terrain Container Handler Crew Protection Kit Testing and Engineering Support at Aberdeen Proving Grounds; Engineering for Modification Work Orders required (based off testing).

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H14: MATERIALS HANDLING EQUIPMENT - ED					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
SBIR/STTR	Various	Small Business:Warren. MI	-	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			-	-		-		-		-			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
PM/Matrix Support	Various	TACOM,:Warren, MI	0.506	-		-		-		-	Continuing	Continuing	Continuing
TARDEC	Various	TARDEC,:Warren, MI	0.340	-		-		-		-	Continuing	Continuing	Continuing
ATLAS II Contract	Various	TBD:TBD	0.822	-		-		-		-	Continuing	Continuing	Continuing
6K VRRTFLT Contract	Various	TRAK International, Port:various	0.928	-		-		-		-	Continuing	Continuing	Continuing
MHE Simulators	MIPR	Kalmar Rt:Cibolo, TX	-	0.955		1.056		-		1.056	Continuing	Continuing	Continuing
Subtotal			2.596	0.955		1.056		-		1.056			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
ATLAS	Various	TBD:TBD	0.250	-		-		-		-	Continuing	Continuing	Continuing
6K VRRTFLT	Various	TBD:TBD	0.342	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.592	-		-		-		-			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
6K VRRTFLT	MIPR	APG:Aberdeen, MD	0.500	-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>					

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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	
RTCH	MIPR	APG:Aberdeen, MD	0.059	-		-		-		-	Continuing	Continuing	Continuing	
Subtotal			0.559	-		-		-		-				

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.747	0.955		1.056		-		1.056			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army																DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE								PROJECT			
2040: Research, Development, Test & Evaluation, Army								PE 0604804A: Logistics and Engineer								H14: MATERIALS HANDLING EQUIPMENT -			
BA 5: Development & Demonstration (SDD)								Equipment - Eng Dev								ED			

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
T&E of MHE Simulators	4	2010	4	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L39: Field Sustainment Support ED			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L39: Field Sustainment Support ED	4.349	5.804	4.230	-	4.230	2.523	2.452	2.392	2.304	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, mortuary affairs systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment such as heaters, camouflage systems and base camp equipment. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Joint Precision Airdrop System 2,400 pounds (JPADS 2K)							-	-	0.874	-	0.874
Description: JPADS 2K is a Precision Guided Airdrop system that autonomously navigates along a predetermined glide and flight path to accurately deliver supplies and equipment. Its two primary components, a decelerator and an Autonomous Guidance Unit (AGU), interface with the United States Air Force (USAF) JPADS mission planner and has a gross rigged weight of 2,400 lbs.											
FY 2012 Base Plans: Continue JPADS 2K product improvement efforts to integrate advanced hardware and software capabilities											
Title: Joint Precision Airdrop System 10,000 lbs. (JPADS 10K)							3.934	2.191	0.374	-	0.374
Articles:							0	0			
Description: JPADS 10K is a Precision Guided Airdrop system that autonomously navigates along a predetermined glide and flight path to accurately deliver supplies and equipment. It utilizes two primary components, a JPADS 10K air vehicle's decelerator connected to an Autonomous Guided Unit (AGU) which interface with the USAF JPADS Mission Planner, and has a maximum gross rigged weight of 10,000 lbs.											
FY 2010 Accomplishments:											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L39: Field Sustainment Support ED				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Completed JPADS 10K Design Validation (DV). Conduct and Initiated JPADS 10K Developmental Testing (DT). FY 2011 Plans: Complete Operational Testing (OT) and obtain Milestone C for JPADS 10K. FY 2012 Base Plans: Complete Operational Testing (OT) and obtain Milestone C for JPADS 10K.							
Title: Advanced Low Velocity Airdrop System (ALVADS) - Light and Heavy Articles: Description: ALVADS - Light and Heavy are capable of airdrop operations at an altitude of 500-ft Above Ground Level (AGL) with increased aircraft survivability, and improved accuracy. Light-Gross rigged weight of 2,520-22,000 lbs and Heavy-Gross rigged weight of 22,001-42,000 lbs. FY 2011 Plans: Conduct and complete DT for Advanced Low Velocity Airdrop Systems (ALVADS-L).			-	2.171 0	-	-	-
Title: Low Cost Aerial Delivery System (LCADS) Articles: Description: LCADS is a modular suite of low cost, expendable parachute/container air items that can be used in lieu of current low and high velocity systems. System includes a low cost container, high-velocity parachute (70 - 90 fps) and low-velocity parachute (less than 28.5 fps). System is compatible with United States Air Force Aircraft (USAF A/C) and aerial port handling equipment. LCADS is a proven means to execute critical resupply missions without having to place soldiers and ground vehicle convoys on the road. FY 2010 Accomplishments: Execute LCADS Pre Planned Product Improvements (P3I) efforts with a focus on reusable Low Cost Low Altitude (LCLA) personnel parachutes for cargo use. FY 2011 Plans: Execute Low Cost Aerial Delivery System (LCADS) P3I efforts with a focus on reusable Low Cost Low Altitude (LCLA) personnel parachutes for cargo use. FY 2012 Base Plans:			0.415 0	0.406 0	0.782	-	0.782

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L39: Field Sustainment Support ED		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
Execute LCADS product improvement efforts with focus on modular capability that spans weights and altitudes for low velocity and high velocity systems.						
Title: Advanced Cargo Parachute Release System (ACPRS) Description: The ACPRS will replace the existing M-1 and M-2 cargo parachute release and is intended to decrease the number of inoperable payloads due to rollovers, while also providing a capability to airdrop loads at 500 ft AGL. FY 2012 Base Plans: Complete Operational Testing (OT) and obtain Milestone C decision.		-	-	2.200	-	2.200
Title: Space Heater Convective 120,000 British Thermal Unit per Hour (BTUH) (SHC 120K) Articles: Description: The SHC 120K is a self-powered, thermoelectric heater that operates outside the tent and provides forced hot air circulation without the need for an external power supply (i.e., field generator). The SHC 120K generates its own electrical power, without any moving parts, through the use of thermoelectric modules located inside the combustion chamber that convert waste heat into electricity. The internal generation of electrical power gives the SHC 120K the added capabilities of single switch operation, forced hot air circulation, outside the tent operation, completely automatic safety and temperature controls, built-in troubleshooting diagnostics, operation without the need for a fire guard, and significantly higher combustion efficiencies, all without the need for an external power supply. The heater burns multi-fuels and operates in extreme cold temperatures down to -60oF. FY 2011 Plans: FY 11: Complete the Operational Field Evaluation on the Space Heater Convective 120,000 BTUH (SHC 120K) and obtain Milestone C LRIP.		-	0.300 0	-	-	-
Title: Pyrolosis Waste to Energy System Articles: Description: FY 11: Conduct OT on Pyrolosis Waste to Energy System transitioning from Foreign Comparative Test Program and conduct Milestone C. FY 2011 Plans:		-	0.736 0	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army				DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L39: <i>Field Sustainment Support ED</i>			

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Conduct Operational Testing (OT) on Pyrolosis Waste to Energy System transitioning from Foreign Comparative Test Program and conduct Milestone C.					
Accomplishments/Planned Programs Subtotals	4.349	5.804	4.230	-	4.230

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPA 3, MA7806: <i>Precision Airdrop, OPA 3, MA7806</i>	22.230	21.402	16.207		16.207		18.160	17.450	15.807	Continuing	Continuing
• 643804 K39: <i>Field Sustainment Support AD, 643804 K39</i>	14.690	18.908	2.952		2.952		3.150	3.330	3.070	Continuing	Continuing
• 643804 VR8: <i>Combat Service Support Systems AD, 643804 VR8</i>			2.042		2.042		1.986	2.015	2.347	Continuing	Continuing
• 654804 VR7: <i>Combat Service Support Systems, 654804 VR7</i>			2.546		2.546		1.635	1.725	1.861	Continuing	Continuing

D. Acquisition Strategy Accelerate product development and testing to transition into production.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army				PE 0604804A: Logistics and Engineer				L39: Field Sustainment Support ED					
BA 5: Development & Demonstration (SDD)				Equipment - Eng Dev									
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Project Management Support	Various	PM FSS, Natick:Natick, MA	1.308	0.290		0.482		-		0.482	Continuing	Continuing	Continuing
Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)	Various	ABO:Warren, MI	0.127	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.435	0.290		0.482		-		0.482			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Soldier Support Equipment	Various	PM FSS, Natick:Various	3.329	0.176		0.248		-		0.248	Continuing	Continuing	Continuing
ACPRS	Various	Various:Various	13.559	0.118		0.500		-		0.500	Continuing	Continuing	Continuing
JPADS 10K Development	Various	Various:Various	1.925	2.000		0.100		-		0.100	Continuing	Continuing	Continuing
LCADS P3I efforts	Various	Various:Various	0.125	0.500		0.100		-		0.100	Continuing	Continuing	Continuing
Subtotal			18.938	2.794		0.948		-		0.948			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Soldier Support Equipment	Various	DTC, MD and ATC, MD:MD	1.686	-		-		-		-	Continuing	Continuing	Continuing
Soldier Support Equipment	Various	Yuma Proving Ground (YPG), AZ, AEC:AZ	7.984	0.500		-		-		-	Continuing	Continuing	Continuing
JPADS 10K DT and OT	Various	YPG. AZ:AZ	1.055	-		-		-		-	Continuing	Continuing	Continuing
JPADS P3I	Various	Yuma Proving Ground, AZ:Yuma, AZ	-	-		0.600		-		0.600	0.000	0.600	0.000
JPADS 10K OT	Various	GSA:GSA	0.054	-		0.200		-		0.200	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support ED</i>					

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
ACPRS	Various	Yuma Proving Ground, AZ:Yuma, AZ	-	-		1.500		-		1.500	0.000	1.500	0.000
LCADS P3I efforts	Various	YPG, AZ/ OTC, NC:YPG, AZ/ OTC, NC	0.211	2.220		0.500		-		0.500	Continuing	Continuing	Continuing
Subtotal			10.990	2.720		2.800		-		2.800			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	31.363	5.804		4.230		-		4.230			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L39: <i>Field Sustainment Support ED</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
Milestone C (MS C) Joint Precision Airdrop System (JPADS) 10K																												
Operational Testing (OT) on JPADS 10 K																												
OT on Advanced Cargo Parachute Release System (ACPRS)																												
Milestone C (MS C) on ACPRS																												
Complete Advanced Low Velocity Airdrop System-Light (ALVADS-L) MS C																												
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L																												
Conduct DT and OT on ALVADS Rapid Rigging/Derigging Airdrop System																												
Conduct Milestone C on ALVADS Rapid Rigging/Derigging Airdrop System																												
Conduct Developmental Testing (DT) on JPADS 10K																												
Obtain Milestone C for Space Heater Convective 120K British Thermal Unit per Hou																												
Conduct Operational Testing (OT) on Pyrolosis Waste to Energy System																												
Conduct Milestone C on Pyrolosis Waste to Energy System																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone C (MS C) Joint Precision Airdrop System (JPADS) 10K	3	2012	3	2012
Operational Testing (OT) on JPADS 10 K	3	2011	4	2011
OT on Advanced Cargo Parachute Release System (ACPRS)	4	2011	1	2012
Milestone C (MS C) on ACPRS	3	2012	3	2012
Complete Advanced Low Velocity Airdrop System-Light (ALVADS-L) MS C	3	2014	3	2014
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L	4	2012	1	2014
Conduct DT and OT on ALVADS Rapid Rigging/Derigging Airdrop System	4	2013	1	2015
Conduct Milestone C on ALVADS Rapid Rigging/Derigging Airdrop System	3	2015	3	2015
Conduct Developmental Testing (DT) on JPADS 10K	1	2011	2	2011
Obtain Milestone C for Space Heater Convective 120K British Thermal Unit per Hou	3	2011	3	2011
Conduct Operational Testing (OT) on Pyrolosis Waste to Energy System	4	2010	1	2011
Conduct Milestone C on Pyrolosis Waste to Energy System	3	2011	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L41: WATER AND PETROLEUM DISTRIBUTION - ED	2.405	2.734	2.079	-	2.079	3.912	3.749	3.771	3.804	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
Description: This project provides all services with ample supply of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to the soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and, dispensing in support of tactical operations, including rapid refueling of aircraft. The mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These research and development (R&D) missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve transformation vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Evaluate portability advancements. Articles: Description: Funding is provided for the following effort FY 2010 Accomplishments: Evaluate the portability advancements designed into the near-infrared (NIR) spectrometer from earlier efforts. Evaluate new fiber optic probes and demonstrate for CASCOM							0.122 0	-	-	-	-
Title: Family of Fuel System Supply Points (FSSPs) Articles: Description: Funding is provided for the following effort FY 2010 Accomplishments: Continue improvements for the Family of Fuel System Supply Points (FSSPs).							0.141 0	-	-	-	-
Title: Integrate product improvements and conduct system level testing and evaluation. Articles:							0.220 0	-	0.904	-	0.904

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army				DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Funding is provided for the following effort FY 2010 Accomplishments: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification system (LWP) and Reverse Osmosis Water Purification Unit (ROWPU), Load Handling System Water Tank Rack (HIPPO) system and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring and perform technical and operational testing on TWPS, LWPs and ROWPUs. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares. FY 2012 Base Plans: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification system (LWP) and Reverse Osmosis Water Purification Unit (ROWPU), Load Handling System Water Tank Rack (HIPPO) system and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring and perform technical and operational testing on TWPS, LWPs and ROWPUs. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.						
Title: Petroleum Quality Analysis System (PQAS). Articles: Description: Funding is provided for the following effort FY 2010 Accomplishments: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing.		0.514 0	-	-	-	-
Title: Fuel System Supply Point (FSSP). Articles:		1.408 0	0.120 0	0.253	-	0.253

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Funding is provided for the following effort FY 2010 Accomplishments: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications. FY 2011 Plans: Continue improvements for the Family of Fuel System Supply Points (FSSPs). FY 2012 Base Plans: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications.						
Title: In-house low/high temperature testing. Articles:		-	0.301 0	-	-	-
Description: Funding is provided for the following effort. FY 2011 Plans: Continue to refine the property prediction models. In-house low/high temperature testing.						
Title: Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP). Articles:		-	0.755 0	-	-	-
Description: Funding is provided for the following effort FY 2011 Plans: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP) and Reverse Osmosis Water Purification Units, Hippo System and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.						
Title: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP).		-	0.278	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Articles: Description: Funding is provided for the following effort FY 2011 Plans: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications			0			
Title: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Articles: Description: Funding is provided for the following effort FY 2011 Plans: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing.		-	0.340 0	-	-	-
Title: Future Water Storage and Distribution Water Packaging System. Articles: Description: Funding is provided for the following effort FY 2011 Plans: Will fund Future Water Storage and Distribution Water Packaging Systems.		-	0.940 0	-	-	-
Title: Versatile Tank and Pump Unit (VTPU) Description: Funding is provided for the following effort. FY 2012 Base Plans: Test and evaluation of the Versatile Tank and Pump Unit.		-	-	0.200	-	0.200
Title: Testing the Modular Fuel System (MFS). Description: Funding is provided for the following effort FY 2012 Base Plans: Initial Operational test and evaluation of the Modular Fuel system (MFS) pump rack modulae (PRM) .		-	-	0.722	-	0.722
Accomplishments/Planned Programs Subtotals		2.405	2.734	2.079	-	2.079

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>			

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE, 0603804/K41: <i>RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development</i>	3.097	2.586	4.122		4.122		2.785	2.894	2.937	Continuing	Continuing
• OPA, R05600: <i>OPA 3, R05600, Water Purification Systems</i>	10.168	15.683								0.000	25.851
• OPA 3, MA6000: <i>OPA 3, MA6000, Distribution Systems, Petroleum & Water</i>	142.309	230.174	76.633		76.633		70.901	74.335	84.610	Continuing	Continuing

D. Acquisition Strategy
Not applicable for this item.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED				
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Advanced Petroleum Test Kit (PTK)	Various	TBD:TBD	-	0.180		-		-		-	Continuing	Continuing	Continuing
Advanced Petroleum Test Kit (PTK)	Various	TARDEC:Warren, MI	-	0.121		-		-		-	Continuing	Continuing	Continuing
FSSP Improvements	Various	TBD:TARDEC, Warren, MI	-	0.278		0.122		-		0.122	Continuing	Continuing	Continuing
Water Purification Systems Improvements	Various	TARDEC:TARDEC Warren, MI	-	0.150		0.300		-		0.300	Continuing	Continuing	Continuing
Water Purification Systems Improvements	Various	TBD:TBD	-	0.150		0.154		-		0.154	Continuing	Continuing	Continuing
Unit Water Pod (Camel II) 900 Gallon	Various	TARDEC:Warren, MI	0.150	-		-		-		-	Continuing	Continuing	Continuing
Water Packaging System	Various	TARDEC:TARDEC Warren, MI	-	0.150		-		-		-	Continuing	Continuing	Continuing
Petroleum Quality Analysis System (PQAS-E)	Various	TARDEC:TARDEC Warren, MI	-	0.300		-		-		-	Continuing	Continuing	Continuing
Water Packaging System	Various	DRS Sustainment Systems:St. Louis, MO	-	0.790		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.150	2.119		0.576		-		0.576			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Fuel System Supply Point (FSSP)	Various	TARDEC:Warren, MI	-	0.120		-		-		-	Continuing	Continuing	Continuing
Unit Water Pod (Camel II) 900 Gallon	Various	TARDEC:Warren, MI	0.100	-		-		-		-	Continuing	Continuing	Continuing
Water Purification Systems Improvements	Various	TARDEC:Warren, MI	-	0.100		-		-		-	Continuing	Continuing	Continuing
Unit Water Pod (Camel) 900 Gallon	Various	TBD:TBD	1.394	-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>					
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Subtotal			1.494	0.220		-		-		-			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Modular Fuel System	Various	Yuma Proving Ground:YPG, AZ	-	-		0.600		-		0.600	Continuing	Continuing	Continuing
Fuel System Supply Point (FSSP)	Various	TBD:TBD	-	-		0.253		-		0.253	Continuing	Continuing	Continuing
Water Purification Improvements	Various	TARDEC:Warren, MI	-	0.155		-		-		-	Continuing	Continuing	Continuing
Water Purification Improvements	Various	NFESC:Port Hueneme, CA	0.332	0.240		0.450		-		0.450	Continuing	Continuing	Continuing
Unit Water Pod (Camel) 900 Gallon	Various	Yuma Proving Ground:Yuma, AZ	1.996	-		-		-		-	Continuing	Continuing	Continuing
Water Packaging System	Various	Aberdeen Proving Ground:APG, MD	-	-		-		-		-	Continuing	Continuing	Continuing
Versitale Tank and Pump Unit (VTPU)	Various	TARDEC:Warren, MI	-	-		0.200		-		0.200	Continuing	Continuing	Continuing
Subtotal			2.328	0.395		1.503		-		1.503			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			3.972	2.734		2.079		-		2.079			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer</i> <i>Equipment - Eng Dev</i>		PROJECT L41: <i>WATER AND PETROLEUM</i> <i>DISTRIBUTION - ED</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests																												
Family of Fuel System Supply Points (FSSPs): Performance of common pumps																												
Bulk Fuel Distribution System																												
Versatile Tank and Pump Unit (VTPU)																												
Future Water Storage and Distribution																												
Bulk Water Purifier																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests	4	2014	4	2014
Family of Fuel System Supply Points (FSSPs): Performance of common pumps	3	2010	4	2014
Bulk Fuel Distribution System	4	2013	4	2015
Versatile Tank and Pump Unit (VTPU)	4	2011	3	2014
Future Water Storage and Distribution	4	2013	3	2014
Bulk Water Purifier	2	2014	1	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L43: ENGINEER SUPPORT EQUIPMENT - ED	0.939	0.874	1.096	-	1.096	1.895	1.190	1.182	1.272	Continuing	Continuing
Quantity of RDT&E Articles											
Note Not applicable for this item.											
A. Mission Description and Budget Item Justification This project supports development, demonstration, testing and evaluation within the Engineering Support Equipment arena for the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE), Surveying, Individual Firefighter Support, Concrete and Masonry, Electricians, Plumbers, Pipefitters, Field Lighting Sets, Diving Equipment, Surface Swimmer Support Sets, Surface Supplied Diving Set, procurement of new Technical Tools, Pioneer Support Set, and the Pioneer Land Clearing and Building Erection Set. Funding will support the procurement of market samples and testing for Hazard ID & Marking, Pioneer Light Field Engineering, Underwater Construction Set, Closed Circuit Scuba Set, the Family of Diving Air Compressors, and Assault Boats and Outboard Motors. Efforts will also involve modernization of the Swimmer Support Sets and Individual Swimmer Support Sets as well as existing Sets, Kits, and Outfits (SKOs).											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Document Development Articles: Description: Funding is provided for the following effort FY 2011 Plans: Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs FY 2012 Base Plans: Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs							-	0.125 0	0.050	-	0.050
Title: Underwater Construction Sets Articles: Description: Research, Development, and Testing of Underwater Construction Sets FY 2011 Plans:							-	0.175 0	0.357	-	0.357

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Conduct market research on Underwater Construction Sets						
FY 2012 Base Plans: Procurement of Underwater Construction Set test articles						
Title: Soldier Portable Sets and Support Equipment Description: Funding is provided for the following effort FY 2011 Plans: Procure market samples for the testing and evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electricians, Plumbers, Pipefitters, Field Lighting Sets, Power Plant Installation Sets, and various other Soldier Portable Sets and Support Equipment		Articles: -	0.343 0	-	-	-
Title: Surface Supplied Diving Set and Deep Sea Set Description: Development and testing for Surface Supplied Diving Set and Deep Sea Set FY 2010 Accomplishments: Description For Purchase (DFP) development, market research, and procurement of components for Surface Supplied Diving Set and the Deep Sea Set, based on latest technology (Life Support Equipment) FY 2012 Base Plans: Procurement of test articles for the Deep Sea Set		Articles: 0.246 0	-	0.229	-	0.229
Title: Closed Circuit Scuba Set Description: Test articles and testing of Closed Circuit Scuba Set FY 2010 Accomplishments: Procure test articles and field test Closed Circuit Scuba Set for suitability		Articles: 0.250 0	-	-	-	-
Title: Family of Diving Air Compressors		Articles: 0.243 0	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Development and testing of the Family of Diving Air Compressors FY 2010 Accomplishments: Procurement of test articles based on Capabilities Production Document (CPD) requirements for the Family of Diving Air Compressors						
Title: Deep Sea Set Description: Funding is provided for the following effort FY 2010 Accomplishments: Redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment) FY 2011 Plans: Continue the redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment)		0.200 0 Articles:	0.175 0	-	-	-
Title: Soldier Portable/Shelter Mounted Sets, Kits, and Outfits (SKOs) Description: Modernization Analysis for modularity of Soldier Portable/Shelter Mounted Sets, Kits, and Outfits FY 2011 Plans: Modernization Analysis for modularity of Soldier Portable/Shelter Mounted Sets, Kits, and Outfits to determine the feasibility of upgrading/combining sets		- Articles:	0.056 0	-	-	-
Title: Assault Boats and Outboard Motors Description: Development of various Assault Boats and Outboard Motors FY 2012 Base Plans: Procurement of Assault Boats and Outboard Motors test articles		-	-	0.250	-	0.250
Title: Engineering and Quality Assurance Description: Engineering and Quality Assurance of engineering SKOs		-	-	0.100	-	0.100

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED	

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2012 Base Plans:</i> Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, and other engineering sets					
<i>Title:</i> Vertical Skills Engineer Construction Kit (VSECK) <i>Description:</i> Research, Development, and Testing of Vertical Skills Engineer Construction Kit (VSECK)	-	-	0.065	-	0.065
<i>FY 2012 Base Plans:</i> Purchase and analysis of VSECK market samples					
<i>Title:</i> Detainee Kit <i>Description:</i> Research, Development, and Testing of Detainee Kit	-	-	0.045	-	0.045
<i>FY 2012 Base Plans:</i> Purchase and analysis of Detainee Kit market samples					
Accomplishments/Planned Programs Subtotals	0.939	0.874	1.096	-	1.096

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

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 1.: OPA 3 ML5301, Items Less than \$5.0M (Engineering Support)	30.439	31.420	12.482		12.482		21.963	19.489	15.818	Continuing	Continuing
• 2.: OPA 3 R70110, Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE)			28.949		28.949					0.000	38.588
• 3.: OPA 3 R70120, Urban Operations, Platoon Set			13.760		13.760		12.392	20.853	18.566	Continuing	Continuing
			11.481		11.481		15.003	21.521	19.122	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 4.: <i>OPA 3 R70130, Urban Operations, Squad Set</i>											
D. Acquisition Strategy											
Progression of Programs will be developed by the completion of the Initial Capabilities Document, Capability Development Document, Capability Production Document, and Description For Purchase continuing into Low Rate Initial Production. Modernization and Optimization of existing tools and testing of market samples will progress from System Development and Demonstration (SDD) and transition into production.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604804A: Logistics and Engineer Equipment - Eng Dev				L43: ENGINEER SUPPORT EQUIPMENT - ED					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Expedited Modernization Initiative Procedure (EMIP) / BOD Procurement of Technical Tools	SS/FP	PM SKOT:Harrison, MI	0.024	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.024	-		-		-		-			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Diving equipment	C/FPAF	Navy/PM SKOT:(FL, IL)	1.605	-		-		-		-	Continuing	Continuing	Continuing
Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE)	SS/FP	PM SKOT:Harrison, MI	0.180	-		-		-		-	Continuing	Continuing	Continuing
Underwater Construction Set market research and purchase of test articles	C/FP	PM SKOT/Edgewood Chemical and Biological Center (ECBC)/TBS:(IL, MI, TBS)	-	0.175		0.357		-		0.357	Continuing	Continuing	Continuing
Surface Supplied Diving Set and Deep Sea Set	C/FP	PM SKOT/ECBC/TBS: (IL, MI, TBS)	0.050	-		0.229		-		0.229	Continuing	Continuing	Continuing
Individual Swimmer Support Set	SS/FP	PM SKOT:Harrison, MI	0.050	-		-		-		-	Continuing	Continuing	Continuing
Family of Diving Air Compressors test articles	SS/FP	Defense Logistics Agency (DLA):Philadelphia, PA	-	-		-		-		-	Continuing	Continuing	Continuing
Closed Circuit Scuba Set test articles	SS/FP	PM SKOT/ECBC:(MI, IL)	-	-		-		-		-	Continuing	Continuing	Continuing
Assault Boats and Outboard Motors test articles	C/FP	TBS:TBS	-	-		0.250		-		0.250	Continuing	Continuing	Continuing
Market Samples of Soldier Portable Sets and Support Equipment	SS/FP	PM SKOT:Harrison, MI	0.243	0.343		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604804A: Logistics and Engineer Equipment - Eng Dev				L43: ENGINEER SUPPORT EQUIPMENT - ED					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Market Samples of Vertical Skills Engineer Construction Kit (VSECK)	C/FP	PM SKOT:Harrison, MI	-	-		0.065		-		0.065	0.000	0.065	0.000
Market Samples for Detainee Kit	C/FP	PM SKOT:Harrison, MI	-	-		0.045		-		0.045	0.000	0.045	0.000
Subtotal			2.128	0.518		0.946		-		0.946			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Allied Trade Organization (ORG) & General Purpose (GP)	SS/FP	PM SKOT:Harrison, MI	0.330	-		-		-		-	Continuing	Continuing	Continuing
Pioneer Land Clearing and Building Erection	SS/FP	PM SKOT:Harrison, MI	0.010	-		-		-		-	Continuing	Continuing	Continuing
Engineering Support Equipment Configuration Analyses and document development support	SS/BOA	Combined Arms Support Command (CASCOM)/ Maneuver Support Center (MANSCEN):(VA, MO)	-	0.125		0.050		-		0.050	Continuing	Continuing	Continuing
Modernization Analyses for modularity of Soldier Portable/ Shelter Mounted SKOs	SS/FP	Armament Research Development and Engineering Center (ARDEC):Rock Island, IL	-	0.056		-		-		-	Continuing	Continuing	Continuing
Pioneer Support Set	SS/FP	PM SKOT:Harrison, MI	0.021	-		-		-		-	Continuing	Continuing	Continuing
Future Combat Systems	SS/FP	PM SKOT:Harrison, MI	0.070	-		-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance of engineering SKOs	C/FP	ECBC/ARDEC:Rock Island, IL	-	-		0.100		-		0.100	Continuing	Continuing	Continuing
Subtotal			0.431	0.181		0.150		-		0.150			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>					

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Organization/General Purpose Tools	SS/FP	PM SKOT:Harrison, MI	0.051	-		-		-		-	Continuing	Continuing	Continuing
Surface Supplied Diving Set	C/FP	Navy/PM SKOT:(FL, IL)	0.200	-		-		-		-	Continuing	Continuing	Continuing
Closed Circuit Scuba Testing	SS/FP	Army Test and Evaluation Command (ATEC):Alexandria, VA	-	-		-		-		-	Continuing	Continuing	Continuing
Redevelopment and testing of state of the art Deep Sea Set	C/FP	PM SKOT/ECBC:Rock Island, IL	-	0.175		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.251	0.175		-		-		-			

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.834	0.874	1.096	-	1.096			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
Design, develop, build, and test Underwater Construction and Deep Sea Sets																												
Procurement of test articles and testing of Assault Boats & Outboard Motors																												
Procurement of test articles & testing of Soldier Portable Sets & Support Equip																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design, develop, build, and test Underwater Construction and Deep Sea Sets	1	2011	3	2013
Procurement of test articles and testing of Assault Boats & Outboard Motors	1	2012	3	2015
Procurement of test articles & testing of Soldier Portable Sets & Support Equip	1	2013	3	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L46: Maintenance Support Equipment	3.138	3.178	3.165	-	3.165	3.657	1.689	1.759	1.778	Continuing	Continuing
Quantity of RDT&E Articles											
Note Not applicable for this item.											
A. Mission Description and Budget Item Justification This project supports requirements generation for Sets, Kits, and Outfits (SKOs) and the subsequent creation of technical data as well as purchase descriptions. Funding will support the modernization of Shop Equipment Truck/Trailer Transported Shelters for the next generation armored vehicle in order to lower the weight of enclosure to accommodate required tool load. Efforts will continue on rapid deploying SKOs to support rapid emerging missions including joint efforts. Support equipment items including Special Tool Sets will be acquired and tested. Various towbar configurations will be researched, procured, and tested. This project will fund efforts to include development of the Metalworking and Machining Shop Set (MWMSS) as well as the Armament Shop Set (ARSS) that support the merging of Military Occupational Specialties (MOS). Research, development, and testing of Fire Suppression systems and investigation feasibility of Joint Modular Container Systems for SKOs will also be performed.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Optimization of antiquated Sets, Kits, and Outfits (SKOs) Articles:							0.100 0	-	-	-	-
Description: Optimization of antiquated SKOs to support modularity in a 2 level maintenance environment including Towbar redesign FY 2010 Accomplishments: Procurement/testing of technologically advanced market samples for verification of feasibility to support latest weapons systems											
Title: Modernize Tool Loads Articles:							0.314 0	-	0.075	-	0.075
Description: Modernize and update tool loads - Procure and verify additional items based on field feedback. Create Purchase Descriptions and purchase Support Equipment test articles FY 2010 Accomplishments:											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L46: Maintenance Support Equipment				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Create Purchase Descriptions and purchase support equipment test articles FY 2012 Base Plans: Expedited Modernization Initiative Procedure (EMIP) procurement of new technical tools. Acquisition of Support Equipment items						
Title: Unique Identification (UID) Codes and Warranty/Replacement system Articles: Description: UID Codes and Warranty/Replacement system enhancements/testing. Joint Modular Intermodal Container System/Joint Modular Intermodal Distribution System (JMICS/JMIDS) Containers FY 2010 Accomplishments: Market research in support of UID for utilization in warranty and replacement claims		0.625 0	-	-	-	-
Title: Future Combat Systems Articles: Description: Market research for tool identification in support of Future Combat Systems FY 2010 Accomplishments: Re-verification of tool requirements as a result of changes in Future Combat Systems		0.070 0	-	-	-	-
Title: Metalworking & Machining Shop Set (MWMSS) Articles: Description: Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations FY 2010 Accomplishments: Design, Develop, and Build MWMSS FY 2011 Plans: Test MWMSS FY 2012 Base Plans: Test MWMSS		0.922 0	1.000 0	0.100	-	0.100
Title: Joint Container Research Articles:		0.063 0	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Composite Manipulation, Joint Container utilization research, and Virtual Engineering incorporation and enhancements						
FY 2010 Accomplishments: Virtual Engineering incorporation and enhancements of Joint Container						
Title: New Technical Tools Articles:		0.012 0	-	-	-	-
Description: Procure new technical tools and subsequent evaluations of tools for SKO optimization						
FY 2010 Accomplishments: Procurement of new technical tools						
Title: Shop Equipment, Shelters, Truck/Trailer Transported Articles:		0.400 0	1.600 0	0.300	-	0.300
Description: Modernization / Redesign efforts of truck/trailer transported shelters for next generation of vehicles						
FY 2010 Accomplishments: Preliminary research and drawings for truck/trailer transported shelters for next generation of vehicles						
FY 2011 Plans: Procure, build, and integrate the next generation truck/trailer transported shelters on a new platform						
FY 2012 Base Plans: Purchase of a next generation vehicle chassis, and integration and testing of the next generation vehicle platform variant						
Title: Support for Requirements Generation Articles:		0.232 0	0.073 0	0.125	-	0.125
Description: Support for requirements generation of future SKOs						
FY 2010 Accomplishments: Document development support for future requirements SKOs						
FY 2011 Plans:						

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Document development support for future requirements SKOs						
FY 2012 Base Plans: Document development support for future requirements SKOs						
Title: Rapid Deployment SKOs Articles: Description: Develop Rapid Deployment Sets, Kits, and Outfits (SKOs) - Special Tool Initiative and support to Mine Resistance Ambush Protection (MRAP) vehicles FY 2010 Accomplishments: Research of lift and hold devices for MRAP		0.100 0	-	-	-	-
Title: Engineering and Quality Assurance Articles: Description: Engineering and Quality Assurance in support of SKOs FY 2011 Plans: Engineering and Quality Assurance dedicated to the development and quality of maintenance SKOs FY 2012 Base Plans: Engineering and Quality Assurance of the Armament Shop Set (ARSS), Special Tool Sets, and other maintenance SKOs		-	0.380 0	0.500	-	0.500
Title: Fire Suppression Systems Articles: Description: Development and testing of Fire Suppression Systems FY 2010 Accomplishments: Purchase of Fire Suppression test articles for testing and Field Feedback		0.300 0	-	-	-	-
Title: Armament Shop Set (ARSS) Articles: Description: Armament Shop Set upgrades		-	0.125 0	2.065	-	2.065

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2011 Plans: Market Research and modeling/simulation for the ARSS											
FY 2012 Base Plans: Purchase of ARSS prototypes											
Accomplishments/Planned Programs Subtotals							3.138	3.178	3.165	-	3.165
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 1.: OPA 1 DL5110, Items Less Than \$5.0M (TACTICAL VEHICLE)	4.763									Continuing	Continuing
• 2.: OPA 3 D16400, Forward Repair System (FRS)	62.884	72.747								Continuing	Continuing
• 3.: OPA 3 M61500, Shop Equipment, Contact Maintenance (SECM)	36.004	82.001	12.052	25.056	37.108		17.933	9.888	10.053	Continuing	Continuing
• 4.: OPA 3 MA9650, Standard Automotive Tool Set (SATS)	94.239	43.698								Continuing	Continuing
• 5.: OPA 3 M62700, Shop Equipment, Welding (SEW)		2.237								Continuing	Continuing
• 6.: OPA 3 ML5345, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)	3.848	3.702	3.852		3.852					Continuing	Continuing
• 7.: OPA3 G39200, Hydraulic Systems Test and Repair Unit (HSTRU)			4.520		4.520		1.692	1.898	1.686	Continuing	Continuing
D. Acquisition Strategy											
Programs will progress from requirements generation through market research, development, market samples and testing. Efforts will support two level maintenance concept utilizing commercial technologies and incorporating them into SKO to support next generation weapon and support systems.											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L46: <i>Maintenance Support Equipment</i>

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Conduct Sets, Kits, & Outfits (SKOs) modernization efforts	C/FP	ATEC / PM SKOT:(MD, MI)	0.840	-		-		-		-	Continuing	Continuing	Continuing
Unique Identification Codes, Joint Modular Intermodal Container/Distribution System (JMICS/JMIDS)	SS/FP	PM SKOT:Harrison, MI	-	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.840	-		-		-		-			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Maintenance Support Equipment Life Cycle Configuration Analyses and ICD Development Support	C/FP	PM SKOT/ Army Test & Evaluation Command (ATEC)/ Combined Arms Support Command (CASCOM):(IL, MI, MD, VA)	0.865	0.073		0.050		-		0.050	Continuing	Continuing	Continuing
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	SS/FP	PM SKOT:Harrison, MI	0.183	-		-		-		-	Continuing	Continuing	Continuing
Expedited Modernization Initiative Procedure (EMIP) Procurement of new Technical Tools	SS/FP	Multiple CONUS:(GA, CA, IL, WI, MI)	-	-		0.025		-		0.025	Continuing	Continuing	Continuing
Metalworking & Machining Shop Set (MWMSS) Configuration	SS/FP	Edgewood Chemical and Biological Center (ECBC) - Prototype Integration Facility (PIF):Edgewood, MD	0.015	-		-		-		-	Continuing	Continuing	Continuing
Modernization/Redesign efforts of Truck/Trailer	SS/FP	ECBC:Rock Island, IL	-	1.600		0.300		-		0.300	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
transported shelters for next generation vehicles													
Development of Fire Suppression Systems	SS/FP	PM SKOT:Harrison, MI	0.127	-		-		-		-	Continuing	Continuing	Continuing
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative. Joint Aviation Tool Set	Various	ECBC:Rock Island, IL	0.020	-		-		-		-	Continuing	Continuing	Continuing
Hydraulic Systems Test & Repair Unit (HSTRU) development	C/FP	MANDUS Group, LaBarge:(IL, MO)	0.313	-		-		-		-	Continuing	Continuing	Continuing
Armament Shop Set (ARSS) prototypes	SS/FP	ECBC-PIF:Edgewood, MD	-	0.125		2.065		-		2.065	Continuing	Continuing	Continuing
Subtotal			1.523	1.798		2.440		-		2.440			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Life Cycle Configuration Analyses & Support to Initial Capabilities Document Development	C/BOA	PM SKOT Rock Island/ CASCOM / Maneuver Support Center (MANSCEN):(IL, VA, MO)	0.306	-		0.125		-		0.125	Continuing	Continuing	Continuing
Modernization of Tool Loads based on Field Feedback	SS/FP	PM SKOT:Harrison, MI	-	-		-		-		-	Continuing	Continuing	Continuing
Industrial Plant Equipment (IPE) documentation for new test articles	SS/FP	PM SKOT:Harrison, MI	0.161	-		-		-		-	Continuing	Continuing	Continuing
Engineer and Quality Assurance in support of SKOs	C/BOA	ECBC / ARDEC / PM SKOT:(IL, MI)	0.135	0.380		0.500		-		0.500	Continuing	Continuing	Continuing
Subtotal			0.602	0.380		0.625		-		0.625			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604804A: Logistics and Engineer Equipment - Eng Dev				L46: Maintenance Support Equipment					
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Life Cycle Configuration Analyses & Support to Initial Capabilities Document Development	C/FP	ATEC/PM SKOT/ CASCOM/MANSCEN: (MD, IL, VA, MO)	0.830	-		-		-		-	Continuing	Continuing	Continuing
Testing of the Metalworking & Machining Shop Set (MWMSS)	SS/FP	ATEC:Aberdeen, MD	-	1.000		0.100		-		0.100	Continuing	Continuing	Continuing
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	SS/FP	PM SKOT:Harrison, MI	0.263	-		-		-		-	Continuing	Continuing	Continuing
Forward Repair System (FRS) enhancements, Flatrack Redesign and Universal Sling Testing	C/BOA	PM SKOT/Army Test & Evaluation Command (ATEC):(IL, MD)	0.047	-		-		-		-	Continuing	Continuing	Continuing
Testing of Support Equipment Items and Configurations	C/BOA	ATEC/ PM SKOT/ ECBC:(MD, MI, IL)	-	-		-		-		-	Continuing	Continuing	Continuing
Testing of Fire Suppression	C/FP	ATEC/PM SKOT/ECBC: (MD, MI, IL)	-	-		-		-		-	Continuing	Continuing	Continuing
Testing of Hydraulic Systems Test & Repair Unit (HSTRU)	SS/FP	ATEC/US Army Research Lab:Aberdeen, MD	0.341	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.481	1.000		0.100		-		0.100			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			4.446	3.178		3.165		-		3.165			
Remarks													

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED	4.393	4.543	-	-	-	-	-	-	2.937	Continuing	Continuing
Quantity of RDT&E Articles											
Note Not applicable for this item.											
A. Mission Description and Budget Item Justification The Improved Environmental Control Units (IECU) program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of Environmental Control Units (ECUs). The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II ODCs and to improve the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance, and increased reliability. 9,18, and 36K BTU/H IECUs: The 9,18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD-ECU variants. The new family of IECUs will utilize a new refrigerant which complies with mandated EPA (Environmental Protection Agency) requirements (non-global warming). FY10-11 funds System Development and Demonstration (SDD) Phase activities for 9,18 and 36K IECUs. This program has no FY12 RDTE request.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Concept and Technology Development Articles:							0.626 0	1.500 0	-	-	-
Description: Funding is provided for the following effort FY 2010 Accomplishments: Continue Concept and Technology Development FY 2011 Plans: Continue Concept and Technology Development											
Title: SDD for the 9, 18 and 36K IECUs. Articles:							3.630 0	3.043 0	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army						DATE: February 2011					
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>			

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Funding is provided for the following effort FY 2010 Accomplishments: Continue SDD for the 9, 18 and 36K IECUs. FY 2011 Plans: Continue SDD for the 9, 18 and 36K IECUs.					
Title: Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR) Articles:	0.137 0	-	-	-	-
Description: Small Business Innovative Research/Small Business Technology Transfer Program FY 2010 Accomplishments: Small Business Innovative Research/Small Business Technology Transfer Program					
Accomplishments/Planned Programs Subtotals	4.393	4.543	-	-	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPA 3: <i>OPA 3, Improved Environmental Control Units , MF9303</i>	13.055	11.453	10.109		10.109		0.386		13.238	Continuing	Continuing

D. Acquisition Strategy
<p>The 9/18/36K IECU variants contract will be executed in four phases: 1) one year Cost-Plus-Fixed-Fee contract for the first phase of System Development and Demonstration (SDD) , 2) two year CPFF contract to complete the SDD efforts, 3) an eight-month Firm-Fixed-Price (FFP) option for the Low Rate Initial Production (LRIP) phase, and 4) 5 one-year Fixed Price, Indefinite Delivery-Indefinite Quantity (IDIQ) options for the Full Rate Production (FRP) phase. During Phase I, two contractors will be required to design and fabricate two prototypes each for two government selected variants. These units will be subjected to limited testing. A down select based primarily on test results will be used by the Government to determine which contractor will continue development of all four variants in Phase II of the SDD effort. These variants will include four configurations: (1) 9K BTU/H, 115V, 1 phase, 60 Hertz; (2) 18K BTU/H, 208V, 3 phase, 60 Hz; (3) 18K BTU/H, 230V, 1 phase, 60 Hz; and (4) 36K BTU/H, 208V, 3 phase, 60 Hz.</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer</i> <i>Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL</i> <i>CONTROL UNITS ED</i>

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
9,18 and 36K IECU	Various	PM-MEP:various	-	0.509		-		-		-	Continuing	Continuing	Continuing
SBIR/STTR	Various	various:various	-	-		-		-		-	Continuing	Continuing	0.000
Subtotal			-	0.509		-		-		-			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
9 ,18 and 36K IECU	Various	Various:TBD	-	1.534		-		-		-	Continuing	Continuing	Continuing
Subtotal			-	1.534		-		-		-			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
9, 18 and 36K IECU	Various	CERDEC:Fort Belvoir, VA	-	0.900		-		-		-	Continuing	Continuing	Continuing
Concept & Technology Development	Various	CERDEC:Fort Belvoir, Va	-	1.500		-		-		-	Continuing	Continuing	Continuing
Subtotal			-	2.400		-		-		-			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
9,18 and 36K IECU	Various	ATEC:various	-	0.100		-		-		-	Continuing	Continuing	Continuing
Subtotal			-	0.100		-		-		-			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-	4.543	-	-	-				
Remarks									

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

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

R-1 ITEM NOMENCLATURE

PE 0604804A: *Logistics and Engineer
Equipment - Eng Dev*

PROJECT

L47: IMPROVED ENVIRONMENTAL
CONTROL UNITS ED

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
SDD Phase II																												
Conduct User Evaluation & Validation/ Verification																												
Milestone C Decision																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
SDD Phase II	3	2010	4	2012
Conduct User Evaluation & Validation/Verification	2	2012	2	2012
Milestone C Decision	1	2013	1	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>	-	-	172.093	-	172.093	53.254	52.049	52.488	52.863	0.000	382.747
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>Joint Light Tactical Vehicles (JLTV): Funding supports the development and testing of the JLTV Family of Vehicles (FoV), which is being developed as a joint system between the Army and Marine Corps. International participation will be offered during this phase. The JLTV goal is a FoV with companion trailers capable of performing multiple mission roles that will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full Range of Military Operations (RoMO). JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency and other means; and maintaining effective competition throughout the lifecycle. Commonality of components, maintenance procedures, training, etc., between vehicles and trailers is expected to be inherent in FoV solutions within and across sub-configurations to minimize FoV total ownership cost. Unique service requirements have been minimized. This is a continuation of the JLTV program which was initiated for the Technology Development Phase. Funding was provided under PE 0603804A, Project L04 for FY11 and previous years.</p> <p>During FY12, major budget activities are based upon an expected December 2011 Capability Development Document (CDD) approval and will support the Source Selection Evaluation Board (SSEB), multiple Engineering and Manufacturing Development (EMD) contracts, hull and ballistic coupon testing, government furnished equipment and program management support. FY12 funding increased from President's Budget (PB)11, \$66.8 million, to PB12, \$172.093 million as a result of requirement changes to the FoV, implementation of the Weapon System Acquisition Reform Act (point estimate to an 80% confidence cost estimate) and updated test estimates.</p> <p>At the request of the House Armed Services Committee - Air and Land Forces, a separate and distinct funding line (0605812A-VU9) was established for JLTV. Transition of Project L50 funding to this newly established Program Element (PE) will occur in FY13.</p>											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Program Management							-	-	11.600	-	11.600
Description: Funding is provided for the following effort											
FY 2012 Base Plans: For salaries, in-house, etc.											
Title: Variant Prototype Contract Design, Development and Fabrication							-	-	155.393	-	155.393

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD				
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Funding is provided for the following effort												
FY 2012 Base Plans: For prototype design and development												
Title: Developmental Test and Evaluation								-	-	5.100	-	5.100
Description: Funding is provided for the following effort												
FY 2012 Base Plans: For JLTV Test Support												
Accomplishments/Planned Programs Subtotals								-	-	172.093	-	172.093
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
• D15603: Joint Light Tactical Vehicles (JLTV), Army OPA 1							592.644	4.182	921.550	1,188.365	2,894.548	
• 0603635M: Marine Corps Ground Combat/Support Systems, RDTE Project 3209			71.847		71.847		34.645	20.043	31.777	0.000	287.275	
• 0206221M: Marine Corps Ground Combat/Support Systems, Production							14.765	147.754	236.941	0.000	399.460	
D. Acquisition Strategy												
The JLTV Acquisition Strategy for the Engineering and Manufacturing Development (EMD) phase, FY12-16, is to award two full and open competition contracts to design, fabricate and test the full range of sub-configurations in sufficient quantities to validate all Capability Development Document requirements. International participation will be offered during this phase. Technology Readiness Level (TRL) 6 or higher is required. The fabricated prototypes will undergo Developmental Test, Reliability, Availability, Maintainability (RAM) testing, Limited User Test and Live Fire Testing.												
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.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Contract Service Support	Various	BAH:Ft. Belvoir, VA	-	-		2.225		-		2.225	Continuing	Continuing	0.000
Contract Service Support	Various	ALION:Ft. Belvoir, VA	-	-		0.885		-		0.885	Continuing	Continuing	0.000
Contract Service Support	Various	Technomics/ Camber:Indian Head, MD	-	-		0.690		-		0.690	Continuing	Continuing	0.000
Subtotal			-	-		3.800		-		3.800			0.000
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
JLTV Systems Engineering Design & Development /GFE	Various	TBD:Various	-	-		22.689		-		22.689	Continuing	Continuing	0.000
Engineering and Manufacturing Development Contracts	Various	TBD:Various	-	-		106.604		-		106.604	Continuing	Continuing	0.000
JLTV Source Selection Evaluation Board	Various	TBD:Various	-	-		15.200		-		15.200	Continuing	Continuing	0.000
JLTV Program Management	Various	TACOM:Warren, MI	-	-		11.600		-		11.600	Continuing	Continuing	0.000
Subtotal			-	-		156.093		-		156.093			0.000
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
JLTV Prototype Design	Various	TACOM:Warren, MI	-	-		2.850		-		2.850	Continuing	Continuing	0.000
JLTV Prototype Design	Various	TARDEC:Warren, MI	-	-		3.450		-		3.450	Continuing	Continuing	0.000
JLTV Prototype Design	Various	TBD:Various	-	-		0.800		-		0.800	Continuing	Continuing	0.000
Subtotal			-	-		7.100		-		7.100			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>					
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
JLTV Live Fire Test and Evaluation	Various	TBD:Various	-	-		5.100		-		5.100	Continuing	Continuing	0.000
Subtotal			-	-		5.100		-		5.100			0.000
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		172.093		-		172.093			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
CDD Army, Marine Corps, and Joint Req Oversight Staffing																												
CDD Joint Req Oversight Com																												
Source Selection Evaluation Board (SSEB)																												
MS B (Eng & Man Development)																												
EMD Contract Award																												
EMD Development Contract																												
EMD Test and Validation / Report																												
MS C (Production & Deployment)																												
LRIP Contract Award																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CDD Army, Marine Corps, and Joint Req Oversight Staffing	2	2011	4	2011
CDD Joint Req Oversight Com	4	2011	4	2011
Source Selection Evaluation Board (SSEB)	4	2011	1	2012
MS B (Eng & Man Development)	1	2012	1	2012
EMD Contract Award	1	2012	1	2012
EMD Development Contract	2	2012	2	2015
EMD Test and Validation / Report	4	2013	3	2015
MS C (Production & Deployment)	1	2016	1	2016
LRIP Contract Award	2	2016	2	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT VR7: COMBAT SERVICE SUPPORT SYSTEMS			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
VR7: COMBAT SERVICE SUPPORT SYSTEMS	-	-	2.546	-	2.546	1.726	1.635	1.725	1.861	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include base camp subsystems, field shelters, showers, latrines, heaters, mortuary affairs systems, camouflage systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports development of expeditionary tactical field systems and support equipment to improve safety, effectiveness, and efficiency of deployed soldiers. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Pyrolysis Waste Disposal System (PWDS)							-	-	1.070	-	1.070
Description: The PWDS is a containerized solid waste disposal system with energy reclamation that utilizes pyrolysis technology (low oxygen thermal destruction) to process several waste streams that include plastic, cardboard, paper, metal cans, medical and sanitary, liquid oil, sewage sludge and food waste in a single waste management machine. Key benefits of pyrolysis over competing technologies include that it requires very little input to operate, has the ability to export energy, and requires minimal water to cool the system. This program will transition the system into production to procure the PWDS for the Army's Force Provider base camp systems.											
FY 2012 Base Plans: Complete logistic requirements and obtain Milestone C Type Classification of the PWDS.											
Title: Human Remains Temperature Controlled Transfer Case (HRTC2)							-	-	0.600	-	0.600
Description: The HRTC2 is a replacement for the current aluminum case for transporting remains from a theater of operation to CONUS that incorporates insulation and refrigeration to provide optimal temperature control and eliminate use of ice and the need for reicing enroute.											
FY 2012 Base Plans:											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army							DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev			PROJECT VR7: COMBAT SERVICE SUPPORT SYSTEMS					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Complete Operational Testing (OT) and obtain Milestone C Type Classification of the HRTC2.											
Title: Modular Ballistic Protection System (MBPS) Description: MBPS is a lightweight, rapidly deployable and reusable ballistic protection system that can be installed in commonly used military shelters in expeditionary and remote base camps and outposts where more robust forms of ballistic protection (i.e. sandbags, concrete barriers) are not readily available or logistically feasible. FY 2012 Base Plans: Conduct Operational Testing (OT) on Tent Extendable Modular Personnel (TEMPER) version of the Modular Ballistic Protection System (MBPS)							-	-	0.651	-	0.651
Title: Family of Space Heaters Description: The family of Army Space Heaters support soldiers operating in basic, cold and extreme cold environments with a safe, portable, lightweight, multi-fueled, self-powered, space heaters for use in multiple tents and/or expeditionary shelters that do not require an external power source. These heaters provide the much needed capability of providing heated air effectively and efficiently while eliminating the shortcomings of the antiquated, dangerous and inefficient heaters they are replacing in the inventory. FY 2012 Base Plans: Execute Pre-Planned Product Improvement (P3I) effort on the family of Space Heaters to improve on fuel efficiency							-	-	0.225	-	0.225
Accomplishments/Planned Programs Subtotals							-	-	2.546	-	2.546
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 643804 K39: Field Sustainment AD, 643804 K39	14.690	18.908	2.952		2.952		3.150	3.330	3.070	Continuing	Continuing
• 643804 VR8: Combat Service Support Systems AD, 643804 VR8			2.042		2.042		1.986	2.015	2.347	Continuing	Continuing
	4.349	5.804	4.230		4.230		2.452	2.392	2.304	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT VR7: <i>COMBAT SERVICE SUPPORT SYSTEMS</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
<ul style="list-style-type: none"> • 654804 L39: <i>Field Sustainment Support ED, 654804 L39</i> 											
D. Acquisition Strategy											
Accelerate product development and testing to transition into production.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT VR7: COMBAT SERVICE SUPPORT SYSTEMS						
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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	
Project Management Support	Various	PM Force Sustainment Systems:Natick, MA	-	-		0.239		-		0.239	Continuing	Continuing	0.000	
Subtotal			-	-		0.239		-		0.239			0.000	
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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	
Soldier Support Equipment	Various	Various:Various	-	-		1.323		-		1.323	Continuing	Continuing	0.000	
Subtotal			-	-		1.323		-		1.323			0.000	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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	
Soldier Support Equipment	Various	Various:Various	-	-		0.984		-		0.984	Continuing	Continuing	0.000	
Subtotal			-	-		0.984		-		0.984			0.000	
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			-	-		2.546		-		2.546			0.000	
Remarks														

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT VR7: <i>COMBAT SERVICE SUPPORT SYSTEMS</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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
Conduct logistics requirements on PWDS																												
Obtain Milestone C TC on PWDS																												
Conduct OT on HRTC2																												
Obtain Milestone C TC on HRTC2																												
Complete evaluation on Net-Zero energy efficiency solutions																												
Conduct OT on TEMPER version of the MBPS																												
Transition Zero-Footprint Base Camp capabilities into Joint Base Camp systems																												
Conduct OT on external framed MBPS																												
Transition MBPS capability into Base Camp systems																												
Obtain Milestone C TC on Mobile Integrated Shop Shelter System																												
Conduct OT SoS Base Camp Efficiency & Environ Combat Outpost																												
Conduct OT on ULCANS mobility variants																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT VR7: <i>COMBAT SERVICE SUPPORT SYSTEMS</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct logisitcs requirements on PWDS	3	2011	2	2012
Obtain Milestone C TC on PWDS	3	2012	3	2012
Conduct OT on HRTC2	1	2012	1	2012
Obtain Milestone C TC on HRTC2	3	2012	3	2012
Complete evaluation on Net-Zero energy efficiency solutions	4	2012	1	2013
Conduct OT on TEMPER version of the MBPS	2	2012	3	2012
Transition Zero-Footprint Base Camp capabilities into Joint Base Camp systems	4	2013	3	2016
Conduct OT on external framed MBPS	3	2013	3	2014
Transition MBPS capability into Base Camp systems	4	2013	1	2014
Obtain Milestone C TC on Mobile Integrated Shop Shelter System	1	2015	1	2015
Conduct OT SoS Base Camp Efficiency & Environ Combat Outpost	4	2015	3	2016
Conduct OT on ULCANS mobility variants	1	2016	3	2016

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