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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	39.588	173.146	43.706	-	43.706	51.442	30.773	24.469	21.833	Continuing	Continuing
194: ENGINE DRIVEN GEN ED	6.919	11.188	9.692	-	9.692	3.864	8.479	7.675	4.637	Continuing	Continuing
H01: COMBAT ENGINEER EQ ED	5.361	5.474	6.351	-	6.351	2.951	2.921	1.960	2.010	Continuing	Continuing
H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	9.864	55.108	9.525	-	9.525	30.747	8.220	2.865	2.886	Continuing	Continuing
H14: MATERIALS HANDLING EQUIPMENT - ED	0.920	1.055	1.415	-	1.415	0.405	0.512	0.943	0.964	Continuing	Continuing
L39: Field Sustainment Support ED	5.599	4.226	2.550	-	2.550	2.431	2.368	2.331	2.269	Continuing	Continuing
L41: WATER AND PETROLEUM DISTRIBUTION - ED	2.636	2.077	3.839	-	3.839	3.601	3.615	3.726	3.789	Continuing	Continuing
L43: ENGINEER SUPPORT EQUIPMENT - ED	0.842	1.095	1.916	-	1.916	1.180	1.170	1.287	1.534	Continuing	Continuing
L46: Maintenance Support Equipment	3.066	3.162	3.697	-	3.697	1.674	1.780	1.799	1.829	Continuing	Continuing
L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED	4.381	-	2.976	-	2.976	2.968	-	-	-	Continuing	Continuing
L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD	-	87.217	-	-	-	-	-	-	-	Continuing	Continuing
VR7: COMBAT SERVICE SUPPORT SYSTEMS	-	2.544	1.745	-	1.745	1.621	1.708	1.883	1.915	Continuing	Continuing
Note Change Summary Explanation: Funding - FY 2013: Adjustment for Joint Light Tactical Vehicle (JLTV) move from Engineering development to Joint Light Tactical Vehicles(655812/VU9).											
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											

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service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

Decrease from FY 2012 to FY 2013 reflects Joint Light Tactical Vehicle(JLTV) move from Engineering Development to Joint Light Tactical Vehicles(PE: 655812/Project: VU9.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	41.039	251.104	99.363	-	99.363
Current President's Budget	39.588	173.146	43.706	-	43.706
Total Adjustments	-1.451	-77.958	-55.657	-	-55.657
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-1.451	-77.958	-55.657	-	-55.657

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
194: ENGINE DRIVEN GEN ED	6.919	11.188	9.692	-	9.692	3.864	8.479	7.675	4.637	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 840 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. FY11 funds completion of DT/OT (Development Test/Operational Test) for AMMPS in preparation for MS-C. FY11-12 fund the performance specification preparation and award of the Engineering and Manufacturing Development (EMD) Phase contract for Large Advanced Mobile Power Sources (LAMPS). FY 13 will continue the EMD phase for LAMPS.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	
Title: Complete Development Test/Operational Test (DT/OT) for AMMPS Articles:						0.850 0	-	-	-	-	
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 2011 Accomplishments: Perform final DT/OT requirements for AMMPS Milestone C decision in July 2011.											
Title: LAMPS Engineering & Manufacturing Demonstration (EMD) Phase Articles:						6.069 0	11.188 0	9.692	-	9.692	
Description: Prepare LAMPS performance specification and begin EMD Phase FY 2011 Accomplishments:											

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Begin preparing LAMPS performance specification and begin EMD Phase					
<i>FY 2012 Plans:</i> Continue preparing LAMPS performance specification and continue EMD Phase					
<i>FY 2013 Base Plans:</i> Continue EMD Phase					
Accomplishments/Planned Programs Subtotals	6.919	11.188	9.692	-	9.692

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 643804.G11: <i>Logistics and Engineer Equipment - Adv Dev G11</i>	2.531	0.690	3.921		3.921		0.675	7.378	4.230	Continuing	Continuing
• MA9800: <i>Generators and Associated Equipment</i>	191.915	67.897	60.302		60.302		178.107	244.083	231.742	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 (RPSTL), Technical Manuals and Training Packages in preparation of Milestone C and Phase III-Production and Fielding. Prepare Performance Specification, Purchase Description and Statement of Work for LAMPS (Large Advanced Mobile Power Sources). Begin LAMPS EMD Phase.

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 2013 Army										DATE: February 2012			
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					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
LAMPS (100-200kW)	Various	Various:Various	6.069	11.188		9.692		-		9.692	Continuing	Continuing	Continuing
Subtotal			6.069	11.188		9.692		-		9.692			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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:Aberdeen Proving Grounds (APG), MD	3.485	-		-		-		-	Continuing	Continuing	Continuing
LAMPS (100-200kW)	Various	ACC-APG:Ft Belvoir, VA	0.372	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			3.857	-		-		-		-			
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			9.926	11.188		9.692		-		9.692			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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																												
Milestone B - LAMPS																												
EMD - LAMPS																												
Prepare Procurement Package and Solicitation																												
Award Phase 1 Contract																												
Production Qualification Test																												
Limited User Test																												
MS C-LAMPS																												
LAMPS Production Option (2yr)																												
Pre-EMD Review																												
RFP & Solicitation																												
Milestone B - STEP																												
EMD Award																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MS C - AMMPS	4	2011	4	2011
Production Release	4	2011	4	2011
Transition to Production	4	2011	1	2012
Milestone B - LAMPS	2	2011	2	2011
EMD - LAMPS	2	2011	4	2015
Prepare Procurement Package and Solicitation	2	2012	2	2012
Award Phase 1 Contract	3	2012	3	2012
Production Qualification Test	1	2014	4	2014
Limited User Test	4	2014	2	2015
MS C-LAMPS	4	2015	4	2015
LAMPS Production Option (2yr)	4	2015	4	2017
Pre-EMD Review	3	2014	3	2014
RFP & Solicitation	3	2014	2	2015
Milestone B - STEP	2	2015	2	2015
EMD Award	2	2015	2	2015

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
H01: COMBAT ENGINEER EQ ED	5.361	5.474	6.351	-	6.351	2.951	2.921	1.960	2.010	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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Family of All Terrain Cranes Articles: Description: System Pre-Award requirements, Key Performance Parameters (KPP), selection criteria development. Testing of systems. FY 2012 Plans: System Pre-Award requirements, KPP, selection criteria development. Testing of systems. FY 2013 Base Plans: Simulator/Scenario development and test; Armor packaging and design; System Engineering/Program Management. system test and evaluation.							-	2.494 0	1.306	-	1.306
Title: CE Armor Articles: Description: Design armor kits for Combat Engineer Equipment. FY 2011 Accomplishments: Design armor kits for Combat Engineer Equipment. FY 2013 Base Plans:							0.500 0	-	1.000	-	1.000

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Qualify alternative sources of supply for opaque & Transparent armor on existing CE equipment. Full Vehicle Armor Protection.							
Title: CE Robotics Research Articles: Description: Development of Robotics Research FY 2011 Accomplishments: Development of Robotics Research FY 2012 Plans: Development of Robotics Research FY 2013 Base Plans: Development of Robotics Research			0.100 0	0.100 0	0.500	-	0.500
Title: CE Simulators Articles: Description: Labor, software, and hardware simulator development FY 2011 Accomplishments: Labor, software, and hardware simulator development FY 2012 Plans: Labor, software, and hardware simulator development FY 2013 Base Plans: Labor, software, and hardware simulator development			1.000 0	2.880 0	1.245	-	1.245
Title: Hazard Clearance Description: Hazard Clearance at Speed FY 2013 Base Plans: Adapt existing vehicle to provide area and route clearance to remove explosive and non-explosive obstacles.			-	-	0.500	-	0.500
Title: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC Type 4 and Loader Type 1 Study/Development			3.711 0	-	0.500	-	0.500

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles: Description: FY10: Forced Entry (Airborne/Air Assault) HMEE, Grader, and Loader Type 1 Study/Development FY 2011 Accomplishments: Forced Entry (Airborne/Air Assault) HMEE, Grader and Loader Type 1 Study/Development FY 2013 Base Plans: FY13: ERACC Type 4 Study/Development						
Title: Market Research Description: Market Research Survey FY 2013 Base Plans: Conduct market research and documentation preparation for all types of construction equipment.		-	-	0.100	-	0.100
Title: Non Nuclear Soil Density Set Testing Description: FY10: Test non nuclear soil density test sets. FY 2011 Accomplishments: Test non nuclear soil density test sets.		0.050 0	-	-	-	-
Title: Fuel Efficiency Description: Improve Fuel Efficiency/Reduce Maintenance Time FY 2013 Base Plans: Using Government supplied vehicles (GFE), evaluate new technologies be developed by private industry to improve the efficiency or reduce maintenance burden.		-	-	0.250	-	0.250
Title: Duty Cycle Description: Duty Cycle Monitoring FY 2013 Base Plans:		-	-	0.250	-	0.250

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Instrumentation of vehicles at FLW and select units to monitor the usage and to establish training and operational usage of the machine. This data, once analyzed will be used in CPD development.													
Title: ERACC Type III Description: ERACC Type III Equipment FY 2013 Base Plans: Integration of ERACC Type III Equipment									-	-	0.200	-	0.200
Title: System Engineering/Program Management Description: Program Management FY 2013 Base Plans: Program Management Support of R&D Program for CE									-	-	0.500	-	0.500
Accomplishments/Planned Programs Subtotals									5.361	5.474	6.351	-	6.351
C. Other Program Funding Summary (\$ in Millions)													
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost		
• High Mobility Engineer Excavator I: High Mobility Engineer Excavator I	62.342	16.907	30.042		30.042					0.000	109.291		
• HMEE III: High Mobility Engineer Excavator III	2.024	2.067								0.000	4.091		
• Grader, Mtzd, Hvy: Grader, Mtzd, Hvy	51.498	2.201	2.028		2.028					0.000	57.727		
• Loader, Scoop Type, 2 1/2 CU YD: Loader, Scoop Type, 2 1/2 CU YD	8.321									0.000	8.321		
• Hydraulic Excavator: Hydraulic Excavator	8.410									0.000	8.410		
• Plant, Asphalt Mixing: Plant, Asphalt Mixing	10.722	0.614	3.629		3.629		11.378	11.168	2.828	Continuing	Continuing		

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• Tractor Full Tracked, Med T-9: <i>Tractor Full Tracked, Med T-9</i>	63.672	50.434	20.867		20.867		34.504	34.652	13.912	Continuing	Continuing
• All Terrain Cranes: <i>All Terrain Cranes</i>			4.003		4.003		18.452	26.161	13.799	Continuing	Continuing
• Skid Steer Loaders: <i>Skid Steer Loaders</i>		8.584								0.000	8.584
• Scraper, Earthmoving: <i>Scraper, Earthmoving</i>	15.577	21.031	6.146		6.146		55.805	56.468	23.177	Continuing	Continuing
• EMMs: <i>EMMs</i>	53.807	43.432	31.200		31.200		3.500			0.000	163.726
• ERACC: <i>ERACC</i>			13.725		13.725		13.597	13.907	14.547	Continuing	Continuing
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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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
System Pre-Award requirements, KPP, selection criteria development, Testing of systems	Various	TACOM & TARDEC:Warren, MI	-	2.494		1.306		-		1.306	0.000	3.800	0.000
Design armor kits for Combat Engineer	Various	TARDEC:Warren, MI	5.512	-		1.000		-		1.000	0.000	6.512	Continuing
Development of Robotic Research for Combat Engineer	Various	TBD:TBD	1.619	0.100		0.500		-		0.500	0.000	2.219	Continuing
Development of Simulator	Various	PEO Stricom:PEO, Stricom, Orlando, FL	5.409	2.880		1.245		-		1.245	0.000	9.534	Continuing
Forced Entry: HMEE Type II, Grader, ERACC Type III and Loader Type I Study/ Development	Various	TARDEC:Warren, MI	8.239	-		0.500		-		0.500	0.000	8.739	Continuing
Hazard Clearance at Speed	TBD	TARDEC:Warren, Michigan	-	-		0.500		-		0.500	0.000	0.500	0.000
ERACC Type III Integration	TBD	TARDEC/ TACOM:Waren, Michigan	-	-		0.200		-		0.200	0.000	0.200	0.000
Market Research	TBD	TARDEC:Warren, Michigan	-	-		0.100		-		0.100	0.000	0.100	0.000
Subtotal			20.779	5.474		5.351		-		5.351	0.000	31.604	
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
System Engineering/Program Mgmt	TBD	TARDEC/ TACOM:Warren, Michigan	-	-		0.500		-		0.500	0.000	0.500	0.000
Subtotal			-	-		0.500		-		0.500	0.000	0.500	0.000

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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 Efficiency	TBD	TARDEC, Warren, Michigan:TARDEC, Warren, Michigan	-	-		0.250		-		0.250	0.000	0.250	0.000
Duty Cycle Monitoring	TBD	TARDEC:Warren, Michigan	-	-		0.250		-		0.250	0.000	0.250	0.000
Non Nuclear Soil Density Set Testing	TBD	TARDEC:Warren, MI	0.050	-		-		-		-	0.000	0.050	0.000
Subtotal			0.050	-		0.500		-		0.500	0.000	0.550	0.000
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			20.829	5.474		6.351		-		6.351	0.000	32.654	
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Family of All Terrain Cranes-Selection criteria & Testing of Systems																												
Design of Armor Kits																												
Robotic Research																												
Simulator Development for Contruction Equipment																												
Force Entry: HMEE Type II, Grader, ERACC III & Loader Type I Study/Development																												
Hazard Clearance at Speed																												
ERACC III integration																												
Market Research																												
System Engineer/Program Support																												
Fuel Efficiency																												
Duty Cycle Monitoring																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Family of All Terrain Cranes-Selection criteria & Testing of Systems	1	2013	4	2013
Design of Armor Kits	1	2012	4	2013
Robotic Research	1	2012	4	2013
Simulator Development for Contruction Equipment	1	2012	4	2013
Force Entry: HMEE Type II, Grader, ERACC III & Loader Type I Study/Development	1	2012	4	2013
Hazard Clearance at Speed	1	2013	4	2013
ERACC III integration	1	2013	4	2013
Market Research	1	2013	4	2013
System Engineer/Program Support	1	2013	4	2013
Fuel Efficiency	1	2013	4	2013
Duty Cycle Monitoring	1	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army								DATE: February 2012			
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			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	9.864	55.108	9.525	-	9.525	30.747	8.220	2.865	2.886	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 development, integration and testing of the Bridge Erection Boat (BEB) as well as development, integration and testing of the Line of Communication Bridge (LOCB). Other efforts supported include Bridging laboratory equipment used in the verification of product improvements to launch platforms as well as structural strength and fatigue testing of Bridging prototypes, development systems, and validation of design modifications. This project also includes the development and testing of light assault gap crossing capability, a remote controlled automatic launch for the Rapidly Emplaced Bridge System (REBS) and integrate and test the REBS on a Stryker chassis, and the development and testing of the Joint Assault Bridge (JAB) system.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: LOC Bridge POR Testing							1.800	-	-	-	-
Articles:							0				
Description: LOC Bridge POR Testing											
FY 2011 Accomplishments: LOC Bridge POR Testing											
Title: JAB Development and Testing							3.441	49.810	7.625	-	7.625
Articles:							0	0			
Description: JAB Development and Testing											
FY 2011 Accomplishments: JAB Development											
FY 2012 Plans: JAB Development.											
FY 2013 Base Plans: JAB Testing.											
Title: BEB Testing							3.500	4.198	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles: 0		0	0			
Description: BEB Testing						
FY 2011 Accomplishments: BEB Testing						
FY 2012 Plans: Completion of operational and development testing and logistics demonstration of the Bridge Erection Boat.						
Title: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)		-	1.100 0	1.400	-	1.400
Articles:						
Description: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)						
FY 2012 Plans: Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).						
FY 2013 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: LOCB Development		1.123 0	-	0.500	-	0.500
Articles:						
Description: LOCB Development						
FY 2011 Accomplishments: LOCB Development						
FY 2013 Base Plans: LOCB Development						
Accomplishments/Planned Programs Subtotals		9.864	55.108	9.525	-	9.525

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012			
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				
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost	
• OPA3, MX0100: OPA3, MX0100	62.817	92.428	35.599		35.599		21.013	20.997	21.548	Continuing	Continuing	
• OPA3, MA8890: OPA3, MA8890	109.057	72.354	32.893		32.893		26.951	37.052	28.710	Continuing	Continuing	
• WTCV, G82925: WTCV, G82925	77.930	97.004	50.039		50.039		70.901	26.141	65.369	Continuing	Continuing	
• WTCV, GZ3001: WTCV, GZ3001							80.889	113.242	102.593	Continuing	Continuing	
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 2013 Army											DATE: February 2012		
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				H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
JAB Development	Various	TBS:TBD	-	49.810		-		-		-	Continuing	Continuing	Continuing
LOCB Development	Various	TBS:TBD	1.123	-		0.500		-		0.500	Continuing	Continuing	Continuing
Subtotal			1.123	49.810		0.500		-		0.500			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Govenment In-House	MIPR	TACOM:Warren, MI	2.100	3.000		3.000		-		3.000	Continuing	Continuing	Continuing
Subtotal			2.100	3.000		3.000		-		3.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
JAB Testing	Various	TBS:TBD	2.541	-		5.125		-		5.125	Continuing	Continuing	Continuing
REBS Testing (Auto Launch- Retrieve)	TBD	TBS TBD:TBS TBD	-	1.100		0.900		-		0.900	0.000	2.000	0.000
BEB Testing	Various	Various:Various	5.230	1.198		-		-		-	0.000	6.428	0.000
LOC Testing	Various	ATEC:APG/Ft. Leonardwood	4.800	-		-		-		-	0.000	4.800	0.000
Subtotal			12.571	2.298		6.025		-		6.025			
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			15.794	55.108		9.525		-		9.525			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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	

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
JAB Development and Testing																												
LOCB Development and Testing																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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
JAB Development and Testing	2	2011	4	2015
LOCB Development and Testing	2	2012	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
H14: MATERIALS HANDLING EQUIPMENT - ED	0.920	1.055	1.415	-	1.415	0.405	0.512	0.943	0.964	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) including Rough Terrain Forklifts, Container Handling Equipment, and other cargo handling related items to enable Combat Service Support units to rapidly and efficiently move and deliver critical supplies worldwide to the Warfighter. Efforts performed under this project include conducting market research, supporting operational requirements identification and validation, conducting trade studies, generating life cycle cost estimates, performing system engineering, developing performance specifications, conducting pre-production test and evaluation, and preparing program management and acquisition documents.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Material Handling Equipment (MHE) Training Aids							0.920	1.055	-	-	-
Articles:							0	0			
Description: Material Handling Equipment (MHE) Training Aids											
FY 2011 Accomplishments: Upgrade Rough Terrain Container Handler (RTCH) Electronic Training Aid											
FY 2012 Plans: Continue upgrade of Rough Terrain Container Handler (RTCH) Electronic Training Aid. Conduct design verification testing											
Title: Material Handling Equipment (MHE) System Improvement							-	-	0.655	-	0.655
Description: System Improvements for Light Capacity Rough Terrain Forklift (LCRTF) for Tactical Operations											
FY 2013 Base Plans: Design and test air drop configuration package for the LCRTF. Integrate and test add-on hardware for reliable cold starting.											
Title: Material Handling Equipment (MHE) Armor Kits							-	-	0.460	-	0.460
Description: Lightweight Armor for All Terrain Lifter Army System (ATLAS) II											

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army							DATE: February 2012				
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<i>FY 2013 Base Plans:</i> Investigate alternative armor solutions to eliminate known performance degradation when operated with current add on armor package (A/B Kit) installed.					
<i>Title:</i> Sling Load Attachment for Rough Terrain Container Handler (RTCH) <i>Description:</i> Sling Load Attachment for Rough Terrain Container Handler (RTCH)	-	-	0.300	-	0.300
<i>FY 2013 Base Plans:</i> Conduct demonstrations and evaluations of proposed Sling Load Attachment to assess operational suitability and value added capability.					
Accomplishments/Planned Programs Subtotals	0.920	1.055	1.415	-	1.415

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPA M41200: <i>Rough Terrain Container Handler</i>	33.856									0.000	33.856
• OPA M41800: <i>All Terrain Lifting Army System</i>	75.303	23.659								0.000	98.962
• OPA G41002: <i>Light Capacity Rough Terrain (LCRT) Forklift</i>	12.864	10.944	5.895		5.895		6.145	6.264	7.119	Continuing	Continuing

D. Acquisition Strategy
Develop specifications for LCRTF improvements, award contracts to produce test items for production verification testing. Testing LCRTF improvements to be performed using Army test facilities. Design lightweight armor solution for ATLAS II using U.S. Army TARDEC's Center for Ground Vehicle Development and Integration. Test armored ATLAS II at Aberdeen Proving Ground, MD. Procure RTCH Sling Load Attachment, obtain safety confirmation and conduct user demonstrations to valid requirements.

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 2013 Army										DATE: February 2012			
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				H14: MATERIALS HANDLING EQUIPMENT - ED					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
MHE Training Aids	MIPR	Kalmar Rt:Cibolo, TX	0.974	1.055		-		-		-	Continuing	Continuing	Continuing
System Improvements for LCRTF for Tactical Operations	Various	TBD:TBD	-	-		0.200		-		0.200	0.000	0.200	0.000
Lightweight Armor for ATLAS II	MIPR	TARDEC:Warren, MI	-	-		0.350		-		0.350	0.000	0.350	0.000
Sling Load Attachment for RTCH	Reqn	Kalmar RT Center:Cibolo, TX	-	-		0.100		-		0.100	0.000	0.100	0.000
Subtotal			0.974	1.055		0.650		-		0.650			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
System Improvements for LCRTF for Tactical Operations	MIPR	TARDEC:Warren, MI	-	-		0.055		-		0.055	0.000	0.055	0.000
Lightweight Armor for ATLAS II	MIPR	TARDEC:Warren, MI	-	-		0.110		-		0.110	0.000	0.110	0.000
Subtotal			-	-		0.165		-		0.165	0.000	0.165	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
System Improvements for LCRTF for Tactical Operations	TBD	TBD:TBD	-	-		0.400		-		0.400	0.000	0.400	0.000
Sling Load Attachment for RTCH	MIPR	Various:Various	-	-		0.200		-		0.200	0.000	0.200	0.000
Subtotal			-	-		0.600		-		0.600	0.000	0.600	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012	
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			
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.974	1.055		1.415		-		1.415			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army										DATE: February 2012			
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>			

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Develop LCRTF air drop package																												
Develop LCRTF cold weather start kit																												
Test LCRTF air drop and cold start capabilities																												
Design and trade analysis of alternative armor for ATLAS II																												
Develop detailed design of lightweight armor kit for ATLAS II																												
Conduct RTCH Sling Load Attachment user demonstrations																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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
Develop LCRTF air drop package	1	2013	4	2013
Develop LCRTF cold weather start kit	1	2013	4	2013
Test LCRTF air drop and cold start capabilities	4	2013	4	2013
Design and trade analysis of alternative armor for ATLAS II	1	2013	4	2013
Develop detailed design of lightweight armor kit for ATLAS II	1	2014	1	2014
Conduct RTCH Sling Load Attachment user demonstrations	3	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army								DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L39: Field Sustainment Support ED	5.599	4.226	2.550	-	2.550	2.431	2.368	2.331	2.269	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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Joint Precision Airdrop System P3I (JPADS) Articles: Description: JPADS 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 pounds (lbs) to 10,000 lbs. FY 2012 Plans: Continue JPADS 2K product improvement efforts to integrate advanced hardware and software capabilities							-	1.626 0	-	-	-
Title: Joint Precision Airdrop System 10,000 lbs. (JPADS 10K) Articles: 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.							3.191 0	1.400 0	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY 2011 Accomplishments: Complete Developmental Testing (DT) and initiate Operational Testing (OT) for JPADS 10K.						
FY 2012 Plans: Complete Operational Testing (OT) and obtain Milestone C for JPADS 10K.						
Title: Advanced Low Velocity Airdrop System (ALVADS) - Light and Heavy 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.		-	-	2.000	-	2.000
FY 2013 Base Plans: Complete Design Validation (DV) for ALVADS-L and initiate Developmental Testing (DT).						
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 feet per second (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.		1.577 0	1.200 0	-	-	-
FY 2011 Accomplishments: 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 Plans: 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 Above Ground Level (AGL).		-	-	0.550	-	0.550

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army				DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY 2013 Base Plans: Obtain Milestone C on ACPRS and initiate pre-planned product improvement effort.						
Title: Space Heater Convective 90,000 British Thermal Unit per Hour (BTUH) (SHC 90K) Articles: Description: The SHC 90K 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 90K 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 90K 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 Accomplishments: FY 11: Complete the User Field Evaluation on the Space Heater Convective 90,000 BTUH (SHC 90K) and procured preparation test items to support Milestone C decision in FY 12.		0.300 0	-	-	-	-
Title: Pyrolosis Waste to Energy System Articles: Description: The Pyrolysis waste to Energy System 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 pyrolosis 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. FY 2011 Accomplishments: Conduct evaluation of hardware at National Training Center (BTC). Conclude FCT evaluations and remove hardware from NTC.		0.531 0	-	-	-	-
Accomplishments/Planned Programs Subtotals		5.599	4.226	2.550	-	2.550

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• MA7806: Precision Airdrop, OPA 3,	21.282	16.207	5.935		5.935		8.129	9.555	9.128	Continuing	Continuing
• 643804 K39: Field Sustainment Support AD,	18.237	2.998	2.970		2.970		3.571	3.107	3.159	Continuing	Continuing
• 643804 VR8: Combat Service Support Systems AD,		2.074	2.023		2.023		2.039	2.375	2.415	Continuing	Continuing
• 654804 VR7: Combat Service Support Systems,		2.544	1.745		1.745		1.708	1.883	1.915	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 2013 Army											DATE: February 2012		
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				L39: Field Sustainment Support ED					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	1.823	0.370		0.400		-		0.400	0.000	2.593	Continuing
Subtotal			1.823	0.370		0.400		-		0.400	0.000	2.593	
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	3.867	-		-		-		-	0.000	3.867	0.000
ALVADS-L	Various	Various:Various	14.003	-		0.400		-		0.400	0.000	14.403	Continuing
JPADS P3I	Various	Various:Various	5.270	0.500		-		-		-	0.000	5.770	Continuing
LCADS P3I efforts	Various	Various:Various	0.750	0.200		-		-		-	0.000	0.950	Continuing
Subtotal			23.890	0.700		0.400		-		0.400	0.000	24.990	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	Yuma Proving Ground (YPG), AZ, AEC:AZ	9.079	0.800		-		-		-	0.000	9.879	Continuing
JPADS P3I	Various	Yuma Proving Ground, AZ:Yuma, AZ	-	0.500		-		-		-	0.000	0.500	0.000
JPADS 10K OT	Various	GSA:GSA	0.108	0.960		-		-		-	0.000	1.068	Continuing
ACPRS	Various	Yuma Proving Ground, AZ:Yuma, AZ	-	-		0.500		-		0.500	0.000	0.500	0.000
ALVADS-L	Various	YPG, AZ/ OTC, NC:YPG, AZ/ OTC, NC	2.642	0.896		1.250		-		1.250	0.000	4.788	Continuing
Subtotal			11.829	3.156		1.750		-		1.750	0.000	16.735	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012	
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			
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.542	4.226		2.550		-		2.550	0.000	44.318	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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																												
Milestone C on Advanced Cargo Parachute Release System (ACPRS)																												
Milestone C (MS C) on Helicopter External/Internal Cargo Delivery																												
Complete Advanced Low Velocity Airdrop System-Light (ALVADS-L) MS C																												
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L																												
Conduct 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 90K British Thermal Unit per Hou																												
Conduct Developmental Testing/Operational Testing (DT/OT) on ALVADS-H																												
Execute JPADS P3I Efforts																												
Conduct Design Validation ALVADS-L																												
Conduct follow on testing ACPRS P3I																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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	1	2012
Milestone C on Advanced Cargo Parachute Release System (ACPRS)	1	2013	1	2013
Milestone C (MS C) on Helicopter External/Internal Cargo Delivery	3	2017	3	2017
Complete Advanced Low Velocity Airdrop System-Light (ALVADS-L) MS C	4	2015	4	2015
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L	4	2013	1	2015
Conduct OT on ALVADS Rapid Rigging/Derigging Airdrop System	1	2015	2	2015
Conduct Milestone C on ALVADS Rapid Rigging/Derigging Airdrop System	4	2015	4	2015
Conduct Developmental Testing (DT) on JPADS 10K	2	2011	3	2011
Obtain Milestone C for Space Heater Convective 90K British Thermal Unit per Hou	4	2012	4	2012
Conduct Developmental Testing/Operational Testing (DT/OT) on ALVADS-H	3	2016	2	2017
Execute JPADS P3I Efforts	1	2012	4	2012
Conduct Design Validation ALVADS-L	1	2013	3	2013
Conduct follow on testing ACPRS P3I	1	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L41: WATER AND PETROLEUM DISTRIBUTION - ED	2.636	2.077	3.839	-	3.839	3.601	3.615	3.726	3.789	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 its 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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Integrate product improvements and conduct system level testing and evaluation.	0.525	0.314	0.250	-	0.250
Articles:	0	0			
Description: Funding is provided for the following effort					
FY 2011 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 II) 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 II) 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 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Continue integration of 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 II) 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. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.						
FY 2013 Base Plans: Continue integration of 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 II) 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. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.						
Title: Fuel System Supply Point (FSSP). Description: Funding is provided for the following effort FY 2011 Accomplishments: Continue improvements for the Family of Fuel System Supply Points (FSSPs). FY 2013 Base Plans: Address the Army's capability gap for automated gauging to capture fuel quantities in collapsible tanks in the Fuel System Supply Point (FSSP). This includes the development of a data device that will transmit and store the data internally and externally to higher command.		Articles: 0.700 0	-	0.624	-	0.624
Title: 3 K Tactical Water Purification System (TWPS). Description: Funding is provided for the following effort FY 2013 Base Plans:		-	-	0.535	-	0.535

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Hold Milestone B Decision review and Fabricate full size 3K Tactical Water Purification System (TWPS) prototype.						
Title: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Articles:		0.403 0	-	0.700	-	0.700
Description: Funding is provided for the following effort FY 2011 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 2013 Base Plans: The Fuel System Supply Points (FSSP) has two different pumps, the 350 Gallon Per Minute (GPM) and the 600 GPM . These pumps will be replaced with one common pump to provide commonality across the fleet. Build the common pump prototypes for testing and finalize the technical manuals and technical data package (drawing package). The technical data package will allow the Army to competitively procure the common pump in the future.						
Title: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Articles:		0.228 0	-	-	-	-
Description: Funding is provided for the following effort FY 2011 Accomplishments: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing.						
Title: Future Water Storage and Distribution Water Packaging System (EWPS). Articles:		0.780 0	0.600 0	0.524	-	0.524
Description: Funding is provided for the following effort FY 2011 Accomplishments: Develop Future Water Storage and Distribution Water Packaging Systems. Test commercial systems and prepare draft Purchase Description (PD). FY 2012 Plans:						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army				DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Continue development of Expeditionary Water Packaging System (EWPS). Test automated EWPS and finalize Purchase Description (PD) and prepare Request for Proposal (RFP). FY 2013 Base Plans: Prepare Milestone C decision documents and prepare for review.						
Title: Modular Tactical Refueling System (MTRS) Articles: Description: Funding is provided for the following effort. FY 2012 Plans: Test and evaluation of the Modular Tactical Refueling System (MTRS). FY 2013 Base Plans: The Capability Production Document (CPD) for the Modular Tactical Refueling System (MTRS) was sent out for worldwide staffing. Assemble two prototype systems for testing, finalize the technical manuals and technical data package (drawing package) . The technical data package will allow the Army to competitively procure the MTRS in the future.		-	0.563 0	0.700	-	0.700
Title: Testing the Modular Fuel System (MFS). Articles: Description: Funding is provided for the following effort FY 2012 Plans: Initial Operational test and evaluation of the Modular Fuel system (MFS) pump rack module (PRM) .		-	0.600 0	-	-	-
Title: Camel II (800 gallon watertank) Description: Perform operational testing on Camel II prototypes FY 2013 Base Plans: Perform operational testing on Camel II prototypes.		-	-	0.506	-	0.506
Accomplishments/Planned Programs Subtotals		2.636	2.077	3.839	-	3.839

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army										DATE: February 2012		
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)												
	Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
	• 0603804/K41: <i>RDTE, Logistics and Engineer Equipment - Advanced Development</i>	2.493	4.187	2.706		2.706		3.104	2.972	3.022	Continuing	Continuing
	• R05600: <i>OPA 3, Water Purification Systems</i>	15.683									0.000	15.683
	• MA6000: <i>OPA 3, Distribution Systems, Petroleum & Water</i>	230.174	75.457	36.266	2.119	38.385		93.778	87.714	75.551	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 2013 Army										DATE: February 2012			
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 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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)	RO	TARDEC:Warren, MI	0.330	-		-		-		-	0.000	0.330	0.000
Water Purification Systems Improvements	Various	TARDEC:TARDEC Warren, MI	0.124	0.060		0.125		-		0.125	0.000	0.309	Continuing
FSSP Improvements	Various	TBD:TARDEC, Warren, MI	2.211	-		0.824		-		0.824	0.000	3.035	Continuing
Water Purification Systems Improvements	Various	TBD:TBD	0.101	0.054		0.025		-		0.025	0.000	0.180	Continuing
Expeditionary Water Packaging System (EWPS)	Various	TARDEC:TARDEC Warren, MI	0.150	0.400		0.424		-		0.424	0.000	0.974	Continuing
Petroleum Quality Analysis System (PQAS-E)	MIPR	TARDEC:TARDEC Warren, MI	0.814	-		-		-		-	0.000	0.814	Continuing
3K Tactical Water Purification System (TWPS)	Various	NFESC:Pt. Huneme, CA	-	-		0.200		-		0.200	0.000	0.200	Continuing
3K Tactical Water Purifiction System (TWPS)	MIPR	TARDEC:Warren, MI	-	-		0.335		-		0.335	0.000	0.335	0.000
Modular Tactical Refueling System (MTRS)	MIPR	TARDEC:Warren, MI	-	0.300		0.200		-		0.200	0.000	0.500	0.000
Subtotal			3.730	0.814		2.133		-		2.133	0.000	6.677	
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	0.122	-		-		-		-	0.000	0.122	Continuing
Water Purification Systems Improvements	Various	TARDEC:Warren, MI	-	-		0.100		-		0.100	0.000	0.100	Continuing
Subtotal			0.122	-		0.100		-		0.100	0.000	0.222	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012				
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					L41: WATER AND PETROLEUM DISTRIBUTION - ED				
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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		-		-		-	0.000	0.600	Continuing	
Fuel System Supply Point (FSSP)	MIPR	Yuma:Yuma Proving Ground, AZ	-	-		0.500		-		0.500	0.000	0.500	Continuing	
Water Purification Improvements	Various	TARDEC:Warren, MI	0.265	0.100		-		-		-	0.000	0.365	Continuing	
Water Purification Improvements	Various	NFESC:Port Hueneme, CA	0.626	0.100		-		-		-	0.000	0.726	Continuing	
Water Packaging System	Various	Aberdeen Proving Ground:APG, MD	0.630	0.200		0.100		-		0.100	0.000	0.930	Continuing	
Camel II	MIPR	Yuma Proving Ground:YPG, AZ	-	-		0.506		-		0.506	0.000	0.506	0.000	
Modular Tactical Refueling System (MTRS)	Various	Yuma:Yuma Provcing Ground, AZ	-	0.263		0.500		-		0.500	0.000	0.763	Continuing	
Subtotal			1.521	1.263		1.606		-		1.606	0.000	4.390		
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			5.373	2.077		3.839		-		3.839	0.000	11.289		
Remarks														

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army																DATE: February 2012																			
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																			
								FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
								1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Family of Fuel System Supply Points (FSSPs): Performance of common pumps																																			
Evaluate Improvements to Water Purification and Distribution Systems																																			
Bulk Fuel Distribution System																																			
Modular Tactical Refueling System (MTRS)																																			
3K Tactical Water Purifictin System (TWPS)																																			
Water Quality Monitoring																																			
Unit Water Pod (Camel II)																																			
Small Unit Water Purifier																																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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
Family of Fuel System Supply Points (FSSPs): Performance of common pumps	1	2012	4	2015
Evaluate Improvements to Water Purification and Distribution Systems	1	2012	4	2017
Bulk Fuel Distribution System	1	2015	1	2016
Modular Tactical Refueling System (MTRS)	1	2013	4	2014
3K Tactical Water Purification System (TWPS)	2	2013	2	2016
Water Quality Monitoring	1	2016	4	2017
Unit Water Pod (Camel II)	2	2013	3	2013
Small Unit Water Purifier	4	2014	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L43: ENGINEER SUPPORT EQUIPMENT - ED	0.842	1.095	1.916	-	1.916	1.180	1.170	1.287	1.534	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, Firefighting Individual Requirements Equipment Support (FIRES), 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, Deep Sea Set, Underwater Construction Set, Closed Circuit Scuba Set, the Family of Diving Air Compressors, Diver Propulsion Systems, Vertical Skills Engineer Construction Kit (VSECK), Family of Detainee Processing Evidence Collection Kit, Fire Protection Equipment (FPE) 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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Document Development	0.125	0.045	0.050	-	0.050
Articles:	0	0			
Description: Development of various capabilities documents and other documents					
FY 2011 Accomplishments: Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs					
FY 2012 Plans: Coordinate to have ICDs, CDDs, and CPDs written for various programs					
FY 2013 Base Plans: Continue development of ICDs, CDDs, and CPDs for various programs					
Title: Underwater Construction Sets	0.143	0.250	0.350	-	0.350

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles: 0		0	0			
Description: Research, Development, and Testing of Underwater Construction Sets						
FY 2011 Accomplishments: Conduct market research on Underwater Construction Sets						
FY 2012 Plans: Procurement of Underwater Construction Set test articles						
FY 2013 Base Plans: Procure and test Underwater Construction Set articles						
Title: Soldier Portable Sets and Support Equipment		0.343	-	-	-	-
Articles: 0						
Description: Procure and test Soldier Portable Set market samples and Support Equipment						
FY 2011 Accomplishments: Procure market samples for the testing and evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electricians, Plumbers, Pipefitters, Field Lighting, Power Plant Installation, and other Soldier Portable Sets and Support Equipment						
Title: Air Compressors for the Diving Program		-	0.175	-	-	-
Articles: 0			0			
Description: Air Compressors for the Diving Program						
FY 2012 Plans: Procurement of air compressor test articles						
Title: Fire Protection Equipment (FPE)		-	0.118	0.170	-	0.170
Articles: 0			0			
Description: Fire Protection Equipment						
FY 2012 Plans:						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Procure FPE items						
FY 2013 Base Plans: Procure Type II and Type III FPE items						
Title: Deep Sea Set	Articles:	0.175 0	-	0.221	-	0.221
Description: Development of the Deep Sea Set						
FY 2011 Accomplishments: Continue the redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment)						
FY 2013 Base Plans: Create Computer Model of existing set /add enhancements to model /develop TDP in support of make-or-buy decision						
Title: Soldier Portable/Shelter Mounted Sets, Kits, and Outfits (SKOs)	Articles:	0.056 0	-	-	-	-
Description: Modernization Analysis for modularity of Soldier Portable/Shelter Mounted Sets, Kits, and Outfits						
FY 2011 Accomplishments: Modernization Analysis for modularity of Soldier Portable/Shelter Mounted Sets, Kits, and Outfits to determine the feasibility of upgrading/combining sets						
Title: Assault Boats and Outboard Motors	Articles:	-	0.160 0	0.625	-	0.625
Description: Development of various Assault Boats and Outboard Motors						
FY 2012 Plans: Procurement of Assault Boats and Outboard Motors test articles						
FY 2013 Base Plans: Testing of 7-man and 15-man boats and testing of motors						
Title: Engineering and Quality Assurance		-	0.223	0.300	-	0.300

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles:			0			
Description: Engineering and Quality Assurance of engineering SKOs						
FY 2012 Plans: Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, and other engineering sets						
FY 2013 Base Plans: Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, Soldier Portable, Firefighting and other engineering sets						
Title: Vertical Skills Engineer Construction Kit (VSECK)		-	0.0200	0.125	-	0.125
Articles:						
Description: Research, Development, and Testing of Vertical Skills Engineer Construction Kit (VSECK)						
FY 2012 Plans: Purchase and analysis of VSECK market samples						
FY 2013 Base Plans: Procure and test VSECK						
Title: Detainee Kit		-	0.0440	0.075	-	0.075
Articles:						
Description: Research, Development, and Testing of Detainee Kit						
FY 2012 Plans: Puchase and analysis of Detainee Kit market samples						
FY 2013 Base Plans: Procure and test Detainee Kits						
Title: Diver Propulsion System		-	0.0600	-	-	-
Articles:						
Description: Purchase of Diver Propulsion Systems						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012		
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>	

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<i>FY 2012 Plans:</i> Purchase Diver Propulsion test articles					
Accomplishments/Planned Programs Subtotals	0.842	1.095	1.916	-	1.916

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

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPA 3 ML5301: OPA 3 ML5301, Items Less than \$5.0M (Engineering Support)	31.243	12.482	14.093		14.093		8.775	4.365	4.641	Continuing	Continuing
• OPA 3 R70110: OPA 3 R70110, Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE)		28.949	5.889		5.889		7.620	7.614	7.617	Continuing	Continuing
• OPA 3 R70120: OPA 3 R70120, Urban Operations, Platoon Set		13.760	13.434		13.434		20.977	21.096	21.262	Continuing	Continuing
• OPA 3 R70130: OPA 3 R70130, Urban Operations, Squad Set		11.481	12.250		12.250		21.463	21.439	22.288	Continuing	Continuing

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 2013 Army										DATE: February 2012			
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					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Surface Supplied Diving Set and Deep Sea Set	C/FP	PM SKOT/ECBC/TBS: (IL, MI, TBS)	0.296	-		-		-		-	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)	0.143	0.200		0.250		-		0.250	Continuing	Continuing	Continuing
Market Samples of Soldier Portable Sets and Support Equipment	SS/FP	PM SKOT:Harrison, MI	0.586	-		-		-		-	Continuing	Continuing	Continuing
Assault Boats and Outboard Motors test articles	C/FP	TBS:TBS	-	0.160		-		-		-	Continuing	Continuing	Continuing
Market Samples for Detainee Kit	C/FP	PM SKOT:Harrison, MI	-	0.044		0.050		-		0.050	Continuing	Continuing	Continuing
Market Samples of Vertical Skills Engineer Construction Kit (VSECK)	C/FP	PM SKOT:Harrison, MI	-	0.020		0.100		-		0.100	Continuing	Continuing	Continuing
Deep Sea Set Computer Modeling and TDP Development	MIPR	ECBC:Rock Island, IL	-	-		0.221		-		0.221	Continuing	Continuing	Continuing
Procure Fire Protection Equipment (Type I, II and III)	C/FP	PM SKOT:Harrison, MI	-	0.118		0.170		-		0.170	Continuing	Continuing	Continuing
Diver Propulsion System Market Samples	C/FP	Patriot 3 Maritime:Fredricksburg, VA	-	0.060		-		-		-	Continuing	Continuing	Continuing
XLDS	SS/FP	TBS:TBS	-	0.050		-		-		-	0.000	0.050	0.000
Develop Air Compressors for Diving Program	C/FP	TBS:TBS	-	0.175		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.025	0.827		0.791		-		0.791			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012			
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					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
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
Engineering Support Equipment Configuration Analyses and document development support	MIPR	Combined Arms Support Command (CASCOM)/ Maneuver Support Center (MANSCEN):(VA, MO)	0.125	0.045		0.050		-		0.050	Continuing	Continuing	Continuing
Engineering and Quality Assurance of engineering SKOs (Soldier Portable)	MIPR	ECBC/ARDEC:Rock Island, IL	-	0.123		0.200		-		0.200	Continuing	Continuing	Continuing
Engineering and Quality Assurance (Boats and Motors)	MIPR	ECBC:Rock Island, IL	-	0.100		0.100		-		0.100	Continuing	Continuing	Continuing
Subtotal			0.181	0.268		0.350		-		0.350			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Redevelopment and testing of state of the art Deep Sea Set	MIPR	PM SKOT/ECBC:Rock Island, IL	0.375	-		-		-		-	Continuing	Continuing	Continuing
Underwater Construction Test	C/FP	Navy/ PM SKOT:FL, MI	-	-		0.100		-		0.100	Continuing	Continuing	Continuing
Testing of Boats and Motors	MIPR	NAVSEA:VA	-	-		0.625		-		0.625	Continuing	Continuing	Continuing
Testing of Soldier Portable Sets	MIPR	ECBC/ATEC:IL, VA	-	-		0.050		-		0.050	Continuing	Continuing	Continuing
Subtotal			0.375	-		0.775		-		0.775			
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1.581	1.095		1.916		-		1.916			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army						DATE: February 2012			
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			
	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army										DATE: February 2012			
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 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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	[REDACTED]																											
Procurement of test articles and testing of Assault Boats & Outboard Motors	[REDACTED]																											
Procurement of test articles & testing of Soldier Portable Sets & Support Equip	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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	2	2011	4	2013
Procurement of test articles and testing of Assault Boats & Outboard Motors	2	2012	4	2015
Procurement of test articles & testing of Soldier Portable Sets & Support Equip	2	2013	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L46: Maintenance Support Equipment	3.066	3.162	3.697	-	3.697	1.674	1.780	1.799	1.829	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 Next Generation Shop Equipment Welding (SEW), the Next Generation Standard Automotive Tool Set (SATS), the Metalworking and Machining Shop Set (MWMSS), as well as the Armament Repair 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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Develop the Next Generation Shop Equipment Welding (SEW)	-	-	0.900	-	0.900
Description: Design, Build, and Test the Next Generation SEW, incorporating new technology and a new platform					
FY 2013 Base Plans: Concept design and development of the Next Generation SEW on a new platform					
Title: Develop Next Generation Standard Automotive Tool Set (SATS)	-	-	0.403	-	0.403
Description: Design, Develop, Build, and Test SATS Future Field Modules					
FY 2013 Base Plans: Procure Next Generation SATS prototypes					
Title: Metalworking & Machining Shop Set (MWMSS)	2.446	0.175	0.100	-	0.100
Articles:	0	0			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army				DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Description: Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations FY 2011 Accomplishments: Test MWMSS and Develop Technical Manuals (TMs) FY 2012 Plans: Additional Testing of MWMSS FY 2013 Base Plans: Additional Testing/Re-testing MWMSS						
Title: Shop Equipment, Shelters, Truck/Trailer Transported Description: Modernization / Redesign efforts of truck/trailer transported shelters for next generation of vehicles FY 2012 Plans: Purchase of a next generation vehicle chassis, and integration and testing of the next generation vehicle platform variant FY 2013 Base Plans: Modernization and development efforts of truck/trailer transported shelters for next generation of vehicles, to include the Shop Equipment Contact Maintenance (SECM) tool load and other vehicle-mounted maintenance SKOs		- Articles:	0.300 0	0.389	-	0.389
Title: Support for Requirements Generation Description: Support for requirements generation of future SKOs FY 2011 Accomplishments: Document development support for future requirements SKOs FY 2012 Plans: Document development support for future requirements FY 2013 Base Plans:		0.190 0 Articles:	0.122 0	0.125	-	0.125

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Document development supporting future requirements SKOs						
Title: Rapid Deployment SKOs Description: Develop Rapid Deployment Sets, Kits, and Outfits (SKOs) - Special Tool Initiative and support to Mine Resistance Ambush Protection (MRAP) and other vehicles FY 2013 Base Plans: Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms.		-	-	0.275	-	0.275
Title: Engineering and Quality Assurance Articles: Description: Engineering and Quality Assurance in support of SKOs FY 2011 Accomplishments: Engineering and Quality Assurance dedicated to the development and quality of maintenance SKOs FY 2012 Plans: Engineering and Quality Assurance of the Armament Shop Set (ARSS), Special Tool Sets, and other maintenance SKOs FY 2013 Base Plans: Engineering and Quality Assurance dedicated to the development and quality of maintenance SKOs		0.380 0	0.500 0	0.450	-	0.450
Title: Armament Shop Set (ARSS) Articles: Description: Armament Shop Set upgrades FY 2011 Accomplishments: Market Research and modeling/simulation for the ARSS FY 2012 Plans: Purchase of ARSS prototypes FY 2013 Base Plans:		0.050 0	2.065 0	1.055	-	1.055

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army										DATE: February 2012				
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Test of ARSS prototypes and development of Technical Manuals														
Accomplishments/Planned Programs Subtotals										3.066	3.162	3.697	-	3.697
C. Other Program Funding Summary (\$ in Millions)														
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost			
• OPA 3 M61500: OPA 3 M61500, Shop Equipment, Contact Maintenance (SECM)	30.790	20.428								Continuing	Continuing			
• OPA 3 MA9650: OPA 3 MA9650, Standard Automotive Tool Set (SATS)	66.295	8.377					3.585	3.608		Continuing	Continuing			
• OPA 3 ML5345: OPA 3 ML5345, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)	3.682	3.852	0.000	0.030	0.030		3.861	3.858	3.859	Continuing	Continuing			
• OPA 3 G05302: OPA 3 G05302, Forward Repair System (FRS)	59.790	8.376								0.000	68.166			
• OPA 3 G39200: OPA 3 G39200, Hydraulic Systems Test and Repair Unit (HSTRU)	23.718	4.520	2.495	0.428	2.923		1.631	2.064	2.173	Continuing	Continuing			
• OPA 3 G05315: OPA 3 G05315, Metalworking and Machining Shop Set (MWMSS)							15.239	15.228	15.233	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.														
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 2013 Army										DATE: February 2012			
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 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	MIPR	PM SKOT/ Army Test & Evaluation Command (ATEC)/ Combined Arms Support Command (CASCOM):(IL, MI, MD, VA)	1.431	-		-		-		-	Continuing	Continuing	Continuing
Next Generation Shop Equipment Welding (SEW) concept design and development	MIPR	ECBC:Rock Island, IL	-	-		0.900		-		0.900	Continuing	Continuing	Continuing
Modernization/Redesign efforts of Truck/Trailer transported shelters for next generation vehicles	MIPR	ECBC:Rock Island, IL	-	0.300		0.389		-		0.389	Continuing	Continuing	Continuing
Expedited Modernization Initiative Procedure (EMIP) Procurement of new Technical Tools	SS/FP	Multiple CONUS:(GA, CA, IL, WI, MI)	0.012	-		-		-		-	Continuing	Continuing	Continuing
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative. Joint Aviation Tool Set	MIPR	ECBC:Rock Island, IL	0.100	-		0.150		-		0.150	Continuing	Continuing	Continuing
Armament Repair Shop Set (ARSS) market research and prototypes	MIPR	ECBC-PIF:Edgewood, MD	0.050	2.065		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.593	2.365		1.439		-		1.439			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	MIPR	PM SKOT Rock Island/ CASCOM /	0.496	0.122		0.125		-		0.125	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012			
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					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Capabilities Document Development		Maneuver Support Center (MANSCEN):(IL, VA, MO)											
Modernization of Tool Loads based on Field Feedback	MIPR	PM SKOT:Harrison, MI	0.300	-		-		-		-	Continuing	Continuing	Continuing
Engineer and Quality Assurance in support of SKOs	MIPR	ECBC / ARDEC / PM SKOT:(IL, MI)	0.578	0.500		0.450		-		0.450	Continuing	Continuing	Continuing
Subtotal			1.374	0.622		0.575		-		0.575			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Test Special Tool Kits	MIPR	ECBC / ATEC:(IL, MD)	-	-		0.125		-		0.125	Continuing	Continuing	Continuing
Testing of the Metalworking & Machining Shop Set (MWMSS)	MIPR	ATEC:Aberdeen, MD	2.446	0.175		0.100		-		0.100	Continuing	Continuing	Continuing
Test Armament Repair Shop Set (ARSS)	MIPR	ATEC:Aberdeen, MD	-	-		1.055		-		1.055	Continuing	Continuing	Continuing
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	MIPR	PM SKOT:Harrison, MI	0.263	-		0.403		-		0.403	Continuing	Continuing	Continuing
Subtotal			2.709	0.175		1.683		-		1.683			
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			5.676	3.162		3.697		-		3.697			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army																				DATE: February 2012			
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			
																				</			

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design, Develop, Build and Test Armament Repair Shop Set (ARSS)	2	2011	4	2015
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets	1	2015	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED	4.381	-	2.976	-	2.976	2.968	-	-	-	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). FY13 funds Engineering and Manufacturing Development (EMD) Phase activities for the 120k IECU which will enable cooling of larger shelters and structures, and may be used to cool multiple tents with one unit. This program has no FY12 RDTE request. There is no current MIL-STD unit in this size.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Concept and Technology Development	2.881	-	-	-	-
Articles:	0				
Description: Funding is provided for the following effort					
FY 2011 Accomplishments: Continue Concept and Technology Development, analysis, and assessments for 120K BTUH ECU efforts, as well as evaluation of emerging technologies					
Title: EMD for the 9,18, and 36K IECUs and 120K IECU.	1.500	-	2.976	-	2.976
Articles:	0				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army				DATE: February 2012	
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Description: Funding is provided for the following effort FY 2011 Accomplishments: Continue EMD for the 9, 18 and 36K IECUs. FY 2013 Base Plans: Begin EMD for the 120K IECU					
Accomplishments/Planned Programs Subtotals	4.381	-	2.976	-	2.976

C. Other Program Funding Summary (\$ in Millions)										
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete
• MF9303: <i>OPA 3, Improved Environmental Control Units , MF9303</i>	11.389	10.109	10.689		10.689		22.351	24.321	25.671	Continuing
										Continuing

D. Acquisition Strategy
Complete Engineering and Manufacturing Development (EMD) for the 9/18/36K IECU variants and transition to production. Begin EMD for 120K IECU which will be acquired in a single-contract, single-contractor, dual-phase approach, via a CPFF 2 year EMD contract, with FFP options for production quantities over a 5 year delivery period.

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 2013 Army											DATE: February 2012		
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				L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	1.124	-		-		-		-	0.000	1.124	Continuing
120K IECU	Various	PM-MEP:Various	-	-		0.532		-		0.532	Continuing	Continuing	0.000
SBIR/STTR	Various	various:various	0.137	-		-		-		-	0.000	0.137	0.000
Subtotal			1.261	-		0.532		-		0.532			
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	C/CPFF	Mainstream Engineering:Vero Beach, FL	2.064	-		-		-		-	0.000	2.064	Continuing
120K IECU	C/CPFF	TBD:TBD	-	-		2.000		-		2.000	Continuing	Continuing	0.000
Subtotal			2.064	-		2.000		-		2.000			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	MIPR	CERDEC:Fort Belvoir, VA	1.642	-		-		-		-	0.000	1.642	0.000
Concept & Technology Development	Various	CERDEC:Fort Belvoir, Va	3.507	-		-		-		-	0.000	3.507	0.000
Subtotal			5.149	-		-		-		-	0.000	5.149	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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:APG, MD	0.300	-		-		-		-	0.000	0.300	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army											DATE: February 2012		
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>					

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
120K IEU	Various	ATEC:APG, MD	-	-		0.444		-		0.444	0.000	0.444	Continuing
Subtotal			0.300	-		0.444		-		0.444	0.000	0.744	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.774	-		2.976		-		2.976			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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>	

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Production Qualification Test																												
Logistics Demonstration																												
Conduct User Evaluation																												
Milestone C/LRIP Decision																												
LRIP/TC Std/FMR Work																												
Full Rate Production Decision																												
120K BTUH IECU																												
Pre-EMD Review																												
Solicitation and Source Selection																												
Milestone B-120K BTUH IECU																												
EMD Phase																												
MS C - 120K BTUH IECU																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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
Production Qualification Test	2	2012	4	2012
Logistics Demonstration	2	2012	4	2012
Conduct User Evaluation	1	2013	2	2013
Milestone C/LRIP Decision	2	2013	2	2013
LRIP/TC Std/FMR Work	2	2013	2	2014
Full Rate Production Decision	2	2014	2	2014
120K BTUH IECU	1	2013	4	2015
Pre-EMD Review	4	2012	4	2012
Solicitation and Source Selection	4	2012	2	2013
Milestone B-120K BTUH IECU	2	2013	2	2013
EMD Phase	2	2013	1	2015
MS C - 120K BTUH IECU	1	2015	1	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD	-	87.217	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note

Transition of funding from PE 0604804A, Project L50 to PE 0605812A, Project VU9 occurs in FY 2013 and outyears.
FY 2008 - FY 2011 funding for the Joint Light Tactical Vehicles (JLTV) program is under Program Element (PE) 0603804A, Project L04.

A. Mission Description and Budget Item Justification

Funding supports the development and testing of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV), which is a joint program between the Army and the Marine Corps. International participation will be offered during the Engineering, Manufacturing and Development (EMD) phase. The JLTV goal is a FoV 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. JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency, reliability, and maintaining effective competition throughout the life cycle. Commonality of components, maintenance procedures, training, etc., between vehicles is expected to be inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.

During FY 2012, major budget activities are based upon an expected January 2012 Capability Development Document (CDD) approval and will support the Source Selection Evaluation Board (SSEB), up to three Engineering and Manufacturing Development (EMD) contracts, hull and ballistic coupon testing, government furnished equipment and program management support. In FY 2012, the program acquisition strategy was revised to address Better Buying Power Initiatives, and reduced the schedule by 15 months to enable a 33-month Non-Developmental Item approach for EMD with Milestone B decision in the third quarter of FY 2012.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Engineering, Manufacturing, and Development (EMD) prototype contract for development and fabrication. Articles:	-	65.610 0	-	-	-
Description: EMD prototype contract.					
FY 2012 Plans: Engineering, Manufacturing, and Development (EMD) contract for prototype development and fabrication, contract source selection board, and costs associated with the successful completion of the EMD phase.					
Title: Joint Light Tactical Vehicles (JLTV) Program Management Support Articles:	-	11.500 0	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army							DATE: February 2012				
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, Article Quantities in Each)							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Description: Funding is provided for the support of program management government operations.											
FY 2012 Plans: Various costs to provide effort during the Engineering, Manufacturing, and Development (EMD) phase.											
Title: Engineering, Manufacturing, and Developmental Test and Evaluation <div>Articles:</div>							-	1.370 0	-	-	-
Description: Funding is provided for Engineering, Manufacturing, and Development test support to include the start of coupon testing.											
FY 2012 Plans: Engineering, Manufacturing, and Development testing.											
Title: Government Furnished Equipment <div>Articles:</div>							-	8.737 0	-	-	-
Description: Government furnished equipment for Joint Light Tactical Vehicles (JLTV) Engineering, Manufacturing, and Development contract phase.											
FY 2012 Plans: Government furnished equipment for Joint Light Tactical Vehicles (JLTV) Engineering, Manufacturing, and Development contract phase.											
Accomplishments/Planned Programs Subtotals							-	87.217	-	-	-
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PM JLTV PROJECT L04: Joint Light Tactical Vehicles (JLTV), 0603804A, Army RDTE Project L04	36.408									0.000	36.408
• PM JLTV PROJECT VU9: Joint Light Tactical Vehicles (JLTV),			72.295		72.295		31.549	51.924	53.223	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army								DATE: February 2012			
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					
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0605812A, Army RDTE Project VU9											
• PM JLTV PRODUCTION D15603: Joint Light Tactical Vehicles (JLTV), D15603, Army OPA 1							167.408	299.238	516.722	Continuing	Continuing
• PM JLTV PROJECT 3209 0603635M: Marine Corps Ground Combat/Support Systems, RDTE Project 3209 0603635M	18.364	46.866								0.000	65.230
• PM JLTV PROJECT 3209 0605812M: Marine Corps Ground Combat/Support Systems, RDTE Project 3209 0605812M			44.500		44.500		16.000	40.100	44.300	Continuing	Continuing
• PM JLTV PRODUCTION 5095: Marine Corps Ground Combat/ Support Systems, Production 5095							24.500	87.300	134.900	Continuing	Continuing
D. Acquisition Strategy											
Joint Light Tactical Vehicles (JLTV) is a Joint Services Program with the U.S. Army and Marine Corps as the two main components. In addition, the Navy anticipates procuring JLTV vehicles upon successful Low Rate Initial Production (LRIP) testing. The program will use an evolutionary approach to deliver capabilities in increments based on program priorities. All technologies entering the current Engineering, Manufacturing and Development (EMD) phase shall be no less than Technology Readiness Level 6 to achieve Capabilities Development Document (CDD) requirements.											
The program revised the acquisition strategy in the first quarter FY 2012 addressing Better Buying Power Initiatives, and reduced the schedule by 15 months to enable a 33-month Non-Developmental Item approach for EMD with Milestone B in the third quarter FY 2012. This initiative saves \$400.0 million in the Future Years Defense Program (FYDP) for the Services.											
Increment I will produce two Mission Role Variant (MRV) configurations (Combat Tactical Vehicle (CTV) and Combat Support Vehicle (CSV)) with mission packages (General Purpose, Heavy Guns Carrier, Close Combat Weapons Carrier, and Utility/Shelter Carrier). EMD vendors will fabricate representative mission packages from both MRVs, which the Government will fully test during the EMD phase. Agreement was reached between the PM and user community to eliminate two mission packages, the Special Purpose (SP) and Command and Control On-The Move (C2OTM) vehicles which integrated WIN-T systems for the Army. Eliminating these											

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
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>
<p>unique vehicles reduces technical risk and cost of the JLTV EMD effort. It also eliminates duplicate development and relies on the WIN-T program's existing efforts to fund, integrate, and test their capabilities on other vehicles during the JLTV EMD schedule</p> <p>Through a full and open competition, the program anticipates awarding up to three firm-fixed price contracts for the EMD phase. Unless future market research identifies a valid non-EMD vendor capable of delivering the required capabilities, there will be a down-select from the EMD contractors to enter into the Production and Deployment phase. The down-select will result in a fixed-price type contract with a base LRIP quantity, LRIP options, full-rate production options, and a Technical Data Package option.</p> <p><u>E. Performance Metrics</u></p> <p>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.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012			
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 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	SS/CPFF	Camber:Huntsville, AL	-	0.200		-		-		-	Continuing	Continuing	0.000
Contract Service Support	SS/CPFF	Booz Allen Hamilton:Ft. Belvoir, VA	-	2.422		-		-		-	Continuing	Continuing	0.000
Contract Service Support	SS/CPFF	US Army Combined Arms Support Commands - CASCOM:Ft. Lee, VA	-	0.200		-		-		-	Continuing	Continuing	0.000
Subtotal			-	2.822		-		-		-			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Engineering and Manufacturing Development Contracts	C/FFP	TBD:Various	-	56.485		-		-		-	Continuing	Continuing	0.000
Subtotal			-	56.485		-		-		-			0.000
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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 Program Management	Various	TACOM Life Cycle Management Command (LCMC):Harrison Township, MI	-	11.500		-		-		-	Continuing	Continuing	0.000
JLTV Source Selection Evaluation Board	MIPR	Various:Various	-	0.500		-		-		-	0.000	0.500	0.000
JLTV Program Prototype for Engineering, Manufacturing, and Development Phase	MIPR	Tank Automotive Research, Development, and	-	3.795		-		-		-	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army											DATE: February 2012		
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>					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
		Engineering Center - TARDEC:Warren, MI											
JLTV Prototype for EMD Phase - Cost and Systems, Legal, Budget, Safety, Security, Contracting	MIPR	TACOM Life Cycle Management Command (LCMC):Warren, MI	-	2.008		-		-		-	Continuing	Continuing	0.000
Government Furnished Equipment	Various	Various:Various	-	8.737		-		-		-	0.000	8.737	0.000
Subtotal			-	26.540		-		-		-			0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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 EMD phase test and evaluation - initiation of coupon test	MIPR	TBD:Various	-	1.370		-		-		-	Continuing	Continuing	0.000
Subtotal			-	1.370		-		-		-			0.000
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	87.217		-		-		-			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Joint Capability Development Document (CDD) Approved																												
Engineering, Manufacturing, and Development (EMD) RFP release																												
Source Selection Evaluation Board (SSEB)																												
MS B																												
EMD Contract Award																												
EMD Development Contract																												
EMD Test and Validation / Report																												
MS C Preparation																												
MS C																												
LRIP Contract Award																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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
Joint Capability Development Document (CDD) Approved	2	2012	2	2012
Engineering, Manufacturing, and Development (EMD) RFP release	2	2012	2	2012
Source Selection Evaluation Board (SSEB)	2	2012	3	2012
MS B	3	2012	3	2012
EMD Contract Award	3	2012	3	2012
EMD Development Contract	3	2012	4	2014
EMD Test and Validation / Report	4	2012	1	2015
MS C Preparation	2	2014	2	2015
MS C	2	2015	2	2015
LRIP Contract Award	3	2015	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
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 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
VR7: COMBAT SERVICE SUPPORT SYSTEMS	-	2.544	1.745	-	1.745	1.621	1.708	1.883	1.915	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, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Human Remains Temperature Controlled Transfer Case (HRTC2) Articles: 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 Plans: Conduct testing and develop documentation for Milestone C Type Classification. FY 2013 Base Plans: Complete Milestone C and award the production contract.	-	0.600 0	0.600	-	0.600
Title: Modular Ballistic Protection System (MBPS) Articles: 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.	-	0.650 0	0.378	-	0.378

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
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, Article Quantities in Each)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY 2012 Plans: Conduct Operational Testing (OT) on Tent Extendable Modular Personnel (TEMPER) version of the MBPS.						
FY 2013 Base Plans: Conduct OT for MBPS stand-alone variant, prepare for Milestone C and transition to production.						
Title: Family of Space Heaters Articles: 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.		-	0.225 0	0.100	-	0.100
FY 2012 Plans: Execute Pre-Planned Product Improvement (P3I) effort on the family of Space Heaters to improve on fuel efficiency						
FY 2013 Base Plans: Complete Developmental and Operational Test on P3I improvements to Army Space Heater and update procurement specification.						
Title: Net-Zero Energy Efficiency Solutions Articles: Description: Net-Zero Energy Efficiency Solutions reduce the operational energy and logistics footprint of the expeditionary base camp system, with the goal being a significant reduction in fuel, water, and power requirements to sustain operations in the field. Operating a base camp such as Force Provider requires a significant amount of logistics support and also produces an enormous amount of by products, both of which cost money, human effort (that means a risk in the form of soldiers on the road), and represents a potential vulnerability.		-	1.069 0	0.667	-	0.667
FY 2012 Plans:						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army							DATE: February 2012				
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, Article Quantities in Each)							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Complete Development of Energy Efficiency (E2) shelter kit solutions for Force Provider modules and conduct Developmental Testing (DT)											
FY 2013 Base Plans: Conduct Operational Testing (OT) on Energy Efficiency (E2) shelter kit solutions for Force Provider modules. Obtain full material release of E2 kits and transition into production.											
Accomplishments/Planned Programs Subtotals							-	2.544	1.745	-	1.745
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 643804 K39: Field Sustainment AD,	18.237	2.998	2.970		2.970		3.571	3.107	3.159	Continuing	Continuing
• 643804 VR8: Combat Service Support Systems AD,		2.074	2.023		2.023		2.039	2.375	2.415	Continuing	Continuing
• 654804 L39: Field Sustainment Support ED,	5.599	4.226	2.550		2.550		2.368	2.331	2.269	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 2013 Army										DATE: February 2012			
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 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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		0.162		-		0.162	Continuing	Continuing	0.000
Subtotal			-	0.239		0.162		-		0.162			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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		0.897		-		0.897	Continuing	Continuing	0.000
Subtotal			-	1.323		0.897		-		0.897			0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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	-	0.982		0.686		-		0.686	Continuing	Continuing	0.000
Subtotal			-	0.982		0.686		-		0.686			0.000
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	2.544		1.745		-		1.745			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army	DATE: February 2012
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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>	PROJECT VR7: <i>COMBAT SERVICE SUPPORT SYSTEMS</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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 DT and OT on HRTC2																												
Obtain Milestone C TC on HRTC2																												
Complete evaluation on Net-Zero energy efficiency solutions																												
Obtain Milestone B and conduct DT for MBPS stand alone																												
Transition Zero-Footprint Base Camp capabilities into Joint Base Camp systems																												
Obtain Milestone C for MBPS stand alone																												
Transition MBPS capability into Base Camp systems																												
Conduct OT SoS Base Camp Efficiency & Environ Combat Outpost																												
Obtain MS C TC SoS Base Camp Efficiency & Environ Combat Outpost																												
Conduct development of Technology Improvements and other variants for ULCANS																												
Conduct DT & OT on Net-Zero Energy Efficiency Solution & transition to production																												
Transition Army Space Heater P3I effort into production																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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 DT and OT on HRTC2	4	2012	2	2013
Obtain Milestone C TC on HRTC2	4	2013	4	2013
Complete evaluation on Net-Zero energy efficiency solutions	1	2012	4	2013
Obtain Milestone B and conduct DT for MBPS stand alone	1	2013	2	2014
Transition Zero-Footprint Base Camp capabilities into Joint Base Camp systems	1	2014	4	2016
Obtain Milestone C for MBPS stand alone	2	2014	2	2014
Transition MBPS capability into Base Camp systems	3	2014	4	2014
Conduct OT SoS Base Camp Efficiency & Environ Combat Outpost	1	2016	4	2016
Obtain MS C TC SoS Base Camp Efficiency & Environ Combat Outpost	2	2017	2	2017
Conduct development of Technology Improvements and other variants for ULCANS	1	2015	4	2017
Conduct DT & OT on Net-Zero Energy Efficiency Solution & transition to production	2	2013	4	2014
Transition Army Space Heater P3I effort into production	4	2013	4	2013