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**Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	56.153	80.490	19.509	-	19.509	10.850	10.837	11.273	12.966	Continuing	Continuing
526: <i>MARINE ORIEN LOG EQ AD</i>	2.110	2.990	2.714	-	2.714	2.806	2.916	3.034	3.078	Continuing	Continuing
G11: <i>ADV ELEC ENERGY CON AD</i>	2.547	2.618	7.679	-	7.679	0.428	-	-	1.534	Continuing	Continuing
K39: <i>Field Sustainment Support AD</i>	14.690	18.908	2.952	-	2.952	2.938	3.150	3.330	3.070	Continuing	Continuing
K41: <i>WATER AND PETROLEUM DISTRIBUTION - AD</i>	3.097	2.586	4.122	-	4.122	2.677	2.785	2.894	2.937	Continuing	Continuing
K42: <i>MATERIEL SUSTAINMENT SUPPORT AD</i>	2.835	0.463	-	-	-	-	-	-	-	Continuing	Continuing
L04: <i>JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD</i>	30.874	52.925	-	-	-	-	-	-	-	Continuing	Continuing
VR8: <i>COMBAT SERVICE SUPPORT SYSTEMS - AD</i>	-	-	2.042	-	2.042	2.001	1.986	2.015	2.347	0.000	10.391

**Note**

Change Summary Explanation:

**A. Mission Description and Budget Item Justification**

This program element supports advanced component development and prototypes of new and improved technologies for combat support and combat service support equipment essential to sustaining combat operations. Advancements in watercraft, bridging, electric power generators and batteries, potable water, material-handling, environmental control, shelter systems, cargo aerial delivery, field service systems, mortuary affairs equipment and petroleum equipment are necessary to improve safety and increase the tactical mobility, operational capability, lethality and survivability on the digital battlefield and to provide for greater sustainment while reducing the logistics support burden.

Decrease from FY 2011 to FY 2012 reflects Joint Light Tactical Vehicle(JLTV) move from Advance Development to Engineering Development.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army				DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
2040: Research, Development, Test & Evaluation, Army		PE 0603804A: Logistics and Engineer Equipment - Adv Dev				
BA 4: Advanced Component Development & Prototypes (ACD&P)						
B. Program Change Summary (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget		59.662	80.490	14.147	-	14.147
Current President's Budget		56.153	80.490	19.509	-	19.509
Total Adjustments		-3.509	-	5.362	-	5.362
• Congressional General Reductions			-			
• Congressional Directed Reductions			-			
• Congressional Rescissions		-	-			
• Congressional Adds			-			
• Congressional Directed Transfers			-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Other Adjustments 1		-3.509	-	5.362	-	5.362

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT 526: MARINE ORIEN LOG EQ AD			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
526: MARINE ORIEN LOG EQ AD	2.110	2.990	2.714	-	2.714	2.806	2.916	3.034	3.078	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
Funding supports project advanced component development and prototype equipment for Army watercraft to provide critical capabilities to support full-spectrum land combat operations by extending the Commanders' available maneuver space to conduct tactical port and Joint Logistics Over-the-Shore (JLOTS) operations, take advantage waterborne maneuver and supply routes, and conduct operations through littoral entry points even in the face of access-denial environments. The Army utilizes a combination of ocean-going and inner harbor floating craft, such as tug boats, modular causeway systems and barge derricks, and ocean-going heavy sustainment lift and high speed craft.											
FY12 funding will be used to support the Vessel-to-Shore Bridging (VSB). The VSB Initial Capabilities Document has been approved and the funding will be used for follow-on research and development to support the transition of the VSB to an acquisition program. VSB will optimize the throughput capabilities of the Joint High Speed Vessel (JHSV) across extended mudflats/tidal estuaries by providing a more rapid and increased flow of combat power and sustainment through multiple austere theater access points.											
FY12 funding will also be used to support the research and development of vessels to replace a tactical port operations landing craft mechanized (LCM-8) vessel and a heavy lift sustainment vessel. The vessels are in their early stages of core requirements development.											
Army watercraft systems fleet-wide research and development funding requirements will complete core requirements development and prototype operational testing and military unit assessment for external people pods to accommodate additional temporary vessel berthing. Funding will also be used for Escalation of Force (EoF) force protection enhancements and Army watercraft unique Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) research, development and testing.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012	
Title: ARMY WATERCRAFT JETA-SPOD  Articles:  Description: Funding is provided for the following effort  FY 2010 Accomplishments: Needs something different from FY11  FY 2011 Plans:								1.401	2.119	-	
								0	0		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev		PROJECT 526: MARINE ORIEN LOG EQ AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2010	FY 2011	FY 2012
JETA-SPOD						
<b>Title:</b> Watercraft - Vessel to Shore Bridging (VSB) Study/Development <b>Description:</b> Funding is provided for the following effort  <b>FY 2012 Plans:</b> VSB - Vessel to Shore Bridging Study/Development				-	-	0.462
<b>Title:</b> Watercraft - Landing Craft Mechanized (LCM 8) Study/Development <b>Description:</b> Landing Craft Mechanized 8  <b>FY 2012 Plans:</b> LCM 8 - Landing Craft Mechanized 8 Study/Development				-	-	0.461
<b>Title:</b> Watercraft - Heavy Lift Vessel Study/Development <b>Description:</b> AWS Heavy Lift Vessel  <b>FY 2012 Plans:</b> Heavy Lift Vessel Study/Development				-	-	0.461
<b>Title:</b> Watercraft - People Pods Study/Development <b>Description:</b> AWS - People Pods  <b>FY 2012 Plans:</b> People Pods Study/Development				-	-	0.461
<b>Title:</b> Watercraft - Force Protection Study/Development <b>Description:</b> AWS - Force Protection  <b>FY 2012 Plans:</b> Force Protection Study/Development				-	-	0.461
<b>Title:</b> Watercraft - C4ISR Study/Development <b>Description:</b> AWS - C4ISR  <b>FY 2012 Plans:</b>				-	-	0.231

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev	PROJECT 526: MARINE ORIEN LOG EQ AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
C4ISR Study/Development				
Title: ARMY WATERCRAFT PROGRAM SUPPORT  Description: Funding is provided for the following effort  FY 2010 Accomplishments: Funds Program Support  FY 2011 Plans: Continues Program Support  FY 2012 Plans: Furute Program Support		Articles: 0.405 0	0.371 0	0.132
Title: Army Watercraft Master Plan Revision Study/Development  Description: AWS Master Plan Revision  FY 2012 Plans: Master Plan Revision Study/Development		-	-	0.045
Title: WATERCRAFT MARKET SURVEYS AND BUSINESS ANALYSIS  Description: Funding is provided for the following effort  FY 2010 Accomplishments: Watercraft market surveys and business analysis  FY 2011 Plans: Continues Watercraft market surveys and business analysis		Articles: 0.304 0	0.500 0	-
Accomplishments/Planned Programs Subtotals		2.110	2.990	2.714

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> 526: <i>MARINE ORIEN LOG EQ AD</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• MA4500: <i>Modification of In-Service Equipment</i>	53.713	103.046	61.208		61.208		78.787	73.300	78.600	0.000	514.376

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

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

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT 526: MARINE ORIEN LOG EQ AD					
Management Services (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Support	SS/BA	PM Force Projection:TACOM	2.459	0.371		0.132		-		0.132	Continuing	Continuing	Continuing	
Subtotal			2.459	0.371		0.132		-		0.132				
Product Development (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
TSV - composite prototype hull design	Various	Naval Underwater Warfare Center,:Newport, R.I.	4.211	-		-		-		-	Continuing	Continuing	Continuing	
Watercraft market surveys/ business analysis	Various	Volpe, DOT:Washington, DC	0.404	0.500		-		-		-	Continuing	Continuing	Continuing	
JETA-SPOD-Vessel to Shore Bridging (VSB)	Various	ERDC,:Washington, DC	8.145	2.119		-		-		-	Continuing	Continuing	Continuing	
Force Protection	C/FFPLOE	TBD:TBD	-	-		0.461		-		0.461	0.000	0.461	0.000	
C4ISR	C/FFPLOE	TBD:TBD	-	-		0.231		-		0.231	0.000	0.231	0.000	
Master Plan Revision	C/FFPLOE	TBD:TBD	-	-		0.045		-		0.045	0.000	0.045	0.000	
LCM 8	C/FFPLOE	TBD:TBD	-	-		0.461		-		0.461	0.000	0.461	0.000	
Heavy Lift Vessel	C/FFPLOE	TBD:TBD	-	-		0.461		-		0.461	0.000	0.461	0.000	
People Pods	C/FFPLOE	TBD:TBD	-	-		0.461		-		0.461	0.000	0.461	0.000	
VSB	C/FFPLOE	TBD:TBD	-	-		0.462		-		0.462	0.000	0.462	0.000	
Subtotal			12.760	2.619		2.582		-		2.582				
Support (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
TSV - composite prototype hull design	TBD	CASCOM,:FT. Lee, VA	5.240	-		-		-		-	Continuing	Continuing	Continuing	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2012 Army</b>											<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: Logistics and Engineer Equipment - Adv Dev				<b>PROJECT</b> 526: MARINE ORIEN LOG EQ AD					
<b>Support (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
TSV/Matrix Support	TBD	TACOM CBU:Warren, MI	4.366	-		-		-		-	Continuing	Continuing	Continuing
TSV/Matrix Support	TBD	TARDEC,:Warren, MI	0.170	-		-		-		-	Continuing	Continuing	Continuing
TSV/In-house	TBD	PM Force Projection,:Warren, MI	2.190	-		-		-		-	Continuing	Continuing	Continuing
TSV-Demil	TBD	TACOM,:Warren, MI	0.424	-		-		-		-	Continuing	Continuing	Continuing
JETA-SPOD-VSB	TBD	TACOM,:Warren, MI	-	-		-		-		-	Continuing	Continuing	Continuing
<b>Subtotal</b>			12.390	-		-		-		-			
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
TSV	TBD	DTC/ ATEC:Washington, DC	1.071	-		-		-		-	Continuing	Continuing	Continuing
TSV	TBD	PM WIN-T:Ft. Monmouth, NJ	1.500	-		-		-		-	Continuing	Continuing	Continuing
<b>Subtotal</b>			2.571	-		-		-		-			
			<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			30.180	2.990		2.714		-		2.714			
<b>Remarks</b>													

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army								<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>				<b>PROJECT</b> G11: <i>ADV ELEC ENERGY CON AD</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
G11: <i>ADV ELEC ENERGY CON AD</i>	2.547	2.618	7.679	-	7.679	0.428	-	-	1.534	Continuing	Continuing
Quantity of RDT&E Articles											
<b>Note</b> Not Applicable for this item.											
<b>A. Mission Description and Budget Item Justification</b> The Mobile Electric Power (MEP) program was established by the Department of Defense to develop modernized, standard families of mobile electric power sources and power distribution systems for all Services throughout the Department of Defense. This Project Office derives concept and technology developments that will improve the performance, mobility, readiness and survivability of the next generation of tactical power sources in support of all Services. It supports initiatives that are essential to the development and fielding of modernized MEP sources from Watts to Megawatts level that comply with environmental statutes and provide noise and signature-suppressed, energy-efficient, lightweight, deployable and reliable equipment. FY12 will fund test and evaluation of technologies for Large Advanced Mobile Power Sources (LAMPS), alternative energy, and Intelligent Power Distribution Systems.											
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	
<b>Title:</b> Contract Activity  <div style="text-align: right;"><b>Articles:</b></div> <b>Description:</b> Continue development of technology supporting the Large Advanced Mobile Power Sources (LAMPS) program, the Small Tactical Electric Power (STEP) programs, Intelligent Power Management and Distribution Systems (IPMDS), and Alternative Energy Sources.*FY12 \$7.000 million add for LAMPS development should have been placed in PE 0604804A Project 194 was included under G11 by mistake,  <b>FY 2010 Accomplishments:</b> Procured various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts included a 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, and intelligent power distribution systems.  <b>FY 2011 Plans:</b> Procure various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include improved 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, and intelligent power distribution/management systems.  <b>FY 2012 Plans:</b>								0.711	0.735	6.741	
								0	0		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev	PROJECT G11: ADV ELEC ENERGY CON AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
Procure various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include small generator sets, hybrid/alternative energy power sources, and intelligent power distribution/management systems.				
<b>Title:</b> Government System Test and Evaluation  <b>Articles:</b>  <b>Description:</b> Continue development of technology supporting the Large Advanced Mobile Power Sources (LAMPS) program, the Small Tactical Electric Power (STEP) programs, Intelligent Power Management and Distribution Systems (IPMDS), and Alternative Energy Sources.  <b>FY 2010 Accomplishments:</b> Evaluated and tested various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts included evaluation of a 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, and intelligent power distribution systems.  <b>FY 2011 Plans:</b> Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include performance testing of an improved 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, and intelligent power distribution/management systems.  <b>FY 2012 Plans:</b> Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the STEP program and the Tactical Electric Power Capabilities Production Document (TEP CPD). Specific efforts will include performance testing of small generator sets, hybrid/alternative energy power sources, and intelligent power distribution/management systems.		0.180 0	0.520 0	0.180
<b>Title:</b> Other Contracts and Gov't agencies  <b>Articles:</b>  <b>Description:</b> Continue development of technology supporting the Large Advanced Mobile Power Sources (LAMPS) program, the Small Tactical Electric Power (STEP) programs, Intelligent Power Management and Distribution Systems (IPMDS), and Alternative Energy Sources.  <b>FY 2010 Accomplishments:</b>		1.338 0	1.125 0	0.506

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev	PROJECT G11: ADV ELEC ENERGY CON AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
Evaluated and tested various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts included evaluation of a 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, intelligent power distribution systems, and market surveys for 100-200 kW generators.  <b>FY 2011 Plans:</b> Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include performance testing of a 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, and intelligent power distribution/management systems.  <b>FY 2012 Plans:</b> Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Specific efforts will include performance testing of small generator sets, hybrid/alternative energy power sources, and intelligent power distribution/management systems.				
<b>Title:</b> Government Program Management  <b>Articles:</b>  <b>Description:</b> Continue development of technology supporting the Large Advanced Mobile Power Sources (LAMPS) program, the Small Tactical Electric Power (STEP) programs, Intelligent Power Management and Distribution Systems (IPMDS), and Alternative Energy Sources.  <b>FY 2010 Accomplishments:</b> Evaluated and tested various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts were aimed at resolving technology gaps to meet Army User requirements. Efforts supported the LAMPS and STEP programs and the Tactical Electric Power Capabilities Production Document (TEP CPD).  <b>FY 2011 Plans:</b> Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the STEP program and the Tactical Electric Power Capabilities Production Document (TEP CPD). Specific efforts will include performance testing of a 1 kW JP-8 fueled generator, hybrid/alternative energy power sources, and intelligent power distribution/management systems.  <b>FY 2012 Plans:</b> Evaluation and testing of various technologies related to Tactical Electric Power and power distribution/management across the DoD power spectrum. Efforts will be aimed at resolving technology gaps to meet Army User requirements. Efforts will support the STEP program and the Tactical Electric Power Capabilities Production Document (TEP CPD). Specific efforts will		0.252 0	0.238 0	0.252

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army							<b>DATE:</b> February 2011				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>			<b>PROJECT</b> G11: <i>ADV ELEC ENERGY CON AD</i>					
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>											
							<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>		
include performance testing of small generator sets, hybrid/alternative energy power sources, and intelligent power distribution/management systems.											
<b>Title:</b> Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)  <b>Description:</b> Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)  <b>FY 2010 Accomplishments:</b> Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)							<b>Articles:</b> 0.066 0	-	-		
<b>Accomplishments/Planned Programs Subtotals</b>							2.547	2.618	7.679		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0604804A: <i>Logistics and Engineer Equipment - Eng Dev 194</i>	1.354	7.166	4.199		4.199		0.238	0.022		Continuing	Continuing
• MA9800: <i>OPA 3, Generators and Associated Eq.</i>	209.012	151.052	31.897		31.897		61.950	121.118	163.704	Continuing	Continuing
<b>D. Acquisition Strategy</b>											
Complete advanced development and transition to Engineering and Manufacturing Development (EMD) phase (Milestone B) and subsequent transition to production (Milestone C).											
<b>E. Performance Metrics</b>											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT G11: ADV ELEC ENERGY CON AD					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	TBD	PM MEP:Ft. Belvoir, VA	-	0.080		0.080		-		0.080	Continuing	Continuing	Continuing
AMMPS Components	TBD	PM MEP:Ft. Belvoir, VA	-	-		-		-		-	Continuing	Continuing	Continuing
LAMP Components	TBD	PM MEP:Ft. Belvoir, VA	-	0.070		0.070		-		0.070	Continuing	Continuing	Continuing
Alternative Energy	TBD	PM MEP:Ft. Belvoir, VA	-	0.050		0.050		-		0.050	Continuing	Continuing	Continuing
Power Distribution/ Management	TBD	PM MEP:Ft. Belvoir, VA	-	0.052		0.052		-		0.052	Continuing	Continuing	Continuing
Small Business Innovative Research/Small Business Technology Transfer Programs	TBD	TBD:TBD	-	-		-		-		-	Continuing	Continuing	0.000
Subtotal			-	0.252		0.252		-		0.252			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	Various	CERDEC:Fort Belvoir, VA	-	0.200		0.100		-		0.100	Continuing	Continuing	Continuing
AMMPS Components	Various	CERDEC:Fort Belvoir, VA	-	-		-		-		-	Continuing	Continuing	Continuing
LAMPS Components	Various	CERDEC:Fort Belvoir, VA	-	0.050		6.355		-		6.355	Continuing	Continuing	Continuing
Alternative Energy	Various	NREL:Washington, DC	-	0.200		0.100		-		0.100	Continuing	Continuing	Continuing
Power Distribution/ Management	Various	Multiple Vendors:TBD	-	0.336		0.186		-		0.186	Continuing	Continuing	Continuing
Subtotal			-	0.786		6.741		-		6.741			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT G11: ADV ELEC ENERGY CON AD					
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	TBD	CERDEC:Ft. Lee, VA	-	0.200		0.050		-		0.050	Continuing	Continuing	Continuing
AMMPS Components	TBD	CERDEC:Ft. Lee, VA	-	-		-		-		-	Continuing	Continuing	Continuing
LAMPS Components	TBD	CERDEC:Ft. Lee, VA	-	0.200		0.056		-		0.056	Continuing	Continuing	Continuing
Alternative Energy	TBD	CERDEC:Ft. Lee, VA	-	0.500		0.200		-		0.200	Continuing	Continuing	Continuing
Power Distribution/ Management	TBD	CERDEC:Ft. Lee, VA	-	0.500		0.200		-		0.200	Continuing	Continuing	Continuing
Subtotal			-	1.400		0.506		-		0.506			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	TBD	CERDEC:Ft. Lee, VA	-	0.030		0.030		-		0.030	Continuing	Continuing	Continuing
AMMPS Components	TBD	CERDEC:Ft. Lee, VA	-	-		-		-		-	Continuing	Continuing	Continuing
LAMPS Components	TBD	CERDEC:Ft. Lee, VA	-	-		-		-		-	Continuing	Continuing	Continuing
Alternative Energy	TBD	CERDEC:Ft. Lee, VA	-	0.050		0.050		-		0.050	Continuing	Continuing	Continuing
Power Distribution/ Management	TBD	CERDEC:Ft. Lee, VA	-	0.100		0.100		-		0.100	Continuing	Continuing	Continuing
Subtotal			-	0.180		0.180		-		0.180			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	2.618		7.679		-		7.679			
Remarks													

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**Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> G11: <i>ADV ELEC ENERGY CON AD</i>
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	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete Proof of Principal Prototype (Comercial Components)																												
Complete Test and Evaluation-STEP																												
Transfer to Engineering and Manufacturing Development-STEP																												
Complete Proof of Principle Prototype																												
Complete Test and Evaluation-LAMPS																												
Transfer to Engineering and Manufacturing Development-LAMPS																												
Develop Proof of Principle Prototypes--AEP																												
Complete Proof of Principle Prototype (Commercial Components)--AEP																												
Complete Test and Evaluation--AEP																												
Transfer to Engineering and Manufacturing Development--AEP																												
Develop Proof of Principle Prototypes-IPD/M																												
Complete Proof of Principle Prototype (Commercial Components)-IPD/M																												
Complete Test and Evaluation-IPD/M																												
Transfer to Engineering and Manufacturing Development-IPD/M																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> G11: <i>ADV ELEC ENERGY CON AD</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Complete Proof of Principal Prototype (Comercial Components)	2	2011	2	2011
Complete Test and Evaluation-STEP	3	2011	3	2011
Transfer to Engineering and Manufacturing Development-STEP	4	2011	4	2011
Complete Proof of Principle Prototype	2	2010	2	2010
Complete Test and Evaluation-LAMPS	3	2010	3	2010
Transfer to Engineering and Manufacturing Development-LAMPS	3	2010	3	2010
Develop Proof of Principle Prototypes--AEP	1	2011	1	2011
Complete Proof of Principle Prototype (Commercial Components)--AEP	1	2012	1	2012
Complete Test and Evaluation--AEP	1	2013	1	2013
Transfer to Engineering and Manufacturing Development--AEP	3	2013	3	2013
Develop Proof of Principle Prototypes-IPD/M	1	2011	1	2011
Complete Proof of Principle Prototype (Commercial Components)-IPD/M	1	2012	1	2012
Complete Test and Evaluation-IPD/M	3	2012	3	2012
Transfer to Engineering and Manufacturing Development-IPD/M	3	2012	3	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT K39: Field Sustainment Support AD			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
K39: Field Sustainment Support AD	14.690	18.908	2.952	-	2.952	2.938	3.150	3.330	3.070	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports development of critical soldier support and sustainment systems including shelter systems (rigid and soft wall), cargo aerial delivery, field service systems, mortuary affairs equipment, heaters, camouflage systems to counter emerging enemy threat technologies, and other combat service support equipment. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. This project also supports Advanced Component Development and Prototyping of Critical Distribution Capabilities to include cargo aerial delivery systems; which provide improved safety and accuracy while increasing survivability of aircraft, personnel, and equipment. The project supports the development of tactical heater systems that support mobile Joint Service command and control, medical, and maintenance platforms. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment through aerial delivery initiatives and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2010	FY 2011	FY 2012
Title: Low Cost Aerial Delivery System (LCADS)									0.855	1.000	-
Articles:									0	0	
Description: LCADS is a modular suite of low cost, expendable parachute/container air items that can be used in lieu of current low and high velocity systems. System includes a low-cost container, high-velocity parachute (70 - 90 fps) and low-velocity parachute (less than 28.5 fps). System is compatible with United States Air Force Aircraft (USAF A/C) and aerial port handling equipment. LCADS is a proven means to execute critical resupply missions without having to place soldiers and ground vehicle convoys on the road.											
FY 2010 Accomplishments:											
Funds execution of LCADS Preplanned Product Improvement (P3I) effort to expand LCADS/Low Cost Low Altitude (LCLA) capability based upon theater feedback and CASCOM guidance. (i.e. increased LCLA weights and additional A/C certifications).											
FY 2011 Plans:											
Continues execution of LCADS P3I effort to expand LCADS/LCLA capability based upon theater feedback and CASCOM guidance. (i.e. increased LCLA weights and additional A/C certifications).											
Title: Joint Precision Airdrop System 10,000 pounds (JPADS 10K)									1.441	-	-
Articles:									0		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev	PROJECT K39: Field Sustainment Support AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
<b>Description:</b> 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 decelerator connected to an Autonomous Guided Unit (AGU) which interfaces with the USAF JPADS Mission Planner, and has a maximum gross rigged weight of 10,000 lbs.  <b>FY 2010 Accomplishments:</b> Completed JPADS 10K Design Validation (DV) testing.				
<b>Title:</b> Joint Precision Airdrop System 2,400 pounds (JPADS 2K)  <b>Articles:</b>		4.037 0	1.500 0	-
<b>Description:</b> JPADS 2K is a Precision Guided Airdrop system that autonomously navigates along a predetermined glide and flight path to accurately deliver supplies and equipment. Its two primary components, a decelerator and an Autonomous Guidance Unit (AGU), interface with the USAF JPADS mission planner and has a gross rigged weight of 2,400 lbs.  <b>FY 2010 Accomplishments:</b> Execute JPADS 2K Pre-Planned Product Improvement efforts in response to JUONS from theater.  <b>FY 2011 Plans:</b> Continues the Execution of JPADS 2K Pre-Planned Product Improvement efforts. Transition effort into systems development and demonstration.				
<b>Title:</b> Advanced Cargo Parachute Release System (ACPRS)  <b>Articles:</b>		2.752 0	2.208 0	-
<b>Description:</b> 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).  <b>FY 2010 Accomplishments:</b> Conduct ACPRS Design Validation (DV) and down-select to single contractor.  <b>FY 2011 Plans:</b> Continue the Developmental Testing (DT) and Operational Testing for ACPRS.				
<b>Title:</b> Advanced Low Velocity Airdrop System Light and Heavy (ALVADS-L or ALVADS-H)  <b>Articles:</b>		-	5.800 0	1.500

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev		PROJECT K39: Field Sustainment Support AD
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
<p><b>Description:</b> 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.</p> <p><b>FY 2011 Plans:</b> Complete ALVADS-L Design Validation (DV) testing.</p> <p><b>FY 2012 Plans:</b> Continues ALVADS-L Design Validation (DV) and initiate DT.</p>				
<p><b>Title:</b> Enhanced Containerized Delivery System (ECDS)</p> <p><b>Articles:</b></p> <p><b>Description:</b> ECDS is comprised of a platform and cargo restraint which works in conjunction with existing G-12D recovery parachutes. The system is simple in design, maintenance and operation, reusable at least twelve times, sling loadable, forkliftable, delivers loads up to 10,000 lbs gross rigged weight and incorporates provisions compatible with United States Air Force (USAF) cargo aircraft rail lock systems and Materiel Handling Equipment (MHE) currently in the field.</p> <p><b>FY 2010 Accomplishments:</b> Execute ECDS Pre-Planned Product Improvement efforts focused on expanding recovery parachute options to include G-11 recovery parachutes and a standard rigging configuration for C-130 and C-17 aircraft.</p>		0.184 0	-	-
<p><b>Title:</b> Space Heater Convective 120,000 BTU (SHC 120K)</p> <p><b>Articles:</b></p> <p><b>Description:</b> The SHC 120K is a self-powered, thermoelectric heater that operates outside the tent and provides forced hot air circulation without the need for an external power supply (i.e., field generator). The SHC 120K generates its own electrical power, without any moving parts, through the use of thermoelectric modules located inside the combustion chamber that convert waste heat into electricity. The internal generation of electrical power gives the SHC 120K the added capabilities of single switch operation, forced hot air circulation, outside the tent operation, completely automatic safety and temperature controls, built-in troubleshooting diagnostics, operation without the need for a fire guard, and significantly higher combustion efficiencies, all without the need for an external power supply. The heater burns multi-fuels and operates in extreme cold temperatures down to -60oF.</p> <p><b>FY 2010 Accomplishments:</b></p>		0.672 0	0.800 0	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army			<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>		<b>PROJECT</b> K39: <i>Field Sustainment Support AD</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
Complete system design and fabricate Engineering Manufacturing Development (EMD) test units for Developmental Testing of SHC 120K.  <b>FY 2011 Plans:</b> Conduct developmental testing and user field evaluation for SHC 120K. Prepare for transition to production and Milestone C decision.					
<b>Title:</b> Human Remains Transfer Case (HRTC)  <b>Description:</b> A replacement for the current aluminum case for transporting remains from a theater of operation to Continental United States (CONUS) that incorporates insulation and refrigeration to provide optimal temperature control and eliminate use of ice and the need for reicing enroute.  <b>FY 2010 Accomplishments:</b> Prepared Milestone B and supported development of prototypes and related documentation for next generation HRTC.  <b>FY 2011 Plans:</b> Complete Milestone B and fabricate prototypes and initiate Developmental Tests for next generation HRTC.			<b>Articles:</b> 0.800 0	1.100 0	-
<b>Title:</b> Joint Modular Intermodal Container System (JMICS)  <b>Description:</b> JMIC Program provides a standard series of durable, reusable, user friendly, easy to handle, modular containers with a standard interface that will provide an effective and efficient handling and distribution operation. JMICS can move by air, land, and sea transportation systems for unit and ship deployments and sustainment operations. The JMIC modular approach can, in some cases, replace current outer packaging for munitions and other supplies for movement in the Defense Transportation System (DTS). The JMIC will also complement the services future automated loading systems and automated handling and storage systems along with emerging capabilities such as Seabasing.  <b>FY 2010 Accomplishments:</b> Initiate program of record and obtain Milestone Decision Authority approval to enter JMIC 3.0K variant into acquisition process at Milestone C.  <b>FY 2011 Plans:</b>			<b>Articles:</b> 1.325 0	3.300 0	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev	PROJECT K39: Field Sustainment Support AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
Conduct development testing (minimal) to support MS C production decision for JMIC 3.0K variant. Obtain Milestone C decision and transition to production.				
<b>Title:</b> Modular Ballistic Protection System (MBPS)  <b>Articles:</b>  <b>Description:</b> 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.  <b>FY 2010 Accomplishments:</b> Conduct Technology Development Efforts focused on maturing MBPS technologies for transitioning to Milestone B and EMD.  <b>FY 2011 Plans:</b> Obtain Milestone B and initiate EMD effort for MBPS.		0.510 0	0.900 0	-
<b>Title:</b> Rapid Rigging and Derigging System (RRDAS)  <b>Articles:</b>  <b>Description:</b> RRDAS creates a roll-on and roll-off capability for rolling stock, reduces exposure time on the drop zone, and reduces reliance on energy-dissipating material (Honeycomb), thus reducing rigging and de-rigging time.  <b>FY 2011 Plans:</b> Obtain MS B and award competitive contracts for prototype systems for RRDAS.  <b>FY 2012 Plans:</b> Obtain MS B and award competitive contracts for prototype systems for RRDAS. Begin DV testing.		-	2.300 0	1.452
<b>Title:</b> Expeditionary Water Reclamation System  <b>Articles:</b>  <b>Description:</b> The Expeditionary Water Reclamation System is a transportable field wastewater treatment / recycling system that can be used to treat raw wastewater and convert it into potable water for reuse in the field. The effort builds upon private research and development undertaken in FY 2009.  <b>FY 2010 Accomplishments:</b> Award contract to produce a 150 gallon per hour, transportable, water reclamation system. Conduct initial user evaluation.		2.114 0	-	-
Accomplishments/Planned Programs Subtotals		14.690	18.908	2.952

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> K39: <i>Field Sustainment Support AD</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPA 3, MA7806: <i>Precision Airdrop</i>	22.230	21.402	16.207		16.207		18.160	17.450	15.807	Continuing	Continuing
• OPA 3, MA7807: <i>Containerized Delivery System</i>	5.744	6.503	6.503		6.503					0.000	18.750
• 643804 VR8: <i>Combat Service Support Systems AD</i>			2.042		2.042		1.986	2.015	2.347	Continuing	Continuing
• 654804 L39: <i>Field Sustainment Support ED</i>	4.349	5.804	4.230		4.230		2.452	2.392	2.304	Continuing	Continuing
• 654804 VR7: <i>Combat Service Support Systems</i>			2.546		2.546		1.635	1.725	1.861	Continuing	Continuing

**D. Acquisition Strategy**

Accelerate Joint Precision Aerial Delivery System (JPADS) product improvements to transition to Production.

**E. Performance Metrics**

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

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603804A: Logistics and Engineer Equipment - Adv Dev				K39: Field Sustainment Support AD					
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM Force Sustainment Sys (FSS), Natick:Natick, MA	1.954	0.945		0.202		-		0.202	Continuing	Continuing	Continuing
Project Management Support	Various	PM MEP Ft Belvoir:Ft Belvoir	0.557	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			2.511	0.945		0.202		-		0.202			
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	PM Force Sustainment Sys (FSS), Natick:Natick, MA	10.086	2.866		0.150		-		0.150	Continuing	Continuing	Continuing
Soldier Support Equipment	Various	NSC, Natick:Natick, MA	2.780	-		-		-		-	Continuing	Continuing	Continuing
Soldier Support Equipment	Various	Various:Various	6.584	-		-		-		-	Continuing	Continuing	Continuing
LCADS P3I Effort	Various	Various:Various	0.600	0.300		-		-		-	Continuing	Continuing	Continuing
JPADS 2K and 10K product improvements	Various	Various:Various	2.600	1.200		-		-		-	Continuing	Continuing	Continuing
ALVADS Development	Various	Various:Various	3.900	4.000		0.500		-		0.500	Continuing	Continuing	Continuing
RRDAS Development	Various	Various:Various	-	2.000		0.800		-		0.800	Continuing	Continuing	Continuing
Next Generation Human Remains Transfer Case Development	Various	Various:Various	0.760	0.700		-		-		-	Continuing	Continuing	Continuing
JMICS Development	Various	Various:Various	-	1.097		-		-		-	Continuing	Continuing	Continuing
Improved Environmental Control Unit (IECU)	Various	CECOM,:CECOM,	0.664	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			27.974	12.163		1.450		-		1.450			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT K39: Field Sustainment Support AD						
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Improved Environmental Control Unit (IECU)	TBD	CECOM,:Ft Belvoir, VA	0.500	-		-		-		-	0.000	0.500	0.000	
Subtotal			0.500	-		-		-		-	0.000	0.500	0.000	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Soldier Support Equipment	Various	DTC/ATC:Maryland	2.128	-		-		-		-	Continuing	Continuing	Continuing	
Helicopter External/Internal Cargo Delivery	Various	Yuma Proving Ground (YPG), AZ, AEC:Yuma Proving Ground, AZ	12.018	0.200		0.100		-		0.100	Continuing	Continuing	Continuing	
RRDAS Design Validation (DV) Testing	Various	YPG, AZ:YPG, AZ	-	-		0.300		-		0.300	Continuing	Continuing	Continuing	
ALVADS Testing Design Validation(DV)	Various	YPG, AZ:YPG, AZ	2.600	2.600		0.900		-		0.900	Continuing	Continuing	Continuing	
ECDS P3I	Various	DTC/OTC:Various	0.350	0.350		-		-		-	Continuing	Continuing	Continuing	
LCADS P3I	Various	DTC, YPG, OTC, FT Bragg:Various	1.457	1.500		-		-		-	Continuing	Continuing	Continuing	
JPADS Testing	Various	YPG:Yuma Proving Ground, AZ	0.350	0.350		-		-		-	Continuing	Continuing	Continuing	
SHC 120K Developmental Testing and User Field Evaluation	Various	ATC:Various	-	0.400		-		-		-	Continuing	Continuing	Continuing	
Human Remains Transfer Case Developmental Testing	Various	ATC:Various	-	0.400		-		-		-	Continuing	Continuing	Continuing	
IECU	Various	Various:various	0.643	-		-		-		-	Continuing	Continuing	Continuing	
Subtotal			19.546	5.800		1.300		-		1.300				

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Army							<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>			<b>PROJECT</b> K39: <i>Field Sustainment Support AD</i>			
	<b>Total Prior Years Cost</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Project Cost Totals</b>	50.531	18.908	2.952	-	2.952				
<b>Remarks</b>									

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Army			<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>		<b>PROJECT</b> K39: <i>Field Sustainment Support AD</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Conduct Developmental Testing (DT) and User Field Evaluation for SHC 120K																												
Obtain Milestone B on Advanced Low Velocity Airdrop System -Light(ALVADS-L)																												
Conduct DV on Helicopter External/Internal Cargo Delivery																												
Obtain Milestone B (MS B) on Helicopter External/Internal Cargo Delivery																												
Conduct DT/Operational Test (OT) on Helicopter External/Internal Cargo Delivery																												
Conduct MS B on Rapid Rigging Derigging Airdrop System (RRDAS)																												
Conduct DV on RRDAS																												
Conduct Milestone A (MS A) for ALVADS (H)																												
Conduct MS B for ALVADS (H)																												
Conduct DV on ALVADS (H)																												
Conduct Milestone B for Next Generation Human Remains Transfer Case																												
Conduct DT for Next Generation Human Remains Transfer Case																												
Obtain Milestone C for Joint Modular Intermodal Container (JMIC) 3.0K																												
Conduct DT on JMIC 3.0K variant																												
Conduct DV for ALVADS (L)																												
Conduct DT for ACPRS																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army																DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE								PROJECT			
2040: Research, Development, Test & Evaluation, Army								PE 0603804A: Logistics and Engineer								K39: Field Sustainment Support AD			
BA 4: Advanced Component Development & Prototypes (ACD&P)								Equipment - Adv Dev											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> K39: <i>Field Sustainment Support AD</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Conduct Developmental Testing (DT) and User Field Evaluation for SHC 120K	4	2010	1	2011
Obtain Milestone B on Advanced Low Velocity Airdrop System -Light(ALVADS-L)	2	2011	2	2011
Conduct DV on Helicopter External/Internal Cargo Delivery	4	2014	3	2015
Obtain Milestone B (MS B) on Helicopter External/Internal Cargo Delivery	2	2014	2	2014
Conduct DT/Operational Test (OT) on Helicopter External/Internal Cargo Delivery	2	2016	4	2016
Conduct MS B on Rapid Rigging Derigging Airdrop System (RRDAS)	3	2012	3	2012
Conduct DV on RRDAS	3	2012	3	2014
Conduct Milestone A (MS A) for ALVADS (H)	4	2013	4	2013
Conduct MS B for ALVADS (H)	2	2015	2	2015
Conduct DV on ALVADS (H)	4	2015	3	2016
Conduct Milestone B for Next Generation Human Remains Transfer Case	2	2011	2	2011
Conduct DT for Next Generation Human Remains Transfer Case	3	2011	4	2011
Obtain Milestone C for Joint Modular Intermodal Container (JMIC) 3.0K	3	2011	3	2011
Conduct DT on JMIC 3.0K variant	1	2011	2	2011
Conduct DV for ALVADS (L)	2	2011	3	2012
Conduct DT for ACPRS	4	2010	2	2011
Conduct Technology Development Effort for MBPS	1	2010	2	2011
Obtain Milestone B for MBPS	3	2011	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT K41: WATER AND PETROLEUM DISTRIBUTION - AD			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
K41: WATER AND PETROLEUM DISTRIBUTION - AD	3.097	2.586	4.122	-	4.122	2.677	2.785	2.894	2.937	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project develops and demonstrates the potential of prototype equipment and technologies to satisfy petroleum storage, distribution, and quality surveillance system requirements. The Concept and Technology Development program supports the development and enhancement of rapidly deployable Petroleum and Water equipment. The mission includes developing onboard fuels quality analysis systems; achieving greater capabilities in the removal of Nuclear, Biological, Chemical (NBC) and other contaminants from water sources; reducing the logistics foot print; developing water reutilization systems to reduce the requirement for transport of water into the theater; and material systems to decrease the logistics foot print and employment time for the transfer of liquid logistics in the theater. The Army fights with clean fuel and drinking water. This vital equipment enables the Army to achieve its transformation vision by providing the Army with the means to be highly mobile and self-sustaining in very hostile theaters of operations. Future Force operations demand that combat systems be rapidly deployable to the theater, rapidly emplaced upon arrival, and rapidly relocated to support a fast moving non-linear battlefield.

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

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> Continue improvements.  <b>Articles:</b>  <b>Description:</b> Funding is provided for the following effort  <b>FY 2010 Accomplishments:</b> Continue improvements for the Load Handling System Water Tank Rack (Hippo), Lightweight Water Purifier (LWP) and Tactical Water Purification System (TWPS). In FY10 conduct a market investigation for devices to automatically dose and control chlorine levels in water tankers and evaluate potential candidates for performance and suitability for military environment. Evaluate improved reverse osmosis elements and media for removal of arsenic from water.	1.667 0	-	-
<b>Title:</b> Complete evaluations and begin preparing new performance based descriptions.  <b>Articles:</b>  <b>Description:</b> Funding is provided for the following effort  <b>FY 2010 Accomplishments:</b>	0.440 0	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev	PROJECT K41: WATER AND PETROLEUM DISTRIBUTION - AD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
Complete evaluations and begin preparing new performance based descriptions for automatic tank gauging, metering devices and portable berms.				
<b>Title:</b> Initiate effort to develop a mobile Water Packaging System.  <b>Articles:</b>  <b>Description:</b> Funding is provided for the following effort  <b>FY 2010 Accomplishments:</b> Perform Market Investigation and support demonstration of a mobile packaging system in the Area of Resistance (AOR). Perform evaluation of commercial water bottling and bagging technologies.  <b>FY 2012 Plans:</b> Initiate effort to develop a mobile Water Packaging System. Conduct market surveys, prepare program documentation and develop Request for Proposal (RFP).		0.550 0	-	1.350
<b>Title:</b> Develop in-line water monitoring equipment and improved hand-held water monitors .  <b>Articles:</b>  <b>Description:</b> Funding is provided for the following effort  <b>FY 2010 Accomplishments:</b> Develop in-line water monitoring equipment and improved hand-held water monitors for use on the Tactical Water Purification System (TWPS), Lightweight Water Purifier (LWP) and Reverse Osmosis Water Purification Units (ROWPUs).		0.440 0	-	-
<b>Title:</b> Initiate effort to develop a bulk water purification system  <b>Articles:</b>  <b>Description:</b> Funding is provided for the following effort  <b>FY 2011 Plans:</b> Initiate effort to develop a bulk water purification system. Conduct market surveys, prepare program documents and develop Request For Proposals (RFPs).  <b>FY 2012 Plans:</b> Continue development of a bulk water purification system.		-	0.461 0	1.372
<b>Title:</b> Improvements for Family of Fuel System Supply Points (FSSPs)  <b>Articles:</b>		-	1.425 0	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army							DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)			R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev			PROJECT K41: WATER AND PETROLEUM DISTRIBUTION - AD					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012		
Description: Funding is provided for the following effort											
FY 2011 Plans: Continue Fuel Systems improvements for Family of Fuel System Supply Points (FSSPs).											
Title: Water monitoring equipment.							-	0.700	-		
Articles:								0			
Description: Funding is provided for the following effort											
FY 2011 Plans: development of in-line water monitoring equipment and hand-held water monitors for use on the Tactical Water Purification Systems (TWPS), Lightweight Water Purifier (LWP) and Reverse Osmosis Water Purification Unit (ROWPU).											
Title: Fuel System Supply Points (FSSPs)							-	-	0.800		
Description: Funding is provided for the following effort											
FY 2012 Plans: Develop prototype mid-term fuel storage container for use in bulk Fuel System Supply Points (FSSPs). Test prototype automated tank gauging for collapsible fabric tanks in FSSPs.											
Title: Versatile Tank and Pump Unit (VTPU)							-	-	0.600		
Description: Funding is provided for the following effort											
FY 2012 Plans: Product development of the Versatile Tank and Pump Unit (VTPU). Down select components and begin subassemble.											
Accomplishments/Planned Programs Subtotals							3.097	2.586	4.122		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• Logistics and Engineering Equipment: Logistics and Engineer Equipment - Engineering Development	2.405	2.734	1.957		1.957		3.749	3.771	3.804	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army									DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT K41: WATER AND PETROLEUM DISTRIBUTION - AD				
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
• Water Purification Systems: Water Purification Systems	10.168	15.683	3.539		3.539		4.643			Continuing	Continuing	
• Distribution Systems, Petroleum & W: Distribution Systems, Petroleum & Water	142.309	230.174	58.962		58.962		33.850	22.575		Continuing	Continuing	
D. Acquisition Strategy												
C. Develop engineering prototypes or select Non-Developmental Item based on market surveys and proposals from industry. Competitive; sole source contract.												
E. Performance Metrics												
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT K41: WATER AND PETROLEUM DISTRIBUTION - AD					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	Various	TBD:TBD	0.408	-		-		-		-	Continuing	Continuing	Continuing
Water Purification Components Improvements	Various	TARDEC:Warren, MI	0.458	-		-		-		-	Continuing	Continuing	Continuing
Water Purification Components Improvements	Various	MTC:Warren, MI	0.150	-		-		-		-	Continuing	Continuing	0.000
Water Purification Components Improvements	Various	NFESC:Port Hueneme, CA	0.301	-		-		-		-	Continuing	Continuing	0.000
Bulk Water Treatment System	Various	TARDEC:Warren, MI	-	0.050		0.168		-		0.168	Continuing	Continuing	Continuing
Water Quality Monitoring	Various	TARDEC:Warren, MI	-	0.150		-		-		-	Continuing	Continuing	Continuing
Bulk Water Treatment System	Various	NFESC:Port Hueneme, CA	-	0.336		0.100		-		0.100	Continuing	Continuing	Continuing
Packaged Water System (EWPS)	Various	TARDEC:Warren,MI	-	-		0.100		-		0.100	Continuing	Continuing	Continuing
Advanced Petroleum Test Kit	Various	TARDEC,:Warren, MI	0.829	-		-		-		-	Continuing	Continuing	Continuing
Packaged Water System (EWPS)	Various	NFESC:Port Hueneme,CA	-	-		0.250		-		0.250	Continuing	Continuing	Continuing
Advanced Petroleum Test Kit	Various	Micron Optical Incorporated:TBD	0.025	-		-		-		-	Continuing	Continuing	Continuing
Advanced Petroleum Test Kit	Various	NAV AIR,:TBD	0.084	-		-		-		-	Continuing	Continuing	Continuing
Petroleum Quality Analysis System Enhanced	Various	TARDEC:TARDEC Warren, MI	0.155	-		-		-		-	Continuing	Continuing	Continuing
Petroleum Quality Analysis System Enhanced	Various	Rock Island Arsenal:Rock Island, IL	0.877	-		-		-		-	Continuing	Continuing	Continuing
Fuel Systems Components Improvements	Various	TARDEC:Warren, MI	0.301	0.200		-		-		-	Continuing	Continuing	Continuing
Petroleum Qulaity Analysis System Enhanced	Various	TARDEC:Warren, MI	0.155	-		-		-		-	Continuing	Continuing	0.000
Fuel Gauging Improvements	Various	TBD:TBD	0.150	-		0.300		-		0.300	Continuing	Continuing	Continuing
Future Fuel Storage System	Various	TBD:TBD	-	0.550		-		-		-	Continuing	Continuing	Continuing
Bulk Fuel Distribution	Various	TBD:TBD	-	0.600		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603804A: Logistics and Engineer Equipment - Adv Dev				K41: WATER AND PETROLEUM DISTRIBUTION - AD					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Expeditionary Water Packaging System (EWPS)	C/CPFF	TARDEC:Warren, MI	-	-		1.000		-		1.000	Continuing	Continuing	Continuing
Bulk Water Treatment	C/CPFF	TARDEC:TARDEC Warren, MI	-	-		1.104		-		1.104	Continuing	Continuing	Continuing
Versatile Tank and Pump Unit (VTPU)	Various	TARDEC:Warren, MI	-	-		0.600		-		0.600	Continuing	Continuing	0.000
Subtotal			3.893	1.886		3.622		-		3.622			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	Various	TARDEC:Warren, MI	0.753	-		-		-		-	Continuing	Continuing	Continuing
Water Quality Monitoring	Various	TARDEC:Warren, MI	-	0.150		-		-		-	Continuing	Continuing	Continuing
Bulk Water Treatment System	Various	TARDEC:Warren, MI	-	0.150		-		-		-	Continuing	Continuing	Continuing
Advanced Petroleum Test Kit (PTK)	Various	TARDEC:Warren, MI	0.110	-		-		-		-	Continuing	Continuing	Continuing
Packaged Water System	Various	TARDEC:Warren, MI	-	-		-		-		-	0.150	0.150	Continuing
Fuel Systems Components Improvements	Various	TARDEC:Warren, MI	0.050	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.913	0.300		-		-		-			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	Various	TARDEC:Warren, MI	0.639	-		-		-		-	Continuing	Continuing	Continuing
Water Purification Components Improvements	Various	Aberdeen Proving Ground:Aberdeen, MD	-	-		-		-		-	0.200	0.200	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Army											<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>				<b>PROJECT</b> K41: <i>WATER AND PETROLEUM DISTRIBUTION - AD</i>						
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>				
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
Water Purification Components Improvements	Various	NFESC:Warren, MI	0.305	-		-		-		-	Continuing	Continuing	Continuing	
Water Quality Monitoring	Various	TARDEC:Warren, MI	-	0.100		-		-		-	Continuing	Continuing	Continuing	
Advanced Petroleum Test Kit (PTK)	Various	TARDEC,:Warren, MI	0.562	-		-		-		-	Continuing	Continuing	Continuing	
Water Quality Monitoring	Various	Aberdeen Proving Ground,MD:APG, MD	-	0.300		-		-		-	Continuing	Continuing	Continuing	
Fuel Pumping Assembly Improvements	Various	TARDEC:Warren, MI	0.100	-		0.500		-		0.500	Continuing	Continuing	Continuing	
Fuel Systems Components Improvements	Various	Yuma Proving Ground:YPG, AZ	0.209	-		-		-		-	Continuing	Continuing	Continuing	
Unit Water Pod (Camel)	Various	Yuma Proving Ground:YPG, AZ	2.049	-		-		-		-	Continuing	Continuing	Continuing	
<b>Subtotal</b>			3.864	0.400		0.500		-		0.500				
			<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Project Cost Totals</b>			8.670	2.586		4.122		-		4.122				
<b>Remarks</b>														

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Army			<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>		<b>PROJECT</b> K41: <i>WATER AND PETROLEUM DISTRIBUTION - AD</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Improvements for Hardware for the LWP/ TWPS/HIPPO																												
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test																												
Improvements for Family of Fuel System Supply Points (FSSPs)																												
Bulk Water Treatment and System																												
Camel II Operational Testing																												
Water Packaging System																												
Automated Fuels Management System																												
Future Fuels Storage Systems																												
Versatile Tank and Pump Unit																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> K41: <i>WATER AND PETROLEUM DISTRIBUTION - AD</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Improvements for Hardware for the LWP/TWPS/HIPPO	3	2010	4	2011
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test	4	2012	3	2013
Improvements for Family of Fuel System Supply Points (FSSPs)	4	2010	3	2013
Bulk Water Treatment and System	4	2011	3	2015
Camel II Operational Testing	1	2013	1	2013
Water Packaging System	3	2011	2	2014
Automated Fuels Management System	4	2013	3	2014
Future Fuels Storage Systems	4	2013	3	2016
Versatile Tank and Pump Unit	3	2011	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT K42: MATERIEL SUSTAINMENT SUPPORT AD			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
K42: MATERIEL SUSTAINMENT SUPPORT AD	2.835	0.463	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports Advanced Component Development and Prototypes of new and reformulated paints, paint removers, cleaners and other surface coating materials and processes for weapon systems production and maintenance operations. The project increases operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across the Army. Materials and processes demonstrated under this project are inherently compliant with all applicable National Emissions Standards for Hazardous Air Pollutants that regulate surface coating activities, thereby eliminating the need for Army installations to incur hundreds of millions of dollars in expenses to purchase, install and operate air pollution control devices. This project transitions advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025). The project tests and evaluates Sustainable Painting Operations for the Total Army (SPOTA) at facilities that produce and maintain Combat Support/Combat Service Support systems, Ground Combat Vehicles and other Army equipment. The project expedites technology transition from the laboratory to operational use by demonstrating the capabilities of new materials and processes to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals and other technical data. Test and evaluation activities are executed by Research, Development and Engineering Command (RDECOM) centers and laboratories in cooperation with the affected Life Cycle Management Commands, Program Executive Offices and Program Managers. Materials are being demonstrated at ten different Army facilities in order to minimize the disruption of materiel maintenance operations at any one facility.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012	
Title: Chemical Agent Resistant Coatings (CARC) and Non-CARC Paints  Articles:  Description: Qualify, validate and approve reformulated CARC systems and other non-CARC paints and surface coatings.  FY 2010 Accomplishments: Completed qualification testing for improved CARC products and populated qualified products database.  FY 2011 Plans: Validate and approve non-chromate, low volatile organic compound pretreatments.								1.717	0.251	-	
								0	0		
Title: Solvents, Thinners and Cleaners  Articles:  Description: Qualify, validate and approve hazardous air pollutant (HAP)-free solvents, thinners and cleaners.								0.205	0.120	-	
								0	0		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army			<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>		<b>PROJECT</b> K42: <i>MATERIEL SUSTAINMENT SUPPORT AD</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b><i>FY 2010 Accomplishments:</i></b> Issued and coordinated draft of new joint, HAP-free cleaning specification to encompass all successfully demonstrated products.					
<b><i>FY 2011 Plans:</i></b> Implement alternative products in approved applications.					
<b><i>Title:</i></b> Depainting			0.446	0.071	-
<b><i>Articles:</i></b>			0	0	
<b><i>Description:</i></b> Qualify, validate and approve chemical paint removers containing no methylene chloride or other HAPs.					
<b><i>FY 2010 Accomplishments:</i></b> Down selected and demonstrated alternative products in remaining vat depainting applications utilizing methylene chloride.					
<b><i>FY 2011 Plans:</i></b> Approve and implement alternative products for all ground vehicle depainting vats.					
<b><i>Title:</i></b> Sealants and Adhesives			0.467	0.021	-
<b><i>Articles:</i></b>			0	0	
<b><i>Description:</i></b> Qualify, validate and approve reformulated sealants and adhesives for high-use applications.					
<b><i>FY 2010 Accomplishments:</i></b> Demonstrated HAP-free adhesives for communications / electronics applications and completed first article testing for low HAP rubber-to-metal bonding products.					
<b><i>FY 2011 Plans:</i></b> Approve and implement all demonstrated alternative adhesives and sealants.					
<b>Accomplishments/Planned Programs Subtotals</b>			2.835	0.463	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> K42: <i>MATERIEL SUSTAINMENT SUPPORT AD</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
•.: <i>Environmental Quality Technology Mgmt Support (06I)</i>	0.265	0.042								0.000	0.307

**D. Acquisition Strategy**

The project transitions demonstrated technology directly into the Army supply system by having National Stock Numbers assigned/reassigned and immediately made available for procurement by the Defense Logistics Agency and the General Services Administration. As acquisition managers approve the new materials and processes for use on their systems, technical writers are specifying them in the appropriate technical publications. The project is managed by the Environmental Acquisition and Logistics Sustainment Program Director at the Headquarters, U.S. Army Research Development and Engineering Command (RDECOM).

**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-2A, RDT&E Project Justification: PB 2012 Army									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603804A: Logistics and Engineer Equipment - Adv Dev				L04: JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L04: JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD	30.874	52.925	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

Joint Light Tactical Vehicles (JLTV): Funding supports the development and testing of the JLTV Family of Vehicles (FoV), which is being developed as a joint and international system between the Army and Marine Corps, and the Australian Army, participating under a Project Arrangement. The JLTV goal is a FoV with companion trailers capable of performing multiple mission roles that will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full Range of Military Operations (RoMO). JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency and other means; and maintaining effective competition throughout the lifecycle. The JLTV FoV includes ten (10) sub-configurations (and companion trailers) in three payload categories. Commonality of components, maintenance procedures, training, etc., between vehicles and trailers is expected to be inherent in FoV solutions within and across Payload Categories to minimize FoV total ownership cost. Unique service requirements have been minimized.

FY10, major budget activities supported completion of ballistic hull testing, vehicle performance testing, user evaluations, reliability testing and prototype live fire evaluations.

During FY11, funds complete the Technology Development phase testing and test report submissions and the initiation of Engineering and Manufacturing Development (EMD) phase. As the program progresses towards EMD, major budget activities will support staffing of the Capabilities Development Document, MS B document preparation, source selection evaluation activities and MS B decision.

RDT&E funding will be provided under a new Program Element - 0604804A, Project L50 for FY12 and out years.

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

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> JLTV Program Management	4.643	-	-
<b>Articles:</b>	0		
<b>Description:</b> Funding is provided for the following effort			
<b>FY 2010 Accomplishments:</b> For salaries, in-house, etc.			
<b>Title:</b> JLTV Variant Prototype Contract Design, Development and Fabrication	17.125	-	-
<b>Articles:</b>	0		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: Logistics and Engineer Equipment - Adv Dev		<b>PROJECT</b> L04: JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Description:</b> Funding is provided for the following effort  <b>FY 2010 Accomplishments:</b> For contract development and design					
<b>Title:</b> JLTV Developmental Test and Evaluation  <b>Description:</b> Funding is provided for the following effort  <b>FY 2010 Accomplishments:</b> For test support			9.106 0	-	-
<b>Title:</b> Program Management  <b>Description:</b> Funding is provided for the following effort  <b>FY 2011 Plans:</b> For salaries, in-house, etc.			-	5.100 0	-
<b>Title:</b> JLTV Variant Prototype Contract Design, Development and Fabrication  <b>Description:</b> Funding is provided for the following effort  <b>FY 2011 Plans:</b> For contract design and development			-	43.425 0	-
<b>Title:</b> JLTV Developmental Test and Evaluation  <b>Description:</b> Funding is provided for the following effort  <b>FY 2011 Plans:</b> For test support			-	4.400 0	-
<b>Accomplishments/Planned Programs Subtotals</b>			30.874	52.925	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> L04: <i>JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0604804A: <i>Joint Light Tactical Vehicles (JLTV), 0604804A, Army RDTE Project L50</i>			162.006		162.006		52.049	52.488	52.863	0.000	372.660
• D15603: <i>Joint Light Tactical Vehicles (JLTV), D15603, Army OPA 1</i>							592.644	4.182	921.550	1,188.365	2,894.548
• 0603635M: <i>Marine Corps Ground Combat/Support Systems, 0603635M, RDTE Project 3209</i>	52.991	31.762	71.847		71.847		34.645	20.043	31.777	0.000	372.028
• 0206221M: <i>Marine Corps Ground Combat/Support Systems, 0206221M, Production 5095</i>							14.765	147.754	236.941	0.000	399.460

## D. Acquisition Strategy

The JLTV Acquisition Strategy for the Technology Demonstration (TD) phase, FY08-11, is to competitively award multiple contracts. During this phase, the contractors will be required to design the JLTV Family of Vehicles (FoV) to the Preliminary Design Review level and fabricate and test selected prototypes and trailers for payload Categories A, B, and C. The TD phase contracts were awarded on October 29, 2008 under the full and open competition process to BAE Systems Land & Armament Systems-Ground Systems Division; General Tactical Vehicles (A Joint Venture of General Dynamics Land Systems, Inc. and AM General, LLC); and Lockheed Martin Systems Integration. The fabricated prototypes will undergo developmental testing, as well as limited user assessments, in a relevant environment at Government test facilities. The addition of Australian prototypes to the program will further reduce the risk. The goal is to ensure the family of prototypes is mature in terms of supporting technologies and full system integration for MS B approval and entry into Engineering and Manufacturing Development (EMD) phase.

The program transitions from TD phase to EMD phase in the fourth quarter of FY11. During the EMD phase, FY11-15, two full and open competition contracts will be awarded to design, fabricate and test the full range of sub-configurations in sufficient quantities to validate all Capability Development Document requirements. International participation will be offered during this phase. Technology Readiness Level (TRL) 6 or higher is required. The fabricated prototypes will undergo Developmental Test, Reliability, Availability, Maintainability (RAM) testing, Limited User Test and Live Fire Testing. Funding will be provided under a new Program Element - 0604804A, Project L50 for FY12 and out years.

## E. Performance Metrics

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

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603804A: Logistics and Engineer Equipment - Adv Dev				L04: JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV Technology Demonstration	C/CPAF	BAE Systems:Santa Clara, CA	32.998	-		-		-		-	Continuing	Continuing	Continuing
JLTV Technology Deomnstration	C/CPFF	General Tactical Vehicles:Sterling Heights, MI	37.567	-		-		-		-	Continuing	Continuing	Continuing
JLTV Technology Demonstration	C/CPFF	Lockheed Martin:Owego, NY	28.684	-		-		-		-	Continuing	Continuing	0.000
JLTV Systems Engineering Design & Development / GFE	Various	TBD:Various	2.292	-		-		-		-	Continuing	Continuing	Continuing
JLTV Engineering & Manufacturing Development Contract/GFE	Various	TBD:Various	-	15.175		-		-		-	Continuing	Continuing	Continuing
JLTV Source Selection and Ballistic Hulls to support the evaluation process	Various	TBD:Various	-	21.400		-		-		-	Continuing	Continuing	Continuing
JLTV Program Management	Various	TACOM:Warren, MI	8.263	5.100		-		-		-	Continuing	Continuing	Continuing
Subtotal			109.804	41.675		-		-		-			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV Variant Prototype Design	Various	TACOM:Warren, MI	2.750	2.950		-		-		-	Continuing	Continuing	Continuing
JLTV Variant Prototype Design	Various	TARDEC:Warren, MI	5.078	2.500		-		-		-	Continuing	Continuing	Continuing
JLTV Variant Prototype Design	Various	Defense Technical Information Center,:Ft. Belvoir, VA	2.272	0.700		-		-		-	Continuing	Continuing	Continuing
JLTV Variant Prototype Design	Various	Other Government Agencies:Various	1.603	0.500		-		-		-	Continuing	Continuing	Continuing
Subtotal			11.703	6.650		-		-		-			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT L04: JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD					
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV Developmental Test and Evaluation Support Costs	C/BOA	TBD:Various	1.526	0.515		-		-		-	Continuing	Continuing	Continuing
JLTV Developmental Test and Evaluation	C/BOA	APG/ATC:Aberdeen, MD	3.942	3.785		-		-		-	Continuing	Continuing	Continuing
JLTV Developmental Test and Evaluation	C/BOA	YPG:Yuma, AZ	-	0.300		-		-		-	Continuing	Continuing	Continuing
Subtotal			5.468	4.600		-		-		-			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			126.975	52.925		-		-		-			
Remarks													

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Army			<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>		<b>PROJECT</b> L04: <i>JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD</i>	

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CDD Army, Marine Corps and Joint Req Oversight Staffing																												
CDD Joint Req Oversight Com																												
Source Selection Board																												
MS B (Eng & Man Development)																												
EMD Contract Award																												
EMD Design and Fabrication																												
EMD Test and Validation / Report																												
MS C (Production & Deployment)																												
LRIP Contract Award																												

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2012 Army

**DATE:** February 2011

## APPROPRIATION/BUDGET ACTIVITY

2040: *Research, Development, Test & Evaluation, Army*  
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

## R-1 ITEM NOMENCLATURE

PE 0603804A: *Logistics and Engineer Equipment - Adv Dev*

## PROJECT

L04: *JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD*

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CDD Army, Marine Corps and Joint Req Oversight Staffing	4	2010	2	2011
CDD Joint Req Oversight Com	2	2011	2	2011
Source Selection Board	2	2011	4	2011
MS B (Eng & Man Development)	3	2011	3	2011
EMD Contract Award	1	2012	1	2012
EMD Design and Fabrication	1	2012	1	2015
EMD Test and Validation / Report	3	2013	2	2015
MS C (Production & Deployment)	3	2015	3	2015
LRIP Contract Award	1	2016	1	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT VR8: COMBAT SERVICE SUPPORT SYSTEMS - AD			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
VR8: COMBAT SERVICE SUPPORT SYSTEMS - AD	-	-	2.042	-	2.042	2.001	1.986	2.015	2.347	0.000	10.391
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project supports development of critical soldier support and sustainment systems including shelter systems (rigid and soft wall), base camp subsystems, field service systems, mortuary affairs equipment, heaters, camouflage systems to counter emerging enemy threat technologies, and other combat service support equipment. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. This project supports Advanced Component Development and Prototyping of Critical tactical support systems that support mobile Joint Service command and control, medical, and maintenance platforms. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular 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) demands in lift, combat zone footprint, and costs for logistical support.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> Zero-Footprint Base Camp	-	-	0.981
<b>Description:</b> Zero-Footprint Base Camp reduces the 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.			
<b>FY 2012 Plans:</b> Conduct Delopmental Testing and Operational Testing (DT/OT) on Zero-Footprint Base Camp capabilities for Joint base camp systems in support of the Office of Secretary of Defense (OSD) Joint Expeditionary Basing Work Group initiative			
<b>Title:</b> Net-Zero Energy Efficiency Solutions	-	-	0.461
<b>Description:</b> Net-Zero Energy Efficiency Solutions reduce the 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.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army							<b>DATE:</b> February 2011				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>			<b>PROJECT</b> VR8: <i>COMBAT SERVICE SUPPORT SYSTEMS - AD</i>					
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>		
<b>FY 2012 Plans:</b> Conduct evaluation on Net-Zero energy efficiency solutions for Force Provider											
<b>Title:</b> Modular Ballistic Protection System (MBPS)  <b>Description:</b> 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.  <b>FY 2012 Plans:</b> Conduct Developmental Testing (DT) on Modular Ballistic Protection System (MBPS).							-	-	0.600		
<b>Accomplishments/Planned Programs Subtotals</b>							-	-	2.042		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 643804 K39: <i>Field Sustainment Support AD</i>	15.911	18.908	3.200		3.200		3.290	3.397	3.140	Continuing	Continuing
• 654804 L39: <i>Field Sustainment Support ED</i>	4.503	5.804	4.245		4.245		2.472	2.431	2.355	Continuing	Continuing
• 654804 VR7: <i>Combat Service Support Systems</i>			2.554		2.554		1.648	1.753	1.900	Continuing	Continuing
• M80200: <i>Force Provider</i>		41.539	6.228		6.228		0.060			0.000	47.827
<b>D. Acquisition Strategy</b> Accelerate Base Camp efficiency and safety initiaives to incorporate in deployed camps and/or incorporate during reset of equipment.											
<b>E. Performance Metrics</b> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603804A: Logistics and Engineer Equipment - Adv Dev				PROJECT VR8: COMBAT SERVICE SUPPORT SYSTEMS - AD						
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Project Management Support	Various	PM Force Sustainment Systems:Natick, MA	-	-		0.203		-		0.203	Continuing	Continuing	0.000	
Subtotal			-	-		0.203		-		0.203			0.000	
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Soldier Support Equipment	Various	Various:Various	-	-		0.939		-		0.939	Continuing	Continuing	0.000	
Subtotal			-	-		0.939		-		0.939			0.000	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Soldier Support Equipment	Various	Various:Various	-	-		0.900		-		0.900	Continuing	Continuing	0.000	
Subtotal			-	-		0.900		-		0.900			0.000	
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			-	-		2.042		-		2.042			0.000	
Remarks														

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**Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> VR8: <i>COMBAT SERVICE SUPPORT SYSTEMS - AD</i>
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	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Conduct evaluation on Net-Zero energy efficiency solutions																												
Conduct DT/OT on Zero-Footprint Base Camp capabilities for Joint Base Camps																												
Conduct DT on Modular Ballistic Protection System (MBPS)																												
Obtain Milestone B on Mobile Integrated Shop Shelter System																												
Conduct DT/OT on Mobile Integrated Shop Shelter System																												
Obtain MS B on SoS Base Camp Efficiency & Environ (E2) project																												
Conduct DT on SoS Base Camp Efficiency & Environ(E2) project																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Army			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603804A: <i>Logistics and Engineer Equipment - Adv Dev</i>	<b>PROJECT</b> VR8: <i>COMBAT SERVICE SUPPORT SYSTEMS - AD</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct evaluation on Net-Zero energy efficiency solutions	4	2011	3	2012
Conduct DT/OT on Zero-Footprint Base Camp capabilities for Joint Base Camps	4	2011	3	2013
Conduct DT on Modular Ballistic Protection System (MBPS)	4	2011	2	2012
Obtain Milestone B on Mobile Integrated Shop Shelter System	1	2013	1	2013
Conduct DT/OT on Mobile Integrated Shop Shelter System	4	2013	3	2014
Obtain MS B on SoS Base Camp Efficiency & Environ (E2) project	1	2014	1	2014
Conduct DT on SoS Base Camp Efficiency & Environ(E2) project	4	2014	1	2016

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