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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	29.884	37.023	41.039	0.000	41.039	39.905	36.634	31.041	31.351	Continuing	Continuing
194: ENGINE DRIVEN GEN ED	6.190	1.383	7.166	0.000	7.166	4.214	1.605	1.551	1.581	Continuing	Continuing
H01: COMBAT ENGINEER EQ ED	3.169	8.451	7.044	0.000	7.044	8.349	8.049	4.971	4.956	Continuing	Continuing
H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	4.393	9.733	8.741	0.000	8.741	10.350	10.090	10.575	10.560	Continuing	Continuing
H14: MATERIALS HANDLING EQUIPMENT - ED	0.441	1.692	0.955	0.000	0.955	1.060	1.197	1.218	1.237	Continuing	Continuing
L39: Field Sustainment Support ED	2.024	4.503	5.804	0.000	5.804	6.799	4.261	4.120	4.184	Continuing	Continuing
L41: WATER AND PETROLEUM DISTRIBUTION - ED	5.699	2.490	2.734	0.000	2.734	2.104	3.974	3.844	3.904	Continuing	Continuing
L42: CAMOUFLAGE SYSTEM ED	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
L43: ENGINEER SUPPORT EQUIPMENT - ED	0.499	0.973	0.874	0.000	0.874	3.533	3.790	3.060	3.142	Continuing	Continuing
L46: Maintenance Support Equipment	1.465	3.249	3.178	0.000	3.178	3.177	3.668	1.702	1.787	Continuing	Continuing
L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED	5.765	4.549	4.543	0.000	4.543	0.319	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.											

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army				DATE: February 2010	
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B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	38.391	36.018	35.992	0.000	35.992
Current President's Budget	29.884	37.023	41.039	0.000	41.039
Total Adjustments	-8.507	1.005	5.047	0.000	5.047
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.195			
• Congressional Adds		1.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-8.254	0.000			
• SBIR/STTR Transfer	-1.053	0.000			
• Adjustments to Budget Years	0.000	0.000	5.047	0.000	5.047
Change Summary Explanation					
Change Summary Explanation: Funding - FY 2011: Accelerate product development for Field Sustainment Support.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
194: <i>ENGINE DRIVEN GEN ED</i>	6.190	1.383	7.166	0.000	7.166	4.214	1.605	1.551	1.581	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification <p>This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY10 will fund completion of DT/OT for AMMPS in preparation for MSC. FY11 will fund the performance specification preparation and will award two Phase I contracts for Large Advanced Mobile Power Sources (LAMPS). Proof of principle to support milestone B in FY12 for Small Tacticle Electrical Power (STEP).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09: Complete AMMPS pre-production test sets. Continue engineering and logistics data deliverables. Begin Developmental Testing. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							6.190	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 FY10: Complete DT Operational Test (OT) for AMMPS. Complete Documentation for Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g.,TM's, sustainment test, fielding plans. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	1.344	0.000	0.000	0.000
Program #3 FY10-FY11: LAMPS Prepare performance Spec. Begin PHASE I SDD. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.000	0.000	6.000	0.000	6.000

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #4 FY11: STEP Prepare performance specification begin Phase I of SDD. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO				0.000	0.000	1.166	0.000	1.166
Program #5 Small Business Innovative Research/Small Business Technology Transfer Program FY 2009 Accomplishments: FY 2009				0.000	0.039	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>					
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						6.190	1.383	7.166	0.000	7.166	
<u>C. Other Program Funding Summary (\$ in Millions)</u>											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>0603804A - Logistics and Engineer Equipment - Adv Dev G11</i>	3.346	2.636	2.632	0.000	2.632	1.338	0.464	0.653	0.654	Continuing	Continuing
• Ord. #2: <i>OPA3, MA9800, Generators and Associated Equipment</i>	240.609	212.600	113.573	37.479	151.052	127.919	18.080	10.625	10.778	Continuing	Continuing
<u>D. Acquisition Strategy</u>											
Perform Developmental Testing (DT)/Operational Testing (OT) for the AMMPS family; perform phase II contract award through a down select. Developmental test and evaluation of technologies that transition into procurement after Milestone C. Complete Delivery of Technical Drawing Packages, Repair Parts and Special Tools List (RPSTL), Technical Manuals and Training Packages in preparation of Milestone C and Phase III-Production and Fielding.Prepare performance Specification for LAMPS (Large Advanced Mobile Power Sources). Begin Phase I SDD for LAMPS.											
<u>E. Performance Metrics</u>											
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 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT 194: ENGINE DRIVEN GEN ED					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	C/CPFF	Various Location could not be determined.	28.137	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Follow-on 2kW Improvement Program	C/CPFF	Various Location could not be determined.	3.300	0.000		0.000		0.000		0.000	Continuing	Continuing	0
IECU	C/CPFF	Various Location could not be determined.	0.613	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LAMPS (100-200kw)	C/CPFF	Various Location could not be determined.	0.000	0.000		5.181		0.000		5.181	Continuing	Continuing	0
STEP	C/CPFF	Various Location could not be determined.	0.000	0.000		0.900		0.000		0.900	Continuing	Continuing	0
Subtotal			32.050	0.000		6.081		0.000		6.081			0.000
Remarks													

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT 194: ENGINE DRIVEN GEN ED				
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
AMMPS(5-60kW)	C	CECOM Ft Belvoir, VA	2.375	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Follow-on 2kW Improvement Program	C	CECOM Ft Belvoir, VA	0.065	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
IECU	C	CECOM Ft Belvoir, VA	0.372	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
STEP	C	CECCOM Ft Belvoir, VA	0.000	0.000		0.485		0.000		0.485	Continuing	Continuing	0	
Subtotal			2.812	0.000		0.485		0.000		0.485			0.000	
Remarks														
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
AMMPS(5-60kW)	C	Various Location could not be determined.	2.031	1.337		0.000		0.000		0.000	Continuing	Continuing	0	
Follow-on 2kW Improvement Program	C	CECOM Ft Beloir, VA	0.216	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
STEP	C	Aberdeen Proving Ground	0.000	0.000		0.600		0.000		0.600	Continuing	Continuing	0	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010																																																																																						
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<p>Test and Evaluation (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method & Type</th> <th>Performing Activity & Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td></td> <td></td> <td>MD</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td>2.247</td> <td>1.337</td> <td></td> <td>0.600</td> <td></td> <td>0.000</td> <td></td> <td>0.600</td> <td></td> <td></td> <td>0.000</td> </tr> </table>																		FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract			MD												Subtotal			2.247	1.337		0.600		0.000		0.600			0.000																												
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																																																							
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Subtotal			2.247	1.337		0.600		0.000		0.600			0.000																																																																																				
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<p>Management Services (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method & Type</th> <th>Performing Activity & Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>AMMPS(5-60kW)</td> <td>C</td> <td>CECOM Ft Belvoir, VA</td> <td>2.507</td> <td>0.046</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td>Continuing</td> <td>Continuing</td> <td>0</td> </tr> <tr> <td>IECU</td> <td>C</td> <td>CECOM Ft Belvoir, VA</td> <td>0.015</td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td>Continuing</td> <td>Continuing</td> <td>0</td> </tr> <tr> <td>LAMPS (100-200kw)</td> <td>C</td> <td>CECOM Ft Belvoir, VA</td> <td>0.000</td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td>Continuing</td> <td>Continuing</td> <td>0</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td>2.522</td> <td>0.046</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td></td> <td>0.000</td> </tr> </table>																		FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	AMMPS(5-60kW)	C	CECOM Ft Belvoir, VA	2.507	0.046		0.000		0.000		0.000	Continuing	Continuing	0	IECU	C	CECOM Ft Belvoir, VA	0.015	0.000		0.000		0.000		0.000	Continuing	Continuing	0	LAMPS (100-200kw)	C	CECOM Ft Belvoir, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	Subtotal			2.522	0.046		0.000		0.000		0.000			0.000
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																																																							
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract																																																																																				
AMMPS(5-60kW)	C	CECOM Ft Belvoir, VA	2.507	0.046		0.000		0.000		0.000	Continuing	Continuing	0																																																																																				
IECU	C	CECOM Ft Belvoir, VA	0.015	0.000		0.000		0.000		0.000	Continuing	Continuing	0																																																																																				
LAMPS (100-200kw)	C	CECOM Ft Belvoir, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0																																																																																				
Subtotal			2.522	0.046		0.000		0.000		0.000			0.000																																																																																				
<u>Remarks</u>																																																																																																	

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		Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		39.631	1.383		7.166		0.000		7.166			0.000
Remarks												

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																		DATE: February 2010									
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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
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Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
MS C	4	2010	4	2010
Production Release	4	2010	1	2011
Transition to Production	4	2010	1	2011
Proof of Principle Milestone B	1	2011	1	2012
No label was entered	1	2011	1	2011
Award SDD Contract Phase I	1	2013	1	2013
SDD Phase I	1	2013	1	2014
Award SDD Contract Phase II	1	2014	1	2014
SDD Phase II	1	2014	2	2015
MS C - 2	2	2015	2	2015
LAMPS (Large Advanced Mobile Power Systems)	2	2010	3	2010
Prepare Performance Spec	3	2010	3	2011
Award SDD Contract Phase I - 2	3	2011	3	2011
SDD Phase I - 2	3	2011	3	2012
Award SDD Phase II	3	2011	3	2012
SDD Phase II - 2	3	2012	1	2014
MS C - 3	1	2014	2	2014

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
H01: COMBAT ENGINEER EQ ED	3.169	8.451	7.044	0.000	7.044	8.349	8.049	4.971	4.956	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project supports the System Development and Demonstration(SDD) of military Construction Equipment used in support of horizontal and vertical engineer construction tasks; required in order to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) modular forces. This project also supports the SDD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground (A/G) Line of Communication (LOC) and Rapid Tactical Earthmoving (RTE) repair and construction which increase the operational reach of modular forces. The BCT and CSB systems include: High Mobility Engineer Excavators (HMEE, Types I); Scrapers, Scoop Loaders, Skid Steer Loaders, Dozers and Graders.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.270	0.000	0.000	0.000	0.000
FY09: Conducts market research and update specs for future engineer transformation.											
FY 2009 Accomplishments:											
FY 2009											
FY 2010 Plans:											
FY 2010											
FY 2011 Base Plans:											
FY 2011 Base											
FY 2011 OCO Plans:											
FY 2011 OCO											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 FY09: Continues development of engineer and acquisition documents required for Milestone Decisions. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.020	0.000	0.000	0.000	0.000
Program #3 FY09: Conducts Test and Evaluation of future engineer equipment. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.150	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4		1.319	0.000	0.000	0.000	0.000
FY09: Development of Robotics Research						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #5		1.410	0.000	0.000	0.000	0.000
FY09: Simulator Development						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #6		0.000	0.820	0.000	0.000	0.000
FY10: Design armor kits for Combat Engineer Equipment.						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #7		0.000	0.100	0.000	0.000	0.000
FY10: Development of Robotics Research						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #8		0.000	2.000	0.000	0.000	0.000
FY10: Simulator Development						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #9		0.000	0.800	0.000	0.000	0.000
FY10: Heavy Scraper Ballistic Testing						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #10 FY10: Forced Entry (Airborne/Air Assault) HMEE Type II, Grader and Loader Type 1 Study/Development FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	3.164	0.000	0.000	0.000
Program #11 FY10: Survivability Enhancements and Armor for Combat Engineer Equipment FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.550	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #12 FY10: Test non nuclear soil density test sets. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.781	0.000	0.000	0.000
Program #13 FY11: Design armor kits for Combat Engineer Equipment. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.500	0.000	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #14		0.000	0.000	0.100	0.000	0.100
FY11: Development of Robotics Research						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #15		0.000	0.000	1.500	0.000	1.500
FY11: Simulator Development						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H01: COMBAT ENGINEER EQ ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #16		0.000	0.000	4.894	0.000	4.894
FY11: Force Entry (Airborne/Air Assault) HMEE Type II, Grader and Loader Type I Study/Development						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #17		0.000	0.000	0.050	0.000	0.050
FY11: Test non nuclear soil density test sets.						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #18						0.000	0.236	0.000	0.000	0.000	
FY10: Small Business Innovative Research/Small Business Technology Transfer Program											
FY 2009 Accomplishments:											
FY 2009											
FY 2010 Plans:											
FY 2010											
FY 2011 Base Plans:											
FY 2011 Base											
FY 2011 OCO Plans:											
FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						3.169	8.451	7.044	0.000	7.044	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OPA3, R05900, High Mobility Engineer Excavator I	24.237	41.497	56.503	3.750	60.253	12.572	0.482	0.000	0.000	Continuing	Continuing
• Ord. #2: OPA3, R05910, High Mobility Engineer Excavator III	30.110	11.339	8.456	0.000	8.456	2.222	0.241	0.000	0.000	0	52.368
• Ord. #3: OPA3, R03801, Grader, Mtzd, Hvy	57.086	44.157	48.379	3.390	51.769	2.250	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: OPA3, M06400, Loader, Scoop Type, 2 1/2 CU YD	20.030	13.493	7.205	1.157	8.362	7.278	6.807	0.000	0.000	0	55.970
	31.066	8.365	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	39.431

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: COMBAT ENGINEER EQ ED			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #5: OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD											
• Ord. #6: OPA3, X01500, Hydraulic Excavator	9.537	19.016	8.458	0.000	8.458	3.312	0.000	0.000	0.000	0	40.323
• Ord. #7: OPA3, M08100, Plant, Asphalt Mixing	7.883	15.374	10.783	0.000	10.783	11.484	10.841	0.000	0.000	0	56.365
• Ord. #8: OPA3, M06100, Tractor Full Tracked, Med T-9	66.716	49.944	64.032	0.000	64.032	66.892	101.099	97.977	102.361	0	549.021
D. Acquisition Strategy											
Conduct research, development, and investigations on future Construction Equipment (CE) and identify the path forward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliability, , survivability, transportability, availability, and maintainability and reduce the logistical footprints for future CE equipment.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT H01: COMBAT ENGINEER EQ ED				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Market Research, Studies, Update Specs for future engineer	C	multiple activities Location could not be determined.	1.423	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Continue development of engineer and acquisition documents	C	multiple activities Location could not be determined.	1.622	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Design armor kits for Combat Engineer	C	TARDEC Warren, MI	3.372	0.820		0.500		0.000		0.500	Continuing	Continuing	0	
Development of Robotic Research for Combat Engineer	C/TBD	TBD Location could not be determined.	0.000	0.100		0.100		0.000		0.100	Continuing	Continuing	0	
Development of Simulator	C	PEO Stricom Orlando, FL	0.000	2.000		1.500		0.000		1.500	Continuing	Continuing	0	
Survivability Enhancements and Armor for Combat Engineer	C	Multiple Activities Location could not be determined.	0.000	0.550		0.000		0.000		0.000	Continuing	Continuing	0	
Forced Entry Airborne(Air Assault) HMEE Type II, Grader and Loader Type I Study/Development	C	TARDEC Warren, MI	0.000	3.128		4.894		0.000		4.894	Continuing	Continuing	0	
Subtotal			6.417	6.598		6.994		0.000		6.994			0.000	
Remarks														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: COMBAT ENGINEER EQ ED					
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	C	TACOM & TARDEC Warren, MI	10.580	0.081		0.000		0.000		0.000	Continuing	Continuing	0
Engineering Operational Integrator Support	C	DA/Pentagon Washington, DC	0.156	0.000		0.000		0.000		0.000	Continuing	Continuing	.156
Construction Equipment Lease Study	C	TACOM & TARDEC Warren, MI	0.200	0.000		0.000		0.000		0.000	Continuing	Continuing	.400
Subtotal			10.936	0.081		0.000		0.000		0.000			0.556
Remarks													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Future Engineer Equipment (various)	C	ATEC Aberdeen, MD	2.882	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Test Nuclear soil density test sets.	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.736		0.050		0.000		0.050	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
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Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Heavy Scraper Ballistic Test	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.800		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.882	1.536		0.050		0.000		0.050			0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Mgt	C	PM CE/MHE Warren, MI	0.762	0.000		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.236		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.762	0.236		0.000		0.000		0.000			0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army							DATE: February 2010		
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<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"></div> <div style="width: 20%; text-align: center;"> Total Prior Years Cost </div> <div style="width: 10%; text-align: center;"> FY 2010 </div> <div style="width: 10%; text-align: center;"> FY 2011 Base </div> <div style="width: 10%; text-align: center;"> FY 2011 OCO </div> <div style="width: 10%; text-align: center;"> FY 2011 Total </div> <div style="width: 10%; text-align: center;"> Cost To Complete </div> <div style="width: 10%; text-align: center;"> Total Cost </div> <div style="width: 10%; text-align: center;"> Target Value of Contract </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 25%;">Project Cost Totals</div> <div style="width: 20%; text-align: center;">20.997</div> <div style="width: 10%; text-align: center;">8.451</div> <div style="width: 10%; text-align: center;">7.044</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">7.044</div> <div style="width: 10%;"></div> <div style="width: 10%; text-align: center;">0.556</div> </div>									
Remarks									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)												R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev												PROJECT H01: COMBAT ENGINEER EQ ED			

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT H01: COMBAT ENGINEER EQ ED		
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Simulator Development for Construction Equipment	1	2009	3	2009
HMEE Type II Development Phase I	1	2010	3	2011
Survivability Enhancements for Construction Equipment	1	2010	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	4.393	9.733	8.741	0.000	8.741	10.350	10.090	10.575	10.560	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification <p>This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include the integration and testing of forty-six meter capability for the Dry Support Bridge (DSB) as well as the development, integration and testing for float capabilities for the Dry Support Bridge (DSB). Other efforts include the development, integration and testing of the Bridge Erection Boat (BEB) and testing of the Program of Record (POR) Line of Communication (LOC) bridge. Additionally, these funds support the refurbishment of Joint Assault Bridge (JAB) test assets following USMC operational testing and the development of an Armored Engineer Vehicle (AEV) driving simulator based on the Abrams tank Common Driver Trainer. This project also includes the development and testing of light assault gap crossing capability, a remote controlled automatic launch for the REBS and integrate and test the REBS on a Stryker chassis, various bridging product improvements such as upgrade of AVL B, to higher Military Load Classifications, development of a health monitoring system, and testing of failure modes for composite bridges.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.850	0.000	0.000	0.000	0.000
FY09: Continues Development, integration, and test for the DSB 46 meter bridge.											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO								
Program #2 FY10: LOC Bridge POR Testing FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO				0.000	1.500	0.000	0.000	0.000
Program #3 FY11: LOC Bridge POR Testing FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010				0.000	0.000	1.800	0.000	1.800

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #4 FY11: JAB Testing FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO				0.000	0.000	2.541	0.000	2.541
Program #5 FY09: ABV Tests FY 2009 Accomplishments: FY 2009				0.350	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6 FY10: ABV Tests FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.200	0.000	0.000	0.000
Program #7 FY10: AVLB Upgrade Test (SANG)		0.000	0.300	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #8 FY09: BEB Testing FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		3.193	0.000	0.000	0.000	0.000
Program #9		0.000	6.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: BEB Testing FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #10 FY11: BEB Testing FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	3.500	0.000	3.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11 FY10: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	1.111	0.000	0.000	0.000
Program #12 FY11: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		0.000	0.000	0.500	0.000	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #13 FY11: Light Assault Gap Crossing Development and Testing. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.400	0.000	0.400
Program #14 FY10: Small Business Innovative Research/Small Business Technology Transfer Program. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.000	0.272	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #15 FY10: Advanced Modular Composite Bridge Testing				0.000	0.150	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #16 FY10: Structural Health Monitoring Project				0.000	0.200	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev			PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010											
FY 2011 Base Plans: FY 2011 Base											
FY 2011 OCO Plans: FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							4.393	9.733	8.741	0.000	8.741
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OPA3, MX0100, Tactical Bridging	265.653	53.739	62.817	0.000	62.817	75.635	57.138	75.463	63.401	Continuing	Continuing
• Ord. #2: OPA3, MA8890, Tactical Bridging, Float Ribbon	141.896	148.113	105.837	3.220	109.057	72.358	50.807	63.232	60.389	Continuing	Continuing
• Ord. #3: WTCV, G82925, Armored Breacher Vehicle	0.000	63.055	77.930	0.000	77.930	125.166	39.088	114.765	115.526	Continuing	Continuing
• Ord. #4: WTCV, GZ3001, Joint Assault Bridge	12.714	70.419	44.133	0.000	44.133	58.779	72.868	100.762	111.904	Continuing	Continuing
D. Acquisition Strategy											
Limited RDT&E effort to support testing and follow-on production.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
DSB 46 meter bridge	SS	WFEL Stockport, England/ ATEC, APG/ TARDEC, MI	1.070	0.000		0.000		0.000		0.000	Continuing	Continuing	1.366	
ABV Tests	C	ATEC APG	0.000	0.200		0.000		0.000		0.000	Continuing	Continuing	0	
AVLB Upgrade Test	C	TBD Location could not be determined.	0.000	0.300		0.000		0.000		0.000	Continuing	Continuing	0	
BEB Development	C	TBD Location could not be determined.	0.000	2.000		0.000		0.000		0.000	Continuing	Continuing	0	
Light Assault Gap Crossing Development and Testing	C	TBD Location could not be determined.	0.000	0.000		0.400		0.000		0.400	Continuing	Continuing	0	
REBS Auto Launch-Retrieve	SS	GDELS Germany, DE	0.000	1.111		0.500		0.000		0.500	Continuing	Continuing	0	
Structural Health Monitoring Project	C	TARDEC Warren, MI	0.000	0.200		0.000		0.000		0.000	Continuing	Continuing	0	
Subtotal			1.070	3.811		0.900		0.000		0.900			1.366	
Remarks														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT H02: TACTICAL BRIDGING - ENGINEERING DEVELOPMENT				
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Other Government Agencies	C	TACOM Warren, MI-- Various	0.140	0.000		0.000		0.000		0.000	0	.140	0	
Subtotal			0.140	0.000		0.000		0.000		0.000	0.000	0.140	0.000	
Remarks														
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
LOC Testing	C	ATEC APG/ FT. Leonardwood	0.000	1.500		1.800		0.000		1.800	Continuing	Continuing	0	
BEB Testing	C	TBD Location could not be determined.	0.000	4.000		3.500		0.000		3.500	Continuing	Continuing	0	
JAB Testing	C/TBD	TBD Location could not be determined.	0.000	0.000		2.541		0.000		2.541	Continuing	Continuing	0	
Advanced Modular Composite Bridge Testing	C	TARDEC Warren, MI	0.000	0.150		0.000		0.000		0.000	Continuing	Continuing	0	
Subtotal			0.000	5.650		7.841		0.000		7.841			0.000	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
<u>Remarks</u>													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Business Innovative Research/Small Business Technology Transfer Program	C	TACOM Warren, MI	0.000	0.272		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.272		0.000		0.000		0.000			0.000
<u>Remarks</u>													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1.210	9.733		8.741		0.000		8.741			1.366
<u>Remarks</u>													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
LOCB POR Testing	1	2010	4	2011
JAB Testing	1	2011	3	2012
ABV Tests	2	2009	3	2010
AVLB Upgrade Test	1	2010	1	2011
BEB Testing	3	2009	3	2011
Dev, Integr, & Test REBS Auto Launch-Retrieve	2	2010	3	2011
Light Assault Gap Crossing Testing and Development	1	2011	3	2013
Advanced Modular Composit Bridge Testing	1	2010	3	2010
Structural Health Monitoring Project	1	2010	1	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>	0.441	1.692	0.955	0.000	0.955	1.060	1.197	1.218	1.237	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification This project supports system development and demonstration of Material Handling Equipment (MHE) that support Combat Service Support units with MHE for world wide rapid movement of supplies including container handling equipment, forklifts, and other cargo handling related items. Necessary efforts include simulator development, validating requirements, developing acquisition strategies, developing performance specifications, and test and evaluation planning.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Developement and integration of 5 Channnel Simulators for MHE systems. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO							0.000	1.613	0.955	0.000	0.955

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H14: MATERIALS HANDLING EQUIPMENT - ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 Rough Terrain Container Handler Crew Protection Kit Development. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.363	0.000	0.000	0.000	0.000
Program #3 Rough Terrain Container Handler Crew Protection Kit Testing at Aberdeen Proving Grounds FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.033	0.033	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT H14: MATERIALS HANDLING EQUIPMENT - ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4		0.033	0.033	0.000	0.000	0.000
Engineering for Modification Work Orders required (based off testing)						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #5		0.012	0.013	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Programs						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>			
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						0.441	1.692	0.955	0.000	0.955	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>RDTE, 0603804.DG14, Logistics Support Equipment, Advance</i>	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #2: <i>OPA3, M41200, Rough Terrain Container Handler (RTCH)</i>	94.967	95.469	29.460	4.562	34.022	0.000	0.000	0.843	0.000	Continuing	Continuing
• Ord. #3: <i>OPA3, M41800, All Terrain Lifting Army System (ATLAS)</i>	54.837	94.075	17.352	56.609	73.961	8.936	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: <i>OPA3, G41002, 5K Light Capacity Rough Terrain (LCRT) Forklift</i>	0.000	0.000	12.936	0.000	12.936	0.000	0.000	4.719	0.000	0	17.655
D. Acquisition Strategy											
RDT&E Engineering - Engineering efforts will be conducted: Programmatic Pre-Milestone C support of 5,000 LB Light Capacity Rough Terrain Forklift; Rough Terrain Container Handler Crew Protection Kit Development; Rough Terrain Container Handler Crew Protection Kit Testing and Engineering Support at Aberdeen Proving Grounds; Engineering for Modification Work Orders required (based off testing).											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L39: <i>Field Sustainment Support ED</i>	2.024	4.503	5.804	0.000	5.804	6.799	4.261	4.120	4.184	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification <p>This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, mortuary affairs systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment such as heaters, canouflage systems and base camp equipment. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							2.024	0.000	0.000	0.000	0.000
FY 09: Obtain Joint Precision Airdrop System (JPADS) 2K Milestone C and Full Material Release and transition into production. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L39: Field Sustainment Support ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 FY 10: Complete JPADS 10K Design Validation (DV). Conduct and Complete JPADS 10K Developmental Testing (DT). Initiate JPADS 10K Operational Testing (OT). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	3.828	0.000	0.000	0.000
Program #3 FY 11: Complete OT and obtain Milestone C for JPADS 10K. FY 2009 Accomplishments: FY 2009		0.000	0.000	2.191	0.000	2.191

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L39: Field Sustainment Support ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4 FY 11: Conduct and complete DT for Advanced Low Velocity Airdrop Systems (ALVADS-L).		0.000	0.000	2.171	0.000	2.171
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #5 FY 10: Execute Low Cost Aerial Delivery System (LCADS) P3I efforts with a focus on reusable Low Cost Low Altitude (LCLA) personnel parachutes for cargo use.		0.000	0.548	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6 FY 11: Execute Low Cost Aerial Delivery System (LCADS) P3I efforts with a focus on reusable Low Cost Low Altitude (LCLA) personnel parachutes for cargo use.		0.000	0.000	0.406	0.000	0.406
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #7		0.000	0.000	0.300	0.000	0.300

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 11: Complete the Operational Field Evaluation on the Space Heater Convective 120,000 BTUH (SHC 120K) and obtain Milestone C LRIP. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #8 FY 11: Conduct OT on Pyrolosis Waste to Energy System transitioning from Foreign Comparative Test Program and conduct Milestone C. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		0.000	0.000	0.736	0.000	0.736

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L39: Field Sustainment Support ED			
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 OCO Plans: FY 2011 OCO											
Program #9 Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR) FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						0.000	0.127	0.000	0.000	0.000	
Accomplishments/Planned Programs Subtotals						2.024	4.503	5.804	0.000	5.804	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OPA 3, MA7806 Precision Airdrop	16.192	18.969	21.402	0.000	21.402	14.874	14.437	14.678	14.916	Continuing	Continuing
	5.383	15.994	18.908	0.000	18.908	5.414	5.271	5.365	5.447	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support ED</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #2: <i>RDT&E, 643804.K39 Field Sustainment Support AD</i>											
D. Acquisition Strategy											
Accelerate product development and testing to transition into production.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010	
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Product Development (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	C	PM FSS Natick	2.809	0.362		0.176		0.000		0.176	Continuing	Continuing	3.241
Soldier Support Equipment - 2	C	Various Location could not be determined.	13.075	0.326		0.118		0.000		0.118	Continuing	Continuing	0
JPADS 10K Development	C	Various Location could not be determined.	0.000	1.218		2.000		0.000		2.000	Continuing	Continuing	0
LCADS P3I efforts	C	Various Location could not be determined.	0.000	0.125		0.500		0.000		0.500	Continuing	Continuing	0
Subtotal			15.884	2.031		2.794		0.000		2.794			3.241

Remarks

Test and Evaluation (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	C	DTC MD and ATC, MD	1.686	0.000		0.000		0.000		0.000	Continuing	Continuing	.130
Soldier Support Equipment - 2	C	Yuma Proving Ground (YPG)	6.284	0.800		0.500		0.000		0.500	Continuing	Continuing	.076

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L39: Field Sustainment Support ED			

Test and Evaluation (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		AZ, AEC											
JPADS 10K DT and OT	C	YPG. AZ Location could not be determined.	0.000	1.055		0.000		0.000		0.000	Continuing	Continuing	0
JPADS 10k DT and OT	C	GSA Location could not be determined.	0.000	0.054		0.000		0.000		0.000	Continuing	Continuing	0
LCADS P3I efforts	C	YPG AZ/ OTC, NC	0.000	0.211		2.220		0.000		2.220	Continuing	Continuing	0
Subtotal			7.970	2.120		2.720		0.000		2.720			0.206

Remarks

Management Services (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	C	PM FSS Natick	0.982	0.225		0.290		0.000		0.290	Continuing	Continuing	0
Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)	C	Nothing entered for Activity and Location.	0.000	0.127		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support ED</i>					
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Location could not be determined.											
Subtotal			0.982	0.352		0.290		0.000		0.290			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			24.836	4.503		5.804		0.000		5.804			3.447
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																			DATE: February 2010												
APPROPRIATION/BUDGET ACTIVITY												R-1 ITEM NOMENCLATURE												PROJECT							
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)												PE 0604804A: Logistics and Engineer Equipment - Eng Dev												L39: Field Sustainment Support ED							

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

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

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

R-1 ITEM NOMENCLATURE

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

PROJECT

L39: *Field Sustainment Support ED*[illegible]

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L39: Field Sustainment Support ED		
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Milestone C JPADS 2K	2	2009	2	2009
Milestone C JPADS 10K/LRIP	2	2011	2	2011
OT on JPADS 10 K	4	2010	4	2010
OT on ACPRS	1	2011	3	2011
Milestone C on ACPRS	2	2012	2	2012
Milestone C on Helicopter External/Internal Cargo Delivery	3	2014	3	2014
Complete ALVADS-L Milestone C	3	2013	3	2013
Conduct DT/OT on ALVADS-L	4	2011	1	2013
Conduct Milestone C for JMICS light duty increment	1	2012	1	2012
Conduct Milestone C on next generation Human Remains Transfer Case	1	2012	1	2012
Conduct DT and OT on ALVADS Rapid Rigging/Derigging Airdrop System	4	2012	1	2014
Conduct Milestone C on ALVADS Rapid Rigging/Derigging Airdrop System	3	2014	3	2014
Conduct Milestone C on Mobile Integrated Shop Shelter System	4	2014	4	2014
Conduct Milestone C on JMICS Intermodal Platform Capability (IPC)	3	2015	3	2015
Execute LCADS P3I efforts	4	2009	3	2011
JPADS 10K FMR/FRP	3	2011	3	2011
Conduct DT on JPADS 10K	1	2010	2	2010
Obtain Milestone C for Space Heater Convective 120K BTUH	2	2011	2	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L39: Field Sustainment Support ED	
	Start		End	
Event	Quarter	Year	Quarter	Year
Conduct Milestone C for JMICS standard duty increment	1	2013	1	2013
Conduct OT on Pyrolosis Waste to Energy System	4	2010	1	2011
Conduct Milestone C on Pyrolosis Waste to Energy System	3	2011	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>	5.699	2.490	2.734	0.000	2.734	2.104	3.974	3.844	3.904	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification Description: This project provides all services ample supply of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to the soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and, dispensing in support of tactical operations, including rapid refueling of aircraft. The mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These research and development (R&D) missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve transformation vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							1.383	0.000	0.000	0.000	0.000
FY09: Develop prototype Petroleum Test Kit (PTK).											
FY 2009 Accomplishments:											
FY 2009											
FY 2010 Plans:											
FY 2010											
FY 2011 Base Plans:											
FY 2011 Base											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 FY09: Continue improvements for the Family of Fuel System Supply Points (FSSPs). Conduct system level demonstrations and evaluations of the common 600 Gallon Per Minute (GPM) Fuel/Water tactical pump and prepare technical data package and logistic support data. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		1.978	0.000	0.000	0.000	0.000
Program #3 FY09: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP)and Reverse Osmosis Water Purification Units, Hippo system and the Unit Water Pod (Camel) System. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, LP, opus and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System		2.338	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
(Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #4 FY10: Evaluate the portability advancements designed into the NIR from earlier efforts. Evaluate new fiber optic probes and demonstrate for CASCOT FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		0.000	0.122	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #5 FY10: Continue improvements for the Family of Fuel System Supply Points (FSSPs). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.141	0.000	0.000	0.000
Program #6 FY10: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP) and Reverse Osmosis Water Purification Units, Hippo System and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, LP, opus and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.		0.000	0.220	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #7 FY10: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.445	0.000	0.000	0.000
Program #8		0.000	1.493	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #9 FY10: Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.069	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #10 FY11: Continue to refine the property prediction nodels. In-house low/high temperature testing. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.301	0.000	0.301
Program #11 FY11: Continue improvements for the Family of Fuel System Supply Points (FSSPs). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.120	0.000	0.120

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #12 FY11: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP) and Reverse Osmosis Water Purification Units, Hippo System and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, LP, opus and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.755	0.000	0.755
Program #13 FY11: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications. FY 2009 Accomplishments: FY 2009		0.000	0.000	0.278	0.000	0.278

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #14 FY11: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.340	0.000	0.340
Program #15 FY11: Future Water Storage and Distribution (Water Packaging System).		0.000	0.000	0.940	0.000	0.940

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED			
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2009 Accomplishments: FY 2009											
FY 2010 Plans: FY 2010											
FY 2011 Base Plans: FY 2011 Base											
FY 2011 OCO Plans: FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						5.699	2.490	2.734	0.000	2.734	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	0.427	3.208	2.586	0.000	2.586	4.468	2.858	2.909	2.953	Continuing	Continuing
• Ord. #2: OPA 3, R05600, Water Purification Systems	50.636	10.168	3.597	12.086	15.683	3.539	4.280	4.643	0.000	Continuing	Continuing
• Ord. #3: OPA 3, MA6000, Distribution Systems, Petroleum & Water	75.251	142.309	175.069	55.105	230.174	58.962	29.401	33.850	22.575	Continuing	Continuing
D. Acquisition Strategy											
N/A											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>

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 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED			
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	C	TBD Location could not be determined.	0.000	0.000		0.180		0.000		0.180	Continuing	Continuing	0
Advanced Petroleum Test Kit (PTK) - 2	C	TARDEC Warren, MI	0.000	0.102		0.121		0.000		0.121	Continuing	Continuing	0
Fuel System Supply Point (FSSP) Improvements	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	.050
FSSP Improvements	C	TBD Location could not be determined.	0.000	1.493		0.278		0.000		0.278	Continuing	Continuing	.400
Water Purification Systems Improvements	C	TARDEC Warren, MI	0.000	0.074		0.150		0.000		0.150	Continuing	Continuing	0
Water Purification Systems Improvements - 2	C	TBD Location could not be determined.	0.000	0.075		0.150		0.000		0.150	Continuing	Continuing	0
Unit Water Pod (Camel) 900 Gallon	C	TARDEC Warren, MI	0.150	0.000		0.000		0.000		0.000	Continuing	Continuing	.100
Water Packaging System	C	TARDEC Warren, MI	0.000	0.000		0.150		0.000		0.150	Continuing	Continuing	0
Water Packaging System - 2	C/CPFF	DRS Location could not be determined.	0.000	0.000		0.790		0.000		0.790	Continuing	Continuing	0
Petroleum Quality Analysis System (PQAS-E)	C	TARDEC Warren, MI	0.000	0.445		0.300		0.000		0.300	Continuing	Continuing	0
Subtotal			0.150	2.189		2.119		0.000		2.119			0.550

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Fuel System Supply Point (FSSP)	C	TARDEC Warren, MI	0.000	0.122		0.120		0.000		0.120	Continuing	Continuing	.025
Water Purification Systems Improvements	C	TARDEC Warren, MI	0.000	0.000		0.100		0.000		0.100	Continuing	Continuing	0
Unit Water Pod (Camel) 900 Gallon	C	TARDEC Warren, MI	0.100	0.000		0.000		0.000		0.000	Continuing	Continuing	.075
Unit Water Pod (Camel) 900 Gallon - 2	C/CPFF	TBD Location could not be determined.	1.394	0.000		0.000		0.000		0.000	Continuing	Continuing	.125
Subtotal			1.494	0.122		0.220		0.000		0.220			0.225
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED			
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Fuel System Supply Point (FSSP)	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	.075
Fuel System Supply Point (FSSP) - 2	C	Yuma Proving Ground Yuma, AZ	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	.450
Water Purification Improvements	C	NFESC Port Hueneme, CA	0.332	0.000		0.240		0.000		0.240	Continuing	Continuing	0
Water Purification Improvements - 2	C	TARDEC Warren, MI	0.000	0.110		0.155		0.000		0.155	Continuing	Continuing	0
Water Purification Improvements	C	Aberdeen Proving Ground Aberdeen, MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Unit Water Pod (Camel) 900 Gallon	C	Yuma Proving Ground Yuma, AZ	1.996	0.000		0.000		0.000		0.000	Continuing	Continuing	1.200
Petroleum Quality Analysis System (PQAS-E)	C	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.328	0.110		0.395		0.000		0.395			1.725
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>					
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.069		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.069		0.000		0.000		0.000			0.000
Remarks not applicable													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			3.972	2.490		2.734		0.000		2.734			2.500
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)												R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev												PROJECT L41: WATER AND PETROLEUM DISTRIBUTION - ED			

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Future Water Storage and Distribution	4	2010	3	2014
Petroleum Quality Analysis System (PQAS-E)	4	2010	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L42: <i>CAMOUFLAGE SYSTEM ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L42: <i>CAMOUFLAGE SYSTEM ED</i>	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification <p>This project provides for System Development and Demonstration of low cost, low observable camouflage systems to counter emerging enemy threat technologies such as Thermal Sensors, Near Infrared (Night Vision) sensors, Short Wave Infrared Sensors by suppression of visual, near-infrared, thermal radar, and acoustic signatures of highly critical mobile and semi-mobile weapon systems and strategic equipment. Efforts include development of Arctic/Snow variants, as well as system unique Ultra Lightweight Camouflage Net System (ULCANS) for the Future Combat Systems. This project also includes development of a threat database that includes spectral, visual and topographic data for primary threat areas supporting mission unique and Special Operations camouflage requirements. This program develops a critical capability that supports the Army's Modular Force by providing signature suppression and counter-surveillance superiority that reduces vulnerability. In addition, this program is clearly focused on dramatically reducing the logistics footprint by providing substantial reductions in weight and cube, while providing superior camouflage protection to the warfighter. Further, more efficient and easier to employ systems will provide vast improvements in mobility, supporting the Army's Modular Concept.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						0.239	0.000	0.000	0.000	0.000	
FY 09: Worked with Night Vision Laboratory (NVL) to define Short Wave Infrared Requirement (SWIR) for improvement to the ULCANS Nets. Jointly with NVL began development of an improved ULCANS Woodland Net to include improvements in the Visible, Near IR and especially the SWIR range which is an emerging threat. Worked with National Ground Intelligence Center (NCIG) and Naval research Laboratory for worldwide background data collection and imagery. Supported NVL's Cooperative Research Development Activities (CRADA) with private industries to help evolve camouflage technology. Continued development and fielding of Counter Snipe NETS for STRYKER, HMMWV and Perimeter/Guard Tower Security Veils (separately funded under Counter Snipe Initiatives/PEO Soldier).											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L42: <i>CAMOUFLAGE SYSTEM ED</i>					
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						0.239	0.000	0.000	0.000	0.000	
<u>C. Other Program Funding Summary (\$ in Millions)</u>											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>RDTE, 0622712.AH35, Camouflage Technology</i>	2.778	2.846	2.876	0.000	2.876	2.932	2.990	3.044	3.096	Continuing	Continuing
<u>D. Acquisition Strategy</u>											
Develop camouflage systems for Services and transition developmental items into procurement with a competitive award. Continual upgrade to counter technology improvements of sensors, and to counter new emerging technologies. Continual leveraging of technology with other special operations programs.											
<u>E. Performance Metrics</u>											
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 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	0.499	0.973	0.874	0.000	0.874	3.533	3.790	3.060	3.142	Continuing	Continuing
Quantity of RDT&E Articles											
Note Not applicable for this item.											
A. Mission Description and Budget Item Justification This project supports development, demonstration, testing and evaluation within the Engineering Support Equipment arena for the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE), Surveying, Individual Firefighter Support, Concrete and Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Diving Equipment, Surface Swimmer Support Sets, Surface Supplied Diving Set, Procurement of new Technical Tools, Pioneer Support Set, and the Pioneer Land Clearing and Building Set. Funding will support the procurement of market samples and testing for Hazard ID & Marking, Pioneer Light Field Engineering, and Allied Trades. Efforts will also involve modernization of the Swimmer Support Sets and Individual Swimmer Support Sets as well as existing Sets, Kits, and Outfits (SKOs).											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1 Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010						0.100	0.000	0.000	0.000	0.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.125	0.000	0.125
Program #3 Development of the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE) FY 2009 Accomplishments: FY 2009		0.186	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4 Modernization of diving sets: Underwater Photo Set, Recompression Chamber, and Remote Operated Vehicle		0.075	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #5 Conduct market research on Underwater Construction Sets.		0.000	0.000	0.175	0.000	0.175

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6 Procure Market Samples for Test and Evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Power Plant Installation Sets, and various Soldier Portable Sets and Support equipment. FY 2009 Accomplishments: FY 2009		0.138	0.000	0.000	0.000	0.000
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Procure Market Samples for Test and Evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Power Plant Installation Sets, and various Soldier Portable Sets and Support equipment. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.343	0.000	0.343
Program #8 Description For Purchase (DFP) development for Surface Supplied Diving Set, and procurement of test articles for the Surface Supplied Diving Set and the Deep Sea Set, based on latest technology (Life Support Equipment). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.000	0.246	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #9 Procure test articles and field test Closed Circuit Scuba Set for suitability.				0.000	0.250	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #10 Procurement of test articles based on Capabilities Production Document (CPD) requirements for the family of diving air compressors.				0.000	0.250	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #11 Redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment).		0.000	0.200	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #12 Redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment).		0.000	0.000	0.175	0.000	0.175

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #13 Modernization Analysis for modularity of Soldier Portable/Shelter Mounted Sets, Kits, and Outfits to determine the feasibility of upgrading/combining sets.		0.000	0.000	0.056	0.000	0.056
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #14		0.000	0.027	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army					DATE: February 2010						
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>							
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total					
Small Business Innovative Research/Small Business Technology Transfer Programs											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals		0.499	0.973	0.874	0.000	0.874					
<u>C. Other Program Funding Summary (\$ in Millions)</u>											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA 3 ML5301, Items Less than \$5.0M (Engineering Support)</i>	38.435	30.437	31.420	0.000	31.420	32.483	4.428	35.905	30.931	Continuing	Continuing
<u>D. Acquisition Strategy</u>											
Progression of Programs will be developed by the completion of the Initial Capabilities Document, Capabilities Development Document, Capability Production Document, and Description For Purchase continuing into Low Rate Initial Production. Modernization and Optimization of existing tools and testing of market samples will progress from System Development and Demonstration (SDD) and transition into production.											
<u>E. Performance Metrics</u>											
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 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L46: <i>Maintenance Support Equipment</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L46: <i>Maintenance Support Equipment</i>	1.465	3.249	3.178	0.000	3.178	3.177	3.668	1.702	1.787	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification This project supports requirements generation for Sets, Kits, and Outfits (SKOs) and the subsequent creation of technical data as well as purchase descriptions. Modernize the Shop Equipment, Contact Maintenance (SECM) for the next generation armored vehicle to lower weight of enclosure to accommodate required tool load. Continue efforts on rapid deploying SKOs to support rapid emerging missions including joint efforts. Acquire and test support equipment items. Conduct research, procure and test various towbar configurations. Efforts to include development of the Metalworking and Machining Shop Set (MWMSS) as well as Armament SKOs that support the merging of Military Occupational Specialties (MOS). Research, develop, and test fire suppression systems and investigate feasibility of Joint Modular Container Systems for SKO.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.000	0.100	0.000	0.000	0.000
Optimization of antiquated SKOs to support modularity in a 2 level maintenance environment including Towbar redesign. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 Modernize and update tool loads - Procure and verify additional items based on field feedback. Create Purchase Descriptions and purchase Support Equipment test articles. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.334	0.000	0.000	0.000
Program #3 Hydraulic Systems Test and Repair Unit (HSTRU) development, testing, and modernization FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010		0.875	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)							
			FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #4 Unique Identification Codes and Warranty/Replacement system enhancements/testing. Joint Modular Intermodal Container System/Joint Modular Intermodal Distribution System (JMICS/JMIDS) Containers. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO			0.000	0.625	0.000	0.000	0.000
Program #5 Future Combat Systems FY 2009 Accomplishments: FY 2009			0.000	0.070	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L46: Maintenance Support Equipment				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6 Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations.		0.015	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #7 Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations.		0.000	0.922	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L46: Maintenance Support Equipment				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #8 Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations.		0.000	0.000	1.000	0.000	1.000
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #9		0.000	0.063	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Composite Manipulation. Joint container utilization research. Virtual Engineering incorporation and enhancements. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #10 Perform testing on Flatrack design and Universal Sling for the Forward Repair System (FRS). FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.047	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11 Procure new technical tools and subsequent evaluations of tools for SKO optimization. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.012	0.000	0.000	0.000
Program #12 Modernization / Redesign efforts of SECM for next generation of vehicles. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.105	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #13 Modernization / Redesign efforts of SECM for next generation of vehicles. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.400	0.000	0.000	0.000
Program #14 Modernization / Redesign efforts of SECM for next generation of vehicles. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	1.600	0.000	1.600

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #15 Support for requirements generation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.161	0.000	0.000	0.000	0.000
Program #16 Support for requirements generation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.232	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #17 Support for requirements generation. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.073	0.000	0.073
Program #18 Develop Rapid Deployment Sets, Kits, and Outfits (SKO) - Special Tool Initiative. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.100	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #19 Engineering and Quality Assurance in support of Sets, Kits, Outfits, and Tools. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.135	0.000	0.000	0.000	0.000
Program #20 Engineering and Quality Assurance in support of Sets, Kits, Outfits, and Tools. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.000	0.000	0.380	0.000	0.380

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #21		0.127	0.000	0.000	0.000	0.000
Fire Suppression Systems						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #22		0.000	0.300	0.000	0.000	0.000
Fire Suppression Systems						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #23		0.000	0.000	0.125	0.000	0.125
Armament Shop Upgrades						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						
Program #24		0.000	0.091	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)						
FY 2009 Accomplishments:						
FY 2009						
FY 2010 Plans:						
FY 2010						
FY 2011 Base Plans:						
FY 2011 Base						
FY 2011 OCO Plans:						
FY 2011 OCO						

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment				
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals							1.465	3.249	3.178	0.000	3.178
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OPA 1, DL5110, Items Less Than \$5.0M (TACTICAL VEHICLE)	0.516	4.763	0.000	0.000	0.000	0.315	0.320	0.326	0.332	Continuing	Continuing
• Ord. #2: OPA 3, G05302/D16400, Forward Repair System	128.583	62.884	63.678	9.068	72.746	2.575	0.000	0.000	0.000	Continuing	Continuing
• Ord. #3: OPA 3, M61500, Shop Equipment, Contact Maintenance	17.803	49.651	56.554	25.448	82.002	12.241	0.000	5.715	0.000	Continuing	Continuing
• Ord. #4: OPA 3, MA9650, Standard Automotive Tool Set	39.437	35.344	38.075	5.622	43.697	10.797	14.912	15.160	15.406	Continuing	Continuing
• Ord. #5: OPA 3, ML5345, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)	1.325	3.848	3.702	0.000	3.702	3.911	0.000	0.621	0.000	Continuing	Continuing
D. Acquisition Strategy											
Programs will progress from requirements generation through market research, development, market samples and testing. Efforts will support two level maintenance concept utilizing commercial technologies and incorporating them into SKO to support next generation weapon and support systems.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT L46: Maintenance Support Equipment				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Maintenance Support Equipment Life Cycle Configuration Analyses and ICD Development Support	C	PM SKOT Rock Island Location could not be determined.	0.865	0.566		0.073		0.000		0.073	Continuing	Continuing	0	
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	C	PM SKOT Rock Island Location could not be determined.	0.183	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Expedited Modernization Initiative Procedure (EMIP) Procurement of new Technical Tools	C	PM SKOT Rock Island Location could not be determined.	0.000	0.012		0.000		0.000		0.000	Continuing	Continuing	0	
Metalworking & Machining Shop Set Configuration	C	PM SKOT Rock Island Location could not be determined.	0.000	0.872		0.000		0.000		0.000	Continuing	Continuing	0	
Modernization / Redesign efforts of Shop Equipment, Contact Maintenance for next generation vehicles	C	PM SKOT Rock Island Location could not be determined.	0.000	0.000		1.600		0.000		1.600	Continuing	Continuing	0	
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative. Joint Aviation Tool Set	C	PM SKOT Rock Island Location could not be determined.	0.000	0.100		0.000		0.000		0.000	Continuing	Continuing	0	
Development of Fire Suppression Systems	C	PM SKOT Rock Island	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
		Location could not be determined.												
Hydraulic Systems Test & Repair Unit (HSTRU) development	C	PM SKOT Rock Island Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Upgrades to Armament Shop Sets	C	PM SKOT ROCK Island Location could not be determined.	0.000	0.000		0.125		0.000		0.125	Continuing	Continuing	0	
Subtotal			1.048	1.550		1.798		0.000		1.798			0.000	
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	C	PM SKOT Rock Island/ CASCOM Ordnance Center & School/ Maneuver Support Center (MANSCEN)	0.152	0.000		0.000		0.000		0.000	Continuing	Continuing	0	

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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Location could not be determined.											
Modernization of Tool Loads based on Field Feedback	C	PM SKOT Rock Island Location could not be determined.	0.000	0.300		0.000		0.000		0.000	Continuing	Continuing	0
Industrial Plant Equipment Documentation for new test articles	C	TBD / PM SKOT Rock Island Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.	C	ECBC / ARDEC / PM SKOT Rock Island Location could not be determined.	0.000	0.063		0.380		0.000		0.380	Continuing	Continuing	0
Subtotal			0.152	0.363		0.380		0.000		0.380			0.000
Remarks													

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT L46: Maintenance Support Equipment				
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	C	Army Test & Evaluation Command (ATEC)/ PM SKOT Rock Island/CASCOM Ordnance Center & School Ft. Lee	0.830	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Testing of the Metalworking & Machining Shop Set (MWMSS)	C	Army Test & Evaluation Command (ATEC) Aberdeen, MD	0.000	0.000		1.000		0.000		1.000	Continuing	Continuing	0	
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	C	PM SKOT Rock Island Location could not be determined.	0.263	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Forward Repair System Flatrack Redesign and Universal Sling Testing.	C	PM SKOT Rock Island/Army Test & Evaluation Command (ATEC) Aberdeen, MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Testing of Support Equipment Items and Configurations	C	Army Test & Evaluation Command (ATEC)/ PM SKOT/ECBC Location could not be determined.	0.000	0.400		0.000		0.000		0.000	Continuing	Continuing	0	
Testing of Fire Suppression	C		0.000	0.300		0.000		0.000		0.000	Continuing	Continuing	0	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment						
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
		Army Test & Evaluation Command (ATEC)/ PM SKOT/ECBC Location could not be determined.												
Testing of Hydraulic Systems Test & Repair Unit (HSTRU)	C	Army Test & Evaluation Command (ATEC)/ US Army Research Lab Aberdeen, MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Subtotal			1.093	0.700		1.000		0.000		1.000			0.000	
Remarks														
Management Services (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Conduct Sets, Kits, & Outfits (SKO) Modernization Efforts	C	Army Test & Evaluation Command & PM SKOT Rock Island	0.688	0.070		0.000		0.000		0.000	Continuing	Continuing	0	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L46: <i>Maintenance Support Equipment</i>					
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Location could not be determined.											
Unique Identification Codes, Joint Modular Intermodal Container/ Distribution System (JMICS/JMIDS)	C	PM SKOT Rock Island Location could not be determined.	0.000	0.475		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.091		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.688	0.636		0.000		0.000		0.000			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.981	3.249		3.178		0.000		3.178			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army																						DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)												R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev										PROJECT L46: Maintenance Support Equipment			

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L46: <i>Maintenance Support Equipment</i>	
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets	4	2009	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>	5.765	4.549	4.543	0.000	4.543	0.319	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification <p>The Improved Environmental Control Units (IECU) program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of Environmental Control Units (ECUs). The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II Ozone Depleting Chemicals (ODCs) and to improve the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance, and increased reliability. 60K British Thermal Unit/Hour (BTU/H) IECU: The 60K BTU/H IECU will be a replacement for the existing Army 54K BTU/H ECU and Air Force developed 66K BTU/H Field Deployable Environmental Control Unit (FDECU). 9,18, and 36K BTU/H IECUs: The 9,18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD-ECU variants. The new family of IECUs will utilize a new refrigerant which complies with mandated EPA (Environmental Protection Agency) requirements (non-global warming). FY09 will fund System Development and Demonstration (SDD) Phase activities for 9,18 and 36K IECUs.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						4.714	0.000	0.000	0.000	0.000	
FY09: Begin SDD for the 9, 18 and 36K IECUs.											
FY 2009 Accomplishments:											
FY 2009											
FY 2010 Plans:											
FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #2 Concept and Technology Development				0.885	0.626	1.500	0.000	1.500
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #3 FY10: Continue SDD for the 9, 18 and 36K IECUs.				0.000	3.771	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009								

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4 FY11: Continue SDD for the 9, 18 and 36K IECUs.		0.000	0.000	3.043	0.000	3.043
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #5 Small Business Innovative Research/Small Business Technology Transfer Program		0.166	0.152	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						5.765	4.549	4.543	0.000	4.543	
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>OPA 3, Improved Environmental Control Units , MF9303</i>	8.847	10.850	20.161	0.000	20.161	0.108	0.000	0.000	0.000	0	39.966
D. Acquisition Strategy											
The 9/18/36K IECU variants contract will be executed in four phases: 1) one year Cost-Plus-Fixed-Fee contract for the first phase of System Development and Demonstration (SDD) , 2) two year CPFF contract to complete the SDD efforts, 3) an eight-month Firm-Fixed-Price (FFP) option for the Low Rate Initial Production (LRIP) phase, and 4) 5 one-year Fixed Price, Indefinite Delivery-Indefinite Quantity (IDIQ) options for the Full Rate Production (FRP) phase. During Phase I, two contractors will be required to design and fabricate two prototypes each for two government selected variants. These units will be subjected to limited testing. A down select based primarily on test results will be used by the Government to determine which contractor will continue development of all four variants in Phase II of the SDD effort. These variants will include four configurations: (1) 9K BTU/H, 115V, 1 phase, 60 Hertz; (2) 18K BTU/H, 208V, 3 phase, 60 Hz; (3) 18K BTU/H, 230V, 1 phase, 60 Hz; and (4) 36K BTU/H, 208V, 3 phase, 60 Hz.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>

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 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K IECU	C/CPFF	Various Location could not be determined.	0.000	2.225		2.060		0.000		2.060	Continuing	Continuing	0
Subtotal			0.000	2.225		2.060		0.000		2.060			0.000
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	C	CERDEC Ft Belvoir, VA	0.000	1.048		0.900		0.000		0.900	Continuing	Continuing	0
Concept & Technology Development	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.626		1.500		0.000		1.500	Continuing	Continuing	0
Subtotal			0.000	1.674		2.400		0.000		2.400			0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	C	ATEC APG, MD	0.000	0.100		0.100		0.000		0.100	Continuing	Continuing	0
Subtotal			0.000	0.100		0.100		0.000		0.100			0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K IECU	C	PM-MEP Ft Belvoir, VA	0.000	0.574		0.509		0.000		0.509	Continuing	Continuing	0
Subtotal			0.000	0.574		0.509		0.000		0.509			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	4.573		5.069		0.000		5.069			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev		PROJECT L47: IMPROVED ENVIRONMENTAL CONTROL UNITS ED	
Schedule Details					
		Start		End	
Event		Quarter	Year	Quarter	Year
SDD Contract Award		2	2009	2	2009
SDD Phase I		2	2009	1	2010
SDD Phase II		2	2010	3	2012
Conduct User Evaluation & Validation/Verification		4	2011	4	2011
Milestone C Decision		3	2012	3	2012

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