

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE			
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev			
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	40019	38391	36018	Continuing	Continuing
194 ENGINE DRIVEN GEN ED	11439	6348	1390	Continuing	Continuing
H01 COMBAT ENGINEER EQ ED	2959	3259	8496	Continuing	Continuing
H02 TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	6530	12211	9784	Continuing	Continuing
H14 MATERIALS HANDLING EQUIPMENT - ED	134	452	501		1087
L39 Field Sustainment Support ED	7335	2084	4527	Continuing	Continuing
L41 WATER AND PETROLEUM DISTRIBUTION - ED	5167	5839	2503	Continuing	Continuing
L42 CAMOUFLAGE SYSTEM ED	240	247			487
L43 ENGINEER SUPPORT EQUIPMENT - ED	495	513	978	Continuing	Continuing
L46 Maintenance Support Equipment	1406	1507	3266	Continuing	Continuing
L47 IMPROVED ENVIRONMENTAL CONTROL UNITS ED	4314	5931	4573		14818

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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BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	47108	37718	47619
Current BES/President's Budget (FY 2010)	40019	38391	36018
Total Adjustments	-7089	673	-11601
Congressional Program Reductions		-127	
Congressional Rescissions			
Congressional Increases		800	
Reprogrammings	-5791		
SBIR/STTR Transfer	-1298		
Adjustments to Budget Years			-11601

Change Summary Explanation: Funding - FY 2008 and FY 2010: Funds realigned to support Army higher priority requirements.

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BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT 194	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
194 ENGINE DRIVEN GEN ED	11439	6348	1390	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY09 will fund Advanced Medium Mobile Power Sources (AMMPS) pre-production tests, development tests and operational tests, complete type classification, materiel release and other actions required for Milestone C production award.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08: Begin AMMPS pre-production test sets. Continue engineering and logistics data deliverables.	11439		
FY09: Complete AMMPS pre-production test sets. Continue engineering and logistics data deliverables. Begin Developmental Testing.		6192	
FY08: 2KW Military Tactical Generator Product Improvement			
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.			1210
FY10-FY11: LAMPS Prepare performance Spec. Begin PHASE I SDD.			180
Small Business Innovative Research/Small Business Technology Transfer Program		156	
Total	11439	6348	1390

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
0603804A - Logistics and Engineer Equipment - Adv Dev G11	3067	3346	2636	Continuing	Continuing
OPA3, MA9800, Generators and Associated Equipment	241798	254809	208277	Continuing	Continuing

Comment:

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0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

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C. Acquisition Strategy Perform Developmental Testing (DT)/Operational Testing (OT) for the AMMPS family; perform phase II contract award through a down select. Developmental test and evaluation of technologies that transition into procurement after Milestone C. Complete Delivery of Technical Drawing Packages, Repair Parts and Special Tools List (RPSTL), Technical Manuals and Training Packages in preparation of Milestone C and Phase III-Production and Fielding.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							194		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	CPFF	Various	28137	7256	2-4Q	700	2Q	600	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	CPFF	Various	3300		4Q						3300	
IECU	CPFF	Various	613							Cont.	Cont.	
LAMPS (100-200kw)											1415	
Subtotal:			32050	7256		700		600		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	2375	1319	2Q	400	1Q	200	2Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	In-house	CECOM, Ft Belvoir, VA	65								65	
IECU		CECOM, Ft Belvoir, VA/	372							Cont.	Cont.	
Subtotal:			2812	1319		400		200		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	MIPR	Various	2031	2559	2Q	4790	1Q	200	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Belvoir, VA	216								216	
Subtotal:			2247	2559		4790		200		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY
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PROJECT
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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	2507	305	1-4Q	458	1-4Q	210	1-4Q	Cont.	Cont.	
IECU		CECOM, Ft Belvoir, VA	15							Cont.	Cont.	
LAMPS (100-200kw)								180	1-4Q		180	
Subtotal:			2522	305		458		390		Cont.	Cont.	
Project Total Cost:			39631	11439		6348		1390		Cont.	Cont.	

Schedule Profile (R4 Exhibit)

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5 - System Development and Demonstration

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0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
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Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
AMMPS Program																																
Award Phase II / Conduct DT & OT																																
(1) MS C																																
(2) Production Release																																
Transition to Production																																
2kW Follow-on Improvement Program																																
Award Multiple Contracts																																
LAMPS (Large Advanced Mobile Power Systems)																																
Prepare Performance Spec																																

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev						194
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
AMMPS Program	1Q - 4Q	1Q - 4Q	1Q - 3Q					
Award Phase II / Conduct DT & OT	1Q - 4Q	1Q - 4Q	1Q					
MS C			3Q					
Production Release			4Q					
Transition to Production			4Q					
2kW Follow-on Improvement Program	1Q - 4Q							
Award Multiple Contracts	1Q - 4Q							
LAMPS (Large Advanced Mobile Power Systems)			3Q - 4Q					
Prepare Performance Spec			3Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT H01	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
H01 COMBAT ENGINEER EQ ED	2959	3259	8496	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration 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 and III); Scrapers, Scoop Loaders, Skid Steer Loaders, Deployable Universal Combat Earthmover (DEUCE), Hydraulic Excavators (HYEX), Dozers and Graders.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-FY09: Conducts market research and update specs for future engineer transformation.	67	270	
FY08-FY09: Continues development of engineer and acquisition documents required for Milestone Decisions.	67	20	
FY08-FY09: Conducts Test and Evaluation of future engineer equipment.		150	
FY08-FY11: Design armor kits for Construction Equipment.	1592		
FY08: Conducts Armor Test and Evaluation for Construction Equipment Systems	1233		
FY09: Development of Robotics Research		1319	260
FY09: Simulator Development		1409	1250
FY10: Forced Entry (Airborne/Air Assault) HMEE Type II Development			5274
FY10-FY11: Survivability Enhancements and Armor for Construction Equipment			1712
Small Business Innovative Research/Small Business Technology Transfer Program		91	
Total	2959	3259	8496

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA3, R05900, High Mobility Engineer Excavator I	25637	24309	24997	Continuing	Continuing
OPA3, R05910, High Mobility Engineer Excavator III	14179	30199	15299		71179
OPA3, R03801, Grader, Mtzd, Hvy	14908	37698	56267	Continuing	Continuing

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BUDGET ACTIVITY	PE NUMBER AND TITLE				PROJECT
5 - System Development and Demonstration	0604804A - Logistics and Engineer Equipment - Eng Dev				H01
OPA3, R14200, Scraper, Elevating SP 11 CY Min Sec	22980				22980
OPA3, M06400, Loader, Scoop Type, 2 1/2 CU YD	6547	14212		12393	57140
OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD	13205	13776		11189	38170
OPA3, X01500, Hydraulic Excavator	3904	9565		14762	40675
OPA3, M08100, Plant, Asphalt Mixing		7960		14278	56950
OPA3, M06100, Tractor Full Tracked, Med T-9	8134	33727		55388	544912

Comment:

C. 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, availability, and maintainability and reduce the logistical footprints for future CE equipment.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							H01		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Non-split rim wheel development	FFP	Hutchinson Tire, Hutchinson, KS	400								400	400
Complete SDD Contracts for HMEE Type I	FFP	ADI, Australia; JCB, Pooler, GA	4047								4047	4047
Market Research, Studies, Update Specs for future engineer	various	multiple activities	1423	20	1-4Q	20	1-4Q			Cont.	Cont.	Cont.
Continue development of engineer and acquisition documents	various	multiple activities	1622	20	1-4Q	20	1-4Q			Cont.	Cont.	Cont.
Design armor kits for Construction Equipment	various	multiple activities	3372	1592	1-2Q					Cont.	Cont.	Cont.
Conduct feasibility studies to armor Construction Equipment Systems	various	multiple activities	200							Cont.	Cont.	Cont.
Development of Robotic Research for Construction Equipment	TBD	TBD				1319	1-4Q	260			1579	
Armor Development for HMEE I Light & Heavy Loaders and HYEX	TBD	TBD	8352	1233	2-4Q						9585	
Development of Simulator	MIPR	PEO Stricom, Orlando, FL				1500	1-4Q	1250	1-4Q		2750	
Survivability Enhancements and Armor for Construction Equipment	MIPR	Multiple Activities						850	1-4Q		1700	
Forced Entry Airborne(Air Assault) HMEE Type II Development	MIPR	Multiple Activities						4774	1-4Q		4774	
Subtotal:			19416	2865		2859		7134		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	TACOM & TARDEC,	10580					913	1-2Q	Cont.	Cont.	Cont.

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BUDGET ACTIVITY			PE NUMBER AND TITLE								PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev								H01		
		Warren, MI											
Engineering Operational Integrator Support	MIPR	DA/Pentagon, Washington, DC	156									156	156
Construction Equipment Lease Study	MIPR	TACOM & TARDEC, Warren, MI	200			250	1-4Q					450	400
Subtotal:			10936			250		913			Cont.	Cont.	Cont.
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
HMEE Type I (6 prototypes)	MIPR	ATEC, Aberdeen, MD	784								784	784	
Armor Tests for IHMEE & DEUCE	MIPR	ATEC, Aberdeen, MD	484							Cont.	Cont.	Cont.	
Future Engineer Equipment (various)	MIPR	ATEC, Aberdeen, MD	2882			150	1-4Q			Cont.	Cont.	Cont.	
Subtotal:			4150			150				Cont.	Cont.	Cont.	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Program Mgt	In-house	PM CE/MHE, Warren, MI	762	94	1-2Q			449	1-2Q	Cont.	Cont.	Cont.	
Subtotal:			762	94				449		Cont.	Cont.	Cont.	
Project Total Cost:			35264	2959		3259		8496		Cont.	Cont.	Cont.	

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE																PROJECT														
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev																H01														
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(5) Develop Acquisition Documents	5				6																											
(6) T&E Armor Systems																																
Simulator Development for Construction Equipment					█																											
HMEE Type II Development Phase I									████████████████████																							
Survivability Enhancements for Construction Equipment									████████████████████																							

Schedule Detail (R4a Exhibit)

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BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev						H01	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
Market Surveillance/Investigation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
T&E of Technologies for Engineer Equip (from components to major systems)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Design Armor Kits	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
SDD of Air & Ground Line of Communication (LOC) enabling technologies	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
T&E of Air & Ground LOC technologies (graders, scrapers, earthmover)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
T&E of Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Market Surveillance/Investigation	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Test and Evaluation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Design Armor Kits for various Construction Equipment systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Air & Ground Line Of Communication (LOC) SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Air & Ground LOC Test & Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q						
T&E Armor Systems	1Q - 4Q	1Q - 4Q							
Simulator Development for Construction Equipment		2Q - 4Q							
HMEE Type II Development Phase I			2Q - 4Q	1Q - 4Q					
Survivability Enhancements for Construction Equipment			2Q - 4Q	1Q - 4Q					

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BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT H02	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
H02 TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	6530	12211	9784	Continuing	Continuing	

A. Mission Description and Budget Item Justification: This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include the integration and testing of forty-six meter capability for the Dry Support Bridge (DSB) as well as the development, integration and testing for float capabilities for the Dry Support Bridge (DSB). Other efforts includes are the development, integration and testing of the Bridge Erection Boat (BEB), 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 of a family of bridges (footbridge 4-8m, and 8-13m) self contained and independent bridges for Infantry Brigade Combat Team (IBCT) and Future Brigade Combat Team (FBCT), 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 AVLB, IRB, and DSB to higher Military Load Classifications, development and application of composite materials in bridging and testing these improvements at the Dynamic Structural Load Simulator Laboratory and start Multi-Functional Gap Crossing effort, and a "full closure" crossing assessment to increase the normal "wheeled" (W) Military Load Crossing (MLC) from the current MLC 96(W) to MLC 105(W).

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-FY10: Continues Development, integration, and test for the DSB 46 meter bridge.	2550	500	845
FY09-FY10: LOC Bridge POR Testing		2900	2000
FY09-FY10: JAB refurbishment of Test Assets.			2500
FY10: AEV (ABV/JAB) Simulator	2500		
FY10: ABV Tests.	300	350	
FY10: AVLB Upgrade Test (SANG):		300	
FY10: Refurbish BEB Test Assets			200
FY08-FY10: BEB Testing	406	6000	2000
FY09: Market investigations (BEB, Multifunctional Bridging, alternative material solution, IBCT Family of Bridges)			
FY09-FY10: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT).		1819	500
FY10: REBS refurbish test assets.			500
FY09-FY10: IBCT/FBCT 4-8 m Platform Independent Gap Defeat Solution Broad Agency Announcement, Demonstration and Government Test.			600
FY09-FY10: Multi-Functional Gap Crossing Effort: Feasibility Study & Investigation of a Bridge Launcher for current bridges.			

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BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT H02
FY08-FY10: Bridging Product Improvements	47	100
FY10:PM Bridging Hangar at SANG Base-Dynamic Structural Load Simulation Laboratory.	727	
FY10: Develop new composite material for Bridging		539
FY08: Small Business Innovative Research/Small Business Technology Transfer Program.		342
Total	6530	12211

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA3, MX0100, Tactical Bridge	50102	93930	64682	Continuing	Continuing
OPA3, MA8890, Tactical Bridging, Float Ribbon	74280	147270	149259	Continuing	Continuing

Comment:

C. Acquisition Strategy Limited RDT&E effort to support testing and follow-on production.

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							H02		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DSB 46 meter bridge	SS-CPFF/MIPR	WFEL, Stockport, England/ ATEC, APG/TARDEC, MI	1070	2550	3-4Q	500	1-3Q	845	1-2Q	Cont.	Cont.	1366
ABV Tests	MIPR	ATEC, APG		300	3Q	350	2-4Q				650	
AEV Simulator	MIPR	PEO-STRI, Orlando, FL		2500							2500	
AVLB Upgrade Test	MIPR					300	2-4Q				300	
JAB refurbishment of Test Assets	PWD	ANAD						2500	2-4Q		2500	
BEB Boat Development	C/REQ	TBD				4000	4Q				4000	
BEB Refurbish Test Assets	MIPR	ATEC, APG						200	2-4Q		200	
Market Investigation BEB, Multifunctional Bridging	MIPR										50	
IBCT/FBCT 4-8 m Gap Defeat		KMWMMB, Mainz Germany/Qinetiq, Hampshire, UK/UCSD, San Diego, CA						600	1-4Q		600	
REBS Auto Launch-Retrieve		GDELS, Germany, DE				1819	2-4Q	500	2Q		2319	
REBS refurbish test assets								500	2Q		500	
LOC refurbishment of test assets		Contractor Facility TBD									1000	
Multifunctional Gap Crossing											2000	
Bridging Product Improvements								100	1Q		600	
PM Bridging Hangar Improvements at SANG Base	MIPR	SANG, MI		727	4Q						727	
Develop New composite material for Bridging	MIPR							539	2Q		539	
Subtotal:			1070	6077		6969		5784		Cont.	Cont.	1366

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY			PE NUMBER AND TITLE								PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev								H02		
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Other Government Agencies	MIPR	TACOM, Warren, MI--Various	140								140		
Subtotal:			140								140		
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
LOC Testing	MIPR	ATEC, APG/ FT. Leonardwood				2900	4Q	2000	1-4Q		4900		
BEB Testing	MIPR	TBD		406	4Q	2000	3-4Q	2000	3-4Q		4406		
Subtotal:				406		4900		4000			9306		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Program Management Support	N/A	TACOM, Warren, MI	808	47							855		
Small Business Innovative Research/Small Business Technology Transfer Program	N/A	TACOM, Warren, MI				342					342		
Subtotal:			808	47		342					1197		
Project Total Cost:			2018	6530		12211		9784		Cont.	Cont.	1366	

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H02

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Dev, Integ, & Test DSB 46 Meter Bridge	█				█				█				█																			
BEB Testing	█				█				█				█																			
Dev, Integr. & Test REBS Auto Launch-Retrieve	█				█				█				█																			
Refurbish REBs Test Assets	█				█				█				█																			
Develop Modular Comps and Lightweight Mat for Bridging Applications	█				█				█				█				█				█				█							
LOC POR testing	█				█				█				█																			
LOC Refurbishment of Test Assets	█				█				█				█				█															
JAB Refurbishment of Test Assets.	█				█				█				█																			
Develop IBCT/FBCT Demonstrators	█				█				█				█				█				█				█							
Test IBCT/FBCT Demonstrators	█				█				█				█				█															
Multifunctional Gap Crossing Effort: Feasibility Study & Investigation	█				█				█				█				█				█				█							
AEV Simulator	█				█				█				█																			
ABV Tests	█				█				█				█																			
Dynamic Structural Load Simulation Laboratory-SANG Base	█				█				█				█																			

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev						H02	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
Dev, Integ, & Test DSB 46 Meter Bridge	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
BEB Testing		4Q	1Q - 4Q	1Q - 4Q					
Dev, Integr, & Test REBS Auto Launch-Retrieve		2Q - 4Q	1Q - 4Q						
Refurbish REBs Test Assets			2Q - 4Q						
Develop Modular Comps and Lightweight Mat for Bridging Applications			2Q - 4Q	1Q - 4Q					
LOC POR testing		4Q	1Q - 4Q						
LOC Refurbishment of Test Assets				1Q - 4Q					
Test BEB SLEP	1Q - 4Q	1Q - 3Q							
Develop Modular Comps and Lightweight Material for Bridging Applications		1Q - 4Q	1Q - 4Q						
JAB Refurbishment of Test Assets.			1Q - 4Q						
Develop IBCT/FBCT Demonstrators			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Test IBCT/FBCT Demonstrators			1Q - 4Q	1Q - 4Q					
Multifunctional Gap Crossing Effort: Feasibility Study & Investigation		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
AEV Simulator			2Q - 4Q						
ABV Tests		3Q - 4Q							
Dynamic Structural Load Simulation Laboratory-SANG Base			1Q - 3Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT H14
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
H14 MATERIALS HANDLING EQUIPMENT - ED	134	452	501		1087

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 validating requirements, developing acquisition strategies, developing performance specifications and test and evaluation planning.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Programmatic Pre-Milestone C support of 5,000 LB Light Capacity Rough Terrain Forklift	56		
Rough Terrain Container Handler Crew Protection Kit Development.	78	100	
Rough Terrain Container Handler Crew Protection Kit Testing at Aberdeen Proving Grounds		190	251
Engineering for Modification Work Orders required (based off testing)		150	250
SBIR/STTR		12	
Total	134	452	501

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
RDTE, 0603804.DG14, Logistics Support Equipment, Advance	259	210		Continuing	Continuing
OPA3, M41200, Rough Terrain Container Handler (RTCH)	143432	115067	95599	Continuing	Continuing
OPA3, M41800, All Terrain Lifting Army System (ATLAS)	72618	54837	94217	Continuing	Continuing

Comment:

C. 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).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

H14

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L39	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
L39 Field Sustainment Support ED	7335	2084	4527	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, mortuary affairs systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment. 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.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY 08: Completed documentation package and obtained Milestone C approval for Mobile Integrated Remains Collection System (MIRCS) to transition into production. Developed training devices to facilitate institutional training on key components.	238		
FY 08: Started and completed Joint Precision Airdrop System (JPADS) 2K developmental Testing (DT) and Operational Testing (OT). FY09: Obtain JPADS 2K Milestone C and Full Material release and transition into production.	7097	2025	
FY 10: Initiate JPADS 10K OT. FY 11: Complete JPADS 10K OT and obtain Milestone C.			4379
FY 10: Execute Low Cost Aerial Delivery System (LCADS) P3I efforts with a focus on reuse.			148
Small Business Innovative Research/Small Business Technology Transfer Program		59	
Total	7335	2084	4527

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA 3, M77700 Mobile Integrated Remains Collection System	9874	17803	18335	Continuing	Continuing
OPA 3, MA7806 Precision Airdrop	199	26700	19700	Continuing	Continuing

Comment:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L39

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

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L39		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	In-House	PM FSS, Natick	2809	1901	1-4Q					Cont.	Cont.	3241
Soldier Support Equipment	Contracts	Various	13075	5003	1-4Q					Cont.	Cont.	
JPADS 10K Development	Contracts/In-House	Various				1062	1-4Q	240	1-4Q	Cont.	Cont.	
LCADS P3I efforts	Contracts/In-House	Various						148	1-4Q	Cont.	Cont.	
Develop Next Generation Transfer Case	Contracts/In-House	Various								Cont.	Cont.	
Subtotal:			15884	6904		1062		388		Cont.	Cont.	3241
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	1686							Cont.	Cont.	130
Soldier Support Equipment	MIPR	Yuma Proving Ground (YPG), AZ, AEC	6284			900	1-4Q			Cont.	Cont.	76
JPADS 10K DT	MIPR	YPG, AZ						2000	2-4Q	Cont.	Cont.	
JPADS 10K OT	MIPR	YPG, AZ/ OTC,NC						2000	4Q	Cont.	Cont.	
Subtotal:			7970			900		4000		Cont.	Cont.	206

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L39

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support		PM FSS, Natick	982	431	1-4Q	63	1-4Q	139	1-4Q	Cont.	Cont.	
SBIR/STTR						59	3Q				59	
Subtotal:			982	431		122		139		Cont.	Cont.	
Project Total Cost:			24836	7335		2084		4527		Cont.	Cont.	3447

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L39

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
(1) Milestone C MIRCS	▲ 1																																			
(2) Milestone C JPADS 2K									▲ 2																											
(3) Milestone C JPADS 10K/LRIP													▲ 3																							
DT/OT on JPADS 2K																																				
OT on JPADS 10 K																																				
OT on ACPRS																																				
(4) Milestone C on ACPRS																					▲ 4															
(5) Milestone C on Helicopter External/Internal Cargo Delivery																									▲ 5											
(6) Complete ALVADS-L Milestone C																									▲ 6											
Conduct DT/OT on ALVADS-L																																				
Conduct DV on JPADS 2K																																				
(7) Conduct Milestone C for JMIDS Joint Modular Intermodal Container System (JMICS)																					▲ 7															
(8) Conduct Milestone C on Next Generation Human Remains Transfer Case																					▲ 8															
Conduct DT and OT on ALVADS Rapid Rigging/Derigging Airdrop System																																				

0604804A (L39)
 Field Sustainment Support ED

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev						L39	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
Milestone C MIRCS	2Q								
Milestone C JPADS 2K		3Q							
Milestone C JPADS 10K/LRIP				3Q					
DT/OT on JPADS 2K	2Q - 4Q								
OT on JPADS 10 K			4Q	1Q					
OT on ACPRS				2Q - 4Q					
Milestone C on ACPRS					3Q				
Milestone C on Helicopter External/Internal Cargo Delivery							4Q		
Complete ALVADS-L Milestone C						4Q			
Conduct DT/OT on ALVADS-L					1Q - 4Q	1Q - 2Q			
Conduct DV on JPADS 2K	1Q - 2Q								
Conduct Milestone C for JMIDS Joint Modular Intermodal Container System (JMICS)					2Q				
Conduct Milestone C on Next Generation Human Remains Transfer Case					2Q				
Conduct DT and OT on ALVADS Rapid Rigging/Derigging Airdrop System						1Q - 4Q	1Q - 2Q		
Conduct Milestone C on ALVADS Rapid Rigging/Derigging Airdrop System							4Q		
Conduct Milestone C on Mobile Integrated Shop Shelter System								1Q	
Conduct Milestone C on JMIDS Intermodal Platform Capability (IPC)			1Q - 4Q	1Q - 4Q					
Execute LCADS P3I efforts			1Q - 4Q	1Q - 4Q					
JPADS 10K FMR/FRP				4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L41
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
L41 WATER AND PETROLEUM DISTRIBUTION - ED	5167	5839	2503	Continuing	Continuing

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.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-10: Develop prototype Advanced Petroleum Test Kit (PTK) and conduct developmental testing and limited user testing. Prepare technical data package for production.	1451	1200	465
FY08-09: 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.	1500	2449	
FY08-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.	716	2028	320
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.			1218
FY08: Complete Production Verification Testing on the 900 Gallon Unit Water Pod (Camel), document and verify logistical data, prepare program management documentation for type classification standard and materiel release, and conduct Milestone C. Complete system-level logistics demonstration and operational testing.	1500		
FY10: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys, component testing and user testing.			500

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT L41
FY10: Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR).		162
Total		5167 5839 2503

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	2442	439	3277	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	43719	51164	8272	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	34173	61545	92877	Continuing	Continuing
OPA 3, MB6400, Quality Surveillance Equipment	1284	1285		Continuing	Continuing

Comment:

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L41		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	C-CPPF	TBD		700	2Q	900	1Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	MIPR	TARDEC, Warren, MI		200	1Q	200	1Q	200	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP) Improvements	In-House	TARDEC, Warren, MI		50	1Q	200	2Q	300	1Q	Cont.	Cont.	Cont.
FSSP Improvements	C-CPPF	MTC, Dayton, OH		600	1Q	900	2Q			Cont.	Cont.	Cont.
Water Purification Systems Improvements	MIPR	TARDEC, Warren, MI		100	1Q	150	1Q	100	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements	MIPR	NFESC, Port Hueneme, CA		116	1Q					Cont.	Cont.	Cont.
Water Purification Systems Improvements	Purchase Order	TBD						120	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	MIPR	TARDEC, Warren, MI	150	100	1Q					Cont.	Cont.	Cont.
Water Packaging System	MIPR	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Water Packaging System	C-CPPF	DRS				1309	3Q			Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS-E)	MIPR	TARDEC, Warren, MI						200	1Q	Cont.	Cont.	Cont.
Subtotal:			150	1866		3659		920		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI		50	1Q	50	1Q			Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	In-House	TARDEC, Warren, MI		25	1Q	100	1Q			Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	In-House	TARDEC, Warren, MI						100	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements	In-House	TARDEC, Warren, MI		50	1Q	100	1Q			Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L41		
Unit Water Pod (Camel) 900 Gallon	In-House	TARDEC, Warren, MI	100	75	1Q					Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	C-CPFF	TBD	1394	125	1Q					Cont.	Cont.	Cont.
Water Packaging System	In-House	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Subtotal:			1494	325		250		100		Cont.	Cont.	Cont.
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI		50	1Q	50	1Q	265	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	MIPR	TARDEC, Warren, MI		275	1Q	382	1Q	743	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	MIPR	Yuma Proving Ground, Yuma, AZ		450	1Q	746	2Q			Cont.	Cont.	Cont.
Water Purification Improvements	MIPR	NFESC, Port Hueneme, CA	332	400	1Q	250	1Q			Cont.	Cont.	Cont.
Water Purification Improvements	In-House	TARDEC, Warren, MI		50	1Q	340	1Q	175	1Q	Cont.	Cont.	Cont.
Water Purification Improvements	MIPR	Aberdeen Proving Ground, Aberdeen, MD								Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	MIPR	Yuma Proving Ground, Yuma, AZ	1996	1751	1Q					Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS-E)	MIPR	TBD						300	1Q	Cont.	Cont.	Cont.
Subtotal:			2328	2976		1768		1483		Cont.	Cont.	Cont.
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR						162	3Q				162	
Subtotal:						162					162	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev						PROJECT L41			
Remarks: not applicable										
Project Total Cost:	3972	5167		5839		2503		Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L41

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests					Develop, Design, Fabricate, Test - PTK																											
Family of Fuel System Supply Points (FSSPs): Performance of common pumps					Performance of common pumps-FSSPs																											
Evaluate Improvements to Water Purification and Distribution Systems					Water Purif Systems and Distribution Systems																											
Unit Water Pod (Camel): Technical and User Testing, Support Data, Log Demo					Testing, Support Data, Log Demo - Camel																											

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev						L41	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests	1Q - 4Q	1Q - 4Q							
Family of Fuel System Supply Points (FSSPs): Performance of common pumps	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Evaluate Improvements to Water Purification and Distribution Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Unit Water Pod (Camel): Technical and User Testing, Support Data, Log Demo	1Q - 4Q	1Q - 4Q							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L42
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
L42 CAMOUFLAGE SYSTEM ED	240	247			487

A. Mission Description and Budget Item Justification: 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.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY 08: Developed prototype technology enhancements for Woodland ULCANS variants to counter emerging enemy detection technologies, incorporating digital design using hyperspectral sensors to obtain spectral optimization. Initiated development of threat database and coating pigment database for joint interest special application efforts. Initiated testing of hardware samples. FY 09: Complete multispectral and hyperspectral testing on Desert ULCANS and prototype materials. Complete development of modification kits for STRYKER topside ULCANS nets.	240	247	
Total	240	247	

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
RDTE, 0622712.AH35, Camouflage Technology	2734	2845	2861	Continuing	Continuing

Comment:

C. Acquisition Strategy 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.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L42		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Camouflage Equipment testing and technology insertion	MIPR	CECOM, FT Belvoir	551	240	1-4Q	247	1-4Q				1038	
ULCANS Technology Insertion	CPFF	CECOM, FT Monmouth	701							Cont.	701	
Subtotal:			1252	240		247				Cont.	1739	
II. Support Costs			Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
III. Test And Evaluation			Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ULCANS, Arctic/Snow	MIPR	TECOM, WSMR	524								524	
Subtotal:			524								524	
IV. Management Services			Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	MIPR	CECOM, FT Belvoir	720							Cont.	720	
Program Support	Contract	Radian, INC	320							Cont.	320	
Subtotal:			1040							Cont.	1040	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L42

Project Total Cost:

2816

240

247

Cont.

3303

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L42

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
(1) Technology Enhancement to Woodland ULCANS	▲				▲																															
Develop STRYKER mod kits													■																							
Conduct testing on Desert ULCANS													■																							
Technology enhancement to Desert ULCANS													■																							

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L42	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Technology Enhancement to Woodland ULCANS	1Q - 4Q							
Develop STRYKER mod kits		1Q - 2Q						
Conduct testing on Desert ULCANS		1Q - 2Q						
Technology enhancement to Desert ULCANS		1Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L43	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
L43 ENGINEER SUPPORT EQUIPMENT - ED	495	513	978	Continuing	Continuing

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).

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Procure test and evaluate market samples of the Pioneer Support Set and Pioneer Land Clearing and Building Set.	31		
Development of the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE).	100	80	
Sets, Kits, and Outfits (SKOs) optimization efforts for Expedited Modernization Initiative Program (EMIP)/ Board of Directors (BOD) and individual tool procurement for modernizing SKOs.	12	12	
Allied Trade Organization (ORG) & General Purpose (GP) Market Investigation, Engineering Effort and Develop Performance Specifications for ORG/GP Set to procure prototypes in FY08 and conduct test and evaluation in FY09.	182	55	
Modernize the Surface Swimmer Support Set and Individual Swimmer Support Set.	100		
Update Engineering type SKOs to support Future Combat Systems/Conduct on site reviews.	70		
Procure Market Samples for Test and Evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electrician, Plumbers, Pipefitters, and Field Lighting Sets.		170	
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)		183	278
Procure test articles and field test Closed Circuit Scuba Set for suitability.			250
Procurement of test articles based on Capabilities Production Document (CPD) requirements for the family of diving air compressors			250
Redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment)			200
SBIR / STTR		13	
Total	495	513	978

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT L43
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<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA 3 ML5301, Items Less than \$5.0M (Engineering Support)	23325	38435	30518	Continuing	Continuing

Comment:

C. Acquisition Strategy 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.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L46	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
L46 Maintenance Support Equipment	1406	1507	3266	Continuing	Continuing

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 Allied Trade 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.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Optimization of antiquated SKOs to support modularity in a 2 level maintenance environment including Towbar redesign.			100
Modernize and update tool loads - Procure and verify additional items based on field feedback. Create Purchase Descriptions and purchase Support Equipment test articles.	200		334
Unique Identification Codes and Warranty/Replacement system enhancements/testing. Joint Modular Intermodal Container System/Joint Modular Intermodal Distribution System (JMICS/JMIDS) Containers.	80		625
Future Combat Systems	220		70
Fund efforts to create documentation for Industrial Plant Equipment (IPE) and air compressors to allow creation of Purchase Descriptions and procurement of test articles.	360		
Design, Develop, Build, and Test Allied Trade configurations.	151		922
Composite Manipulation. Joint container utilization research. Virtual Engineering incorporation and enhancements.	183		63
Machinist Tool Sets Shelter and Non-Shelter	100	70	
Perform testing on Flatrack design for the Forward Repair System (FRS). FY09 Modernize/Update Tool Load (verify additional items based on Field Feedback).	100	50	
Procure new technical tools and subsequent evaluations of tools for SKO optimization.	12	12	12
Modernization / Redesign efforts of SECM for next generation of vehicles.		392	400
Support for requirements generation.		311	340
Create Purchase Descriptions and procure IPE and Air Compressors.		334	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT L46
Develop Rapid Deployment Sets, Kits, and Outfits (SKO) - Special Tool Initiative.		154 100
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.		141
Fire Suppression Systems		300
Armament Shop Upgrades		
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		43
Total	1406	1507 3266

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA 1, DL5110, Items Less Than \$5.0M (TACTICAL VEHICLE)	8000	2902	298	Continuing	Continuing
OPA 3, G05302, Forward Repair System	113794	127311	62884	Continuing	Continuing
OPA 3, M61500, Shop Equipment, Contact Maintenance	96791	17754	49651	Continuing	Continuing
OPA 3, MA9650, Standard Automotive Tool Set	189998	34211	35344	Continuing	Continuing
OPA 3, ML5345, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)	1386	1325	1358	Continuing	Continuing

Comment:

C. 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.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L46		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Maintenance Support Equipment Life Cycle Configuration Analyses and ICD Development Support	In-House	PM SKOT Rock Island	865					674	1-3Q	Cont.	Cont.	Cont.
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	In-House	PM SKOT Rock Island	183							Cont.	Cont.	Cont.
Modernization of Industrial Plant Equipment (IPE)	MIPR / In-House	TBD / PM SKOT Rock Island				291	1-3Q			Cont.	Cont.	Cont.
Expedited Modernization Initiative Procedure (EMIP) Procurement of new Technical Tools	In-House	PM SKOT Rock Island		12	1-3Q	12	1-3Q	12	1-3Q	Cont.	Cont.	Cont.
Machinist Tool Sets, Shelter / Non-Shelter	In-House	PM SKOT Rock Island		100	1-3Q	70	1-3Q			Cont.	Cont.	Cont.
Allied Trades Test Article Configurations	In-House	PM SKOT Rock Island		151	1-3Q			872	1-3Q	Cont.	Cont.	Cont.
Modernization / Redesign efforts of Shop Equipment, Contact Maintenance for next generation vehicles	In-House	PM SKOT Rock Island				392	1-3Q			Cont.	Cont.	Cont.
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative. Joint Aviation Tool Set	In-House	PM SKOT Rock Island				154	1-3Q	100	1-3Q	Cont.	Cont.	Cont.
Subtotal:			1048	263		919		1658		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Life Cycle Configuration Analyses	In-House	PM SKOT Rock Island	152							Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L46		
& Support to Initial Capabilities Development Document												
Future Combat Systems	In-House	PM SKOT Rock Island		220	1-3Q					Cont.	Cont.	Cont.
Modernization of Tool Loads based on Field Feedback	In-House	PM SKOT Rock Island		200	1-3Q			300	1-3Q	Cont.	Cont.	Cont.
Industrial Plant Equipment Documentation for new test articles	MIPR / In-House	TBD / PM SKOT Rock Island		360	1-3Q	311	1-3Q			Cont.	Cont.	Cont.
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.	MIPR / In - House	ECBC / ARDEC / PM SKOT Rock Island				141	1-2Q	63	1-2Q	Cont.	Cont.	Cont.
Subtotal:			152	780		452		363		Cont.	Cont.	Cont.
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	MIPR/ In-House	Army Test & Evaluation Command (ATEC)/PM SKOT Rock Island/CASCOM Ordnance Center & School, Ft. Lee	830							Cont.	Cont.	Cont.
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability		PM SKOT Rock Island	263							Cont.	Cont.	Cont.
Forward Repair System Flatrack Redesign. FY09 Modernize/Update Tool Load.	In-House	PM SKOT Rock Island		100	1-3Q	93	1-3Q			Cont.	Cont.	Cont.
Testing of Support Equipment Items and Configurations	MIPR/ In-House	Army Test & Evaluation Command (ATEC)/ PM SKOT/ECBC						400	1-3Q		1473	
Testing of Fire Suppression	MIPR/ In-House	Army Test & Evaluation Command (ATEC)/PM						300	1-3Q		300	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev							PROJECT L46				
		SKOT/ECBC										
Subtotal:			1093	100		93		700		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Conduct Sets, Kits, & Outfits (SKO) Modernization Efforts	MIPR/ In-House	Army Test & Evaluation Command & PM SKOT Rock Island	688					70	1-3Q	Cont.	Cont.	Cont.
Composite Manipulation	In-House	PM SKOT Rock Island		183	1-3Q					Cont.	Cont.	Cont.
Unique Identification Codes, Joint Modular Intermodal Container/Distribution System (JMICS/JMIDS)	In-House	PM SKOT Rock Island		80	1-3Q			475	1-3Q	Cont.	Cont.	Cont.
SBIR/STTR						43	3Q				43	
Subtotal:			688	263		43		545		Cont.	Cont.	Cont.

Project Total Cost:			2981	1406		1507		3266		Cont.	Cont.	Cont.
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Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L46

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Modernization / Redesign efforts of SECM for next generation of vehicles.																																
Design, Develop, Build and Test Allied Trade Configurations																																
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets																																

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev						L46
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Modernization / Redesign efforts of SECM for next generation of vehicles.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Design, Develop, Build and Test Allied Trade Configurations	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		

Modernization / Redesign efforts of Shop Equipment, Contact Maintenance (SECM) for next generation of vehicles.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L47
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
L47 IMPROVED ENVIRONMENTAL CONTROL UNITS ED	4314	5931	4573		14818

A. Mission Description and Budget Item Justification: The Improved Environmental Control Units (IECU) program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of Environmental Control Units (ECUs). The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II 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. FY09 will fund System Development and Demonstration (SDD) Phase activities for 9, 18 and 36K IECUs.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08: 9, 18 and 36K IECU System Development and Demonstration (SDD) contract award.	2649		
FY08: Milestone C Decision for the 60K BTU/H IECU	800		
FY08: Perform Type Classification Materiel Release (MR) and other actions required for Milestone C Full Rate Production (FRP) decision for the 60K IECU.	865		
FY09: Continue SDD for the 9, 18 and 36K IECUs.		4714	3947
Concept and Technology Development		1051	626
Small Business Innovative Research/Small Business Technology Transfer Program		166	
Total	4314	5931	4573

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA 3, Improved Environmental Control Units , MF9303	10320	11168	11924		33412

Comment: Based on JUN 09, 9/18/36 K IECU Contract Award

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L47

C. 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.

60K IECU: in LRIP (FY09) OPA funding.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L47		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	CPFF	Various		2649	4Q	3010	3Q	2225	2Q	Cont.	Cont.	
60K IECU	CPFF	Various		18	2Q					Cont.	Cont.	
Subtotal:				2667		3010		2225		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA			2Q	814	2Q	1200	2Q	Cont.	Cont.	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA		1335	2Q					Cont.	Cont.	
Concept & Technology Development						1051	2Q	626	2Q		1677	
Subtotal:				1335		1865		1826		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	ATEC, APG, MD				500	3Q	100	3Q	Cont.	Cont.	
Subtotal:						500		100		Cont.	Cont.	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT	
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev							L47	
9, 18 and 36K IECU	In-house	PM-MEP, Ft Belvoir, VA			1-4Q	556	1-4Q	422	1-4Q	Cont.	Cont.
60K IECU	In-house	PM-MEP, Ft Belvoir, VA		312	1-4Q					Cont.	Cont.
Subtotal:				312		556		422		Cont.	Cont.
Project Total Cost:											
				4314		5931		4573		Cont.	Cont.

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
9, 18 and 36K BTU/H IECU																																				
(1) SDD Contract Award																																				
SDD Phase I																																				
60K BTU/H IECU																																				
(2) Milestone C Decision																																				

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L47	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
9, 18 and 36K BTU/H IECU								
SDD Contract Award		3Q						
SDD Phase I		3Q - 4Q	1Q - 2Q					
SDD Phase II			3Q - 4Q					
60K BTU/H IECU								
Milestone C Decision	2Q							