

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY		PE NUMBER AND TITLE								
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev								
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	14790	42330	45009	35971	47967	51896	57894	49424	Continuing	Continuing
194 ENGINE DRIVEN GEN ED	3900	16826	8696	4402	1399	1400	2375	1552	Continuing	Continuing
H01 COMBAT ENGINEER EQ ED	4956	4831	3386	3298	10722	10742	9844	8037		55816
H02 TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	956	2871	9331	12337	12237	12616	15044	17037		82429
H14 MATERIALS HANDLING EQUIPMENT - ED	479	511	414	457	517	992	1106	1257		6202
L39 Field Sustainment Support ED	1848	8357	7489	2107	4664	6690	6619	6776		44550
L41 WATER AND PETROLEUM DISTRIBUTION - ED	2651	7218	9012	5091	3359	3383	2049	3965		44746
L42 CAMOUFLAGE SYSTEM ED			248	250	1584	1375	2600	1700		9293
L43 ENGINEER SUPPORT EQUIPMENT - ED		307	513	517	6622	4967	10000	5100		28026
L46 Maintenance Support Equipment		1409	1455	1523	3363	8231	8257	4000		28238
L47 IMPROVED ENVIRONMENTAL CONTROL UNITS ED			4465	5989	3500	1500				15454

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	PE NUMBER AND TITLE			
5 - System Development and Demonstration	0604804A - Logistics and Engineer Equipment - Eng Dev			
<u>B. Program Change Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	14150	40301	36791	44482
Current BES/President's Budget (FY 2008/2009)	14790	42330	45009	35971
Total Adjustments	640	2029	8218	-8511
Congressional Program Reductions	-217	-162		
Congressional Rescissions	-143			
Congressional Increases	1000	2500		
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years		-309	8218	-8511

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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 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
194 ENGINE DRIVEN GEN ED	3900	16826	8696	4402	1399	1400	2375	1552	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. FY08 and FY09 will fund completion of 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.

Accomplishments/Planned Program:	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY06: Initiated a downselect to 1 contractor to award Phase II for Advanced Medium Mobile Power Sources (AMMPS).	3900			
FY07: Award Phase II System Development and Demonstration (SDD) contract to build 120 pre-production sets for operational testing and developmental testing in FY08 for AMMPS and continue engineering and logistics data deliverables		13874		
FY07: Conduct product enhancement efforts to extend service life and minimize operator maintenance requirements for the 2 kW Military Tactical Generator (MTG).		1500		
FY07: Conduct market research analysis and user requirements study to better define acquisition strategy for the 9, 18, 36K Improved Environmental Control Unit (IECU)		1000		
FY07: Small Business Innovative Research (SBIR)		404		
FY07: Small Business Technology Transfer Research (STTR)		48		
FY08: Complete AMMPS pre-production test sets and begin Developmental Test (DT). Continue engineering and logistics data deliverables.			8696	
FY09: Complete DT and begin Operational Test (OT) for AMMPS. Complete Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g., TM's, sustainment test, fielding plans.				4402
Total	3900	16826	8696	4402

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603804A - Logistics and Engineer Equipment - Adv	1763	2030	3171	3390	2926	2942	1642	740	Continuing	Continuing

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT 194		
Dev G11										
0604804A - Logistics and Engineer Equipment - Eng Dev L47			4465	5989	3500	1500				15454
OPA3, MA9800, Generators and Associated Equipment	65816	90789	92863	159816	142716	131504	131767	23601	Continuing	Continuing

Comment:

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.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	CPFF	Various	12928	3564	2Q	13524	3-4Q	3494	2Q	700	2Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	CPFF	Various	1800			1500	2Q						3300	
IECU	CPFF	Various				613	2-4Q					Cont.	Cont.	
Subtotal:			14728	3564		15637		3494		700		Cont.	Cont.	
II. Support Costs			Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	2175	100	1Q			400	1Q	400	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	In-house	CECOM, Ft Belvoir, VA	65										65	
IECU		CECOM, Ft Belvoir, VA/				372	2-4Q					Cont.	Cont.	
Subtotal:			2240	100		372		400		400		Cont.	Cont.	
III. Test And Evaluation			Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	MIPR	Various	1878			500	2Q	4500	1Q	3000	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Belvoir, VA	216										216	
IECU														
Subtotal:			2094			500		4500		3000		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	1733	236	1-4Q	302	1-4Q	302	1-4Q	302	1-4Q	Cont.	Cont.	
Follow-on 2kW Improvement Program														
IECU		CECOM, Ft Belvoir, VA				15	1-4Q					Cont.	Cont.	
Subtotal:			1733	236		317		302		302		Cont.	Cont.	
Project Total Cost:			20795	3900		16826		8696		4402		Cont.	Cont.	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
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Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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 / Production Release, (2) Transition to Production																																
Tactical Quiet Generators																																
(3) Service Life Extension Program																																
STEP (Small Tact. Electric Power)																																
(4) Prepare Performance Spec																																
2kW Follow-on Improvement Program																																
(5) Award Multiple Contracts																																
IECU 9, 18, 36K Program																																
(6) Prepare Contract Solicitation																																
LAMPS (Large Advanced Mobile Power Systems)																																
(7) Prepare Performance Spec. / MS B																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
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<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>
AMMPS Program	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Award Phase II / Conduct DT & OT		2Q - 4Q	1Q - 4Q	1Q - 2Q				
MS C / Production Release			1Q - 3Q	4Q				
Transition to Production				4Q				
Tactical Quiet Generators								
Service Life Extension Program					1Q - 4Q	1Q - 4Q		
STEP (Small Tact. Electric Power)								
Prepare Performance Spec							3Q - 4Q	1Q - 3Q
2kW Follow-on Improvement Program								
Award Multiple Contracts		3Q - 4Q	1Q - 3Q					
IECU 9, 18, 36K Program								
Prepare Contract Solicitation		2Q - 4Q						
LAMPS (Large Advanced Mobile Power Systems)	1Q							
Prepare Performance Spec. / MS B						4Q	1Q - 4Q	1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT H01	
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
H01 COMBAT ENGINEER EQ ED	4956	4831	3386	3298	10722	10742	9844	8037		55816

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) modularity 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 modularity 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.

Accomplishments/Planned Program:	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY06-FY09: Conducts market research and update specs for future engineer transformation.	20	50	20	20
FY06-FY09: Continues development of engineer and acquisition documents required for Milestone Decisions.	20	475	20	20
FY06-FY09: Conducts Test and Evaluation of future engineer equipment.	135	460		150
FY06-FY07: Design armor kits for Construction Equipment.	566	1200	1686	
FY06: Conducts feasibility studies for armor on Construction Equipment.	100			
FY06-FY08: Conducts Armor Test and Evaluation for Construction Equipment Systems	4115	1400	1660	
FY07: Initiates SDD of systems enabling A/G LOC Repair and Construction capabilities				
FY07: Productivity analysis of commercial tactic, techniques and procedures (TTP) for load and haul.		1110		
FY09: Development of Robotics Research				3108
FY07: SBIR/STTR		136		
Total	4956	4831	3386	3298

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, R05900, High Mobility Engineer Excavator I	5310	40815	23760	24475	25210	25965			Continuing	Continuing
OPA3, R05910, High Mobility Engineer Excavator III	5257	8239	14040	14465	14250	500				56751
OPA3, R03801, Grader, Mtzd, Hvy		13886	1170	15550	23646	25897			Continuing	Continuing
OPA3, R14200, Scraper, Elevating SP 11 CY Min Sec		10407	19440	19797	15643					65287

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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, M06400, Loader, Scoop Type, 2 1/2 CU YD			6070	6479	6528	6633	6761	6815		39286
OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD	13058	17971	12772	12826	10240	500	250	250		67867
OPA3, X01500, Hydraulic Excavator		5065	3371	5896	6059	6486				26877
OPA3, R03300, Roller, Vibratory, Self-Propelled (CCE)										
OPA3, M08100, Plant, Asphalt Mixing				7960	14400	14828				37188
OPA3, M06100, Tractor Full Tracked, Med T-9	4656	4780	6000	6180	6365	6560	17000	24700		76241

Comment:

C. Acquisition Strategy Conduct research, development, and investigations on future Construction Equipment (CE) and identify the pathforward 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)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 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	1333	20	1-4Q	50	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Continue development of engineer and acquisition documents	various	multiple activities	1107	20	1-4Q	440	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Design armor kits for Construction Equipment	various	multiple activities	1324	424	1-4Q	1200	1-4Q	1686	1-2Q			Cont.	Cont.	Cont.
Conduct feasibility studies to armor Construction Equipment Systems	various	multiple activities		100	2-4Q							Cont.	Cont.	Cont.
Initiate SDD for A/G LOC Repair and Construction	TBD	TBD										Cont.	Cont.	Cont.
Development of Robotic Research for Construction Equipment										3108	1-4Q		3108	
Armor Development for HMEE I Light & Heavy Loaders and HYEX		TBD		4115	1-2Q	1400	1-2Q	1660	2-4Q				7175	
Subtotal:			8211	4679		3090		3386		3148		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	TACOM & TARDEC, Warren, MI	10580									Cont.	Cont.	Cont.
Engineering Operational Integrator Support	MIPR	DA/Pentagon, Washington, DC	156										156	156
Construction Equipment Lease	MIPR	DA/Pentagon,	200										200	400

ARMY RDT&E COST ANALYSIS (R3)											February 2007			
BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev									H01		
Study		Washington, DC												
Subtotal:			10936									Cont.	Cont.	Cont.
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 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	200	142	1-4Q		1-4Q		1-4Q			Cont.	Cont.	Cont.
Future Engineer Equipment (various)	MIPR	ATEC, Aberdeen, MD	2152	135	1-4Q	495	1-4Q			150	1-4Q	Cont.	Cont.	Cont.
Productivity analysis of TTP	various	multiple				1110	2-4Q						1110	1500
Subtotal:			3136	277		1605				150		Cont.	Cont.	Cont.
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Mgt	In-house	PM CE/MHE, Warren, MI	762									Cont.	Cont.	Cont.
SBIR/STTR						136	1-2Q						136	
Subtotal:			762			136						Cont.	Cont.	Cont.
Project Total Cost:			23045	4956		4831		3386		3298		Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

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BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
H01

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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
Market Surveillance/Investigation of Future Engineer Equipment	[Red grid background]																															
T&E of Technologies for Engineer Equip (from components to major systems)	[Red grid background]																															
Design Armor Kits	[Red grid background]																															
SDD of Air & Ground Line of Communication (LOC) enabling technologies	[Red grid background]																															
T&E of Air & Ground LOC technologies (graders, scrapers, earthmover)	[Red grid background]																															
Develop Acquisition Documents	[Red grid background]																															
T&E of Armor Systems	[Red grid background]																															
Productivity analysis for tactic, technique & procedures for load & haul	[Red grid background]																															
Engineering Lease Study	[Red grid background]																															

Schedule Detail (R4a Exhibit)

February 2007

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 2006</u>	<u>FY 2007</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>
Market Surveillance/Investigation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	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	1Q - 4Q	1Q - 4Q		
HMEE Source Selection								
HMEE System Demonstration Contract Award (2 contractors)								
HMEE System Demonstration Testing (PPT & LUT)								
HMEE MS C/ TC Generic								
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	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	1Q - 4Q	1Q - 4Q		
T&E of Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Milestone C and LRIP Approval for HMEE I								
Milestone C and LRIP Approval for HMEE III								
Productivity analysis for tactic, technique & procedures for load & haul		2Q - 4Q						
Engineering Lease Study		2Q - 4Q						
Market Surveillance/Investigation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Test and Evaluation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Design Armor Kits for various Construction Equipment systems	1Q - 4Q	1Q - 4Q	1Q - 4Q					

Air & Ground Line Of Communication (LOC) SDD	1Q - 4Q							
Air & Ground LOC Test & Evaluation		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Develop Acquisition Documents	1Q - 4Q							
T&E Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Productivity analysis for tactic, technique & procedure for load & haul	2Q - 4Q							
Engineering Lease Study	2Q - 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 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
H02 TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	956	2871	9331	12337	12237	12616	15044	17037		82429

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: Assessment of the Rapidly Emplaced Bridging System (REBS) for the Stryker Brigade Combat Team (SBCT) the development, integration and testing of forth-six meter capability for the Dry Support Bridge (DSB). Also included: is the development, integration and testing for float capabilities for the Dry Support Bridge (DSB, development, integration and testing an electronically controlled replacement engine for the Bridge Erection Boat (BEB), a remote controlled automatic launch for the REBS and finally integrate and test the REBS on an FCS chassis.

<u>Accomplishments/Planned Program:</u>	FY 2006	FY 2007	FY 2008	FY 2009
FY06: Continues Development, integration, and test for the DSB 46 meter bridge.	204			
FY06-FY09: Continues Development, integration, and test for the DSB Float Bridge.	247	2790	6331	4200
FY06: Arctic Kit development for the Rapidly Emplaced Bridging	505			
FY08-FY09: BEB Electronically Controlled Engine			3000	2000
FY09: Development, integration and testing of REBS Improved Bridge				2137
FY09: Development, integration and testing of REBS Auto Launch-Retrieve				2000
FY09: Integrate REBS bridge on FCS chassis.				2000
SBIR/STTR		81		
Total	956	2871	9331	12337

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MX0100, Tactical Bridge	25789	69328	50443	68572	60833	61351	63487	59487	Continuing	Continuing
OPA3, MA8890, Tactical Bridging, Float Ribbon	7697	150671	74785	105627	85999	76451	68500	52800	Continuing	Continuing

Comment:

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

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - System Development and Demonstration

0604804A - Logistics and Engineer Equipment - Eng Dev

H02

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DSB 46 meter bridge	SS-CPFF	WFEL, Stockport, England	662	204	1Q							Cont.	Cont.	1366
DSB float bridge	SS-CPFF	WFEL, Stockport, England		237	2Q	2780	1Q	6321	1Q	4200		6000	19538	8944
REBS Artic Kit		GDSBS, Germany, DE		505									505	505
BEB Elect Controlled Engine		FBM Babcock Marine Ltd, United Kingdom					1Q	3000	1Q	2000			5000	
REBS Improved Bridge		GDSBS, Germany, DE							1Q	2127			2127	
REBS Auto Launch-Retrieve		GDSBS, Germany, DE							1Q	2000			2000	
REBS Bridge on FCS Chassis		GDSBS, Germany, DE							1Q	2000			2000	
Subtotal:			662	946		2780		9321		12327		Cont.	Cont.	10815
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Government Agencies	MIPR	TACOM, Warren, MI--Various	120	10	2Q	10	1Q	10	1Q	10			160	
Subtotal:			120	10		10		10		10			160	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
REBS OT	MIPR	HQ OTC, Ft Hood, TX	2624											1714
DSB 46 meter Bridge	SS-CPFF	WFEL, Stockport, UK	246				1Q							208
Subtotal:			2870											1922

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
H02

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	NA	TACOM, Warren, MI	727										727	
SBIR/STTR						81							81	
Subtotal:			727			81							808	
Project Total Cost:			4379	956		2871		9331		12337		Cont.	Cont.	12737

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
H02

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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
REBS Operational Test	█																															
Dev, Integr, & Test DSB 46 Meter Bridge	█																															
Dev, Integr & Test DSB Float Capability	█				█				█				█																			
Dev, Integr, & Test BEB Elect. Controlled Engine									█																							
Dev, Integr, & Test REBS Improved Bridge													█				█															
Dev, Integr, & Test REBS Auto Launch-Retrieve													█				█															
Integrate REBS Bridge on FCS Chassis													█				█				█											
Develop Modular Comps and Lightweight Mat for Bridging Applications													█				█				█				█							

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
H02

<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>
REBS Operational Test	1Q - 3Q							
Dev, Integ, & Test DSB 46 Meter Bridge	1Q - 4Q	1Q - 3Q						
Dev, Integ & Test DSB Float Capability	1Q - 4Q	1Q						
Dev, Integr, & Test BEB Elect. Controlled Engine			3Q - 4Q	1Q - 2Q				
Dev, Integr, & Test REBS Improved Bridge				1Q - 4Q	1Q - 4Q	1Q - 2Q		
Dev, Integr, & Test REBS Auto Launch-Retrieve				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Integrate REBS Bridge on FCS Chassis				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
Develop Modular Comps and Lightweight Mat for Bridging Applications				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
REBS Operational Test								
Develop DSB 46 Meter Bridge								
Integrate and Test DSB 46 Meter Bridge								
Develop DSB Float Bridge Capability	1Q - 4Q	1Q - 4Q						
Integrate DSB Float Bridge Capability			1Q - 4Q					
Test DSB Float Bridge Capability				1Q - 4Q				
Develop BEB Electronically Controlled Engine		1Q - 3Q						
Integrate BEB Electronically Controlled Engine		4Q	1Q					
Test BEB Electronically Controlled Engine			1Q - 2Q					
Develop New REBS Improved Bridge			1Q - 3Q					
Integrate New REBS Improved Bridge			3Q - 4Q					
Test New REBS Improved Bridge				1Q - 2Q				
Develop REBS Fully Automated Launch/Retrieve			1Q - 4Q					
Integrate REBS Fully Automated Launch/Retrieve				1Q - 2Q				

Test REBS Fully Automated Launch/Retrieve				3Q - 4Q				
Integration of REBS on Future Combat System (FCS) Chassis			1Q - 4Q	1Q - 4Q	1Q - 4Q			
Develop Modular Comps and Lightweight Material for Bridging Applications				1Q - 4Q	1Q - 4Q			

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L39	
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L39 Field Sustainment Support ED	1848	8357	7489	2107	4664	6690	6619	6776		44550

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, environmental control units, mortuary affairs, 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>	FY 2006	FY 2007	FY 2008	FY 2009
FY 06: Completed fabrication of Mobile Integrated Remains Collections System (MIRCS) prototypes and initiated Developmental Testing (DT). FY 07: Complete DT and conduct Operational Testing (OT). FY 08: Complete documentation and prepare for Milestone C package for MIRCS to transition into production.	1362	1911	405	
FY 06: Initiated and completed Operational Testing (OT) and obtained Milestone C for Enhanced Containerized Delivery System (ECDS).	200			
FY 06: Completed OT, obtained ECP and transition into production for Extraction Parachute Jettison System - Heavy (EPJS-H).	286			
FY 07: Procure JPADS 2K DT, test prototypes and start JPADS 2K System DT. FY 08: Complete JPADS 2K DT and OT. FY 09: Obtain JPADS 2K Milestone C and transition into production.		6211	1870	330
FY 07: Obtain Milestone B for JPADS 10K. FY 08: Refit JPADS 10K DemVal Prototypes and initiate DT. FY 09: Complete JPADS 10K DT and OT.			5214	1777
SBIR/STTR		235		
Total	1848	8357	7489	2107

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3, M77700 Mobile Integrated Remains Collection System			9941	17925	18491	5324			Continuing	Continuing

Comment:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

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)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	In-House	PM FSS, Natick	1431	217	1-4Q	984	1-4Q	2065	1-4Q	590	1-4Q	Cont.	Cont.	3241
Soldier Support Equipment	In-House	CECOM, FT Belvoir	1441									Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	6656	1273	1-2Q	3946	1-2Q	5198	1-4Q	1454	1-4Q	Cont.	Cont.	
Subtotal:			9528	1490		4930		7263		2044		Cont.	Cont.	3241
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	712	100	1-4Q	804	1-4Q					Cont.		130
Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ, AEC	3772	200	1-4Q	2143	1-4Q					Cont.		76
Subtotal:			4484	300		2947						Cont.		206
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support		PM FSS, Natick	386	58	1-4Q	245	1-4Q	226	1-4Q	63	1-4Q	Cont.	Cont.	
SBIR/STTR						235							235	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE								PROJECT		
5 - System Development and Demonstration	0604804A - Logistics and Engineer Equipment - Eng Dev								L39		
Subtotal:	386	58		480		226		63	Cont.	Cont.	
Project Total Cost:	14398	1848		8357		7489		2107	Cont.	Cont.	3447

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L39

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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) Transition EPJS-H into Production				▲ ₁																												
(2) Milestone C ECDS				▲ ₂																												
(3) Milestone C MIRCS, (4) Milestone C JPADS 2K, (5) Milestone C JPADS 10K									▲ ₃				▲ ₄				▲ ₅															
DT/OT on ECDS		■	■	■																												
DT on EPJS-H	■																															
DT/OT on JPADS 2K								■	■	■	■	■																				
DT/OT on MIRCS				■	■	■	■	■																								
OT on EPJS-H	■	■																														
DT on JPADS 10K												■	■	■	■																	
OT on JPADS 10 K, DT on ALVADS, OT on ALVADS															■	■	■	■														
OT on JPADS 30k																				■	■	■	■									
(6) Milestone C on JPADS 30k																												▲ ₆				

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L39

<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>
Transition EPJS-H into Production	4Q							
Milestone C ECDS	4Q							
Milestone C MIRCS			1Q					
Milestone C JPADS 2K				1Q				
Milestone C JPADS 10K					1Q			
DT/OT on ECDS	1Q - 3Q							
DT on EPJS-H	1Q							
DT/OT on JPADS 2K		4Q	1Q - 3Q					
DT/OT on MIRCS	4Q	1Q - 2Q						
OT on EPJS-H	1Q - 2Q							
DT on JPADS 10K			4Q	1Q - 2Q				
OT on JPADS 10 K				2Q - 3Q				
DT on ALVADS				2Q - 4Q				
OT on ALVADS					2Q - 4Q			
OT on JPADS 30k						1Q - 4Q		
Milestone C on JPADS 30k								1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L41	
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L41 WATER AND PETROLEUM DISTRIBUTION - ED	2651	7218	9012	5091	3359	3383	2049	3965		44746

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 its 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 Rapidly Installed Fuel Transfer System (RIFTS) is being developed as an enhancement system for bulk fuel distribution and does not replace the Inland Petroleum Distribution System (IPDS). RIFTS can be deployed at a rate of 20-30 miles per day as compared to 2-3 miles per day for IPDS. Additionally, the mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These R&D missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve its transformation vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.

Justification: FY08/09 procures modules for the Rapidly Installed Fuel Transfer System (RIFTS). RIFTS is a bulk fluid distribution system which will consist of four major modules: conduit deployment/retrieval module (Block I), automated pumping station (APS), command and control module (C2M) with leak detection capabilities, and computer based planning aid (Block II). The state-of-the-art technology in Block II will significantly enhance the Army's bulk fuel distribution capabilities over the Inland Petroleum Distribution System (IPDS). IPDS pumps, due to their age and condition, are only marginally supportable. The Block II enhancements will increase mobility by becoming smaller and more efficient and will provide fuel throughput of 850,000 gallons (850K) of liquid per day. Integration of the C2M and the computer based planning aid will increase alertness and responsiveness by providing a quick optimum route for system layout and provide real time system operational status. The leak detection capability will provide fast and precise location of leak points. Pre-planned Product Improvements (P3I) for the family of Fuel System Supply Points (FSSP) and water distribution and purification systems will be transitioned from component development efforts under Project K41. Selected components and other improvements will be integrated into the parent system and system-level tests and evaluations will be conducted. Successfully demonstrated improvements will be incorporated into the system through inserting these proven, new technologies into an on-going production by means of an Engineering Change Proposal (ECP) or into fielded system by means of a Modification Work Order (MWO) or by Modernization by Spares. Petroleum System P3I efforts will include reliability data collection and analysis to improve reliability of the Petroleum Quality Analysis System (PQAS) and procuring, integrating and testing automated tank gauging and flow metering components into a surrogate FSSP for verification of system operation, maintenance, software, and human interface requirements. Water Distribution and Purification P3I efforts will include performing engineering integration analysis and system design to incorporate in-line water quality monitoring and chlorine dosing and controls into the Tactical Water Purification System (TWPS), Lightweight Water Purifier (LWP) and Reverse Osmosis Water Purification Units (ROWPUs), integrating water monitoring equipment into a military water treatment system and perform technical and operational testing. A development contract will be awarded for Petroleum Test Kit (PTK) to design and integrate a comprehensive set of fuel quality analysis instruments and technical acceptance testing will be conducted. Production-level prototype PTKs will be fabricated, logistic and test support package will be procured, Production Prove Out Testing and Limited User Testing will be conducted, a tailored logistic demonstration will be performed, and management and procurement documentation will be prepared to support a Milestone C decision. Camel efforts will include completing technical data, preparing environmental assessments and reporting test results and assessments; performing a system-level Logistics Demonstration, and conducted Limited User Testing. These efforts will support the Full Rate Production Decision.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT L41
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<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY06: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block I development ,Complete production qualification testing. Prepare Milestone C program documents.	2651	3631		
FY07-FY09: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block II development, prototype design, fabrication and test.			3812	1191
FY08-09: Develop prototype Advanced Petroleum Test Kit (PTK) and conduct developmental testing and limited user testing. Prepare technical data package for production.			1200	1200
FY08: Assemble, integrate and test Up-Armored Petroleum Quality Analysis System (PQAS) on Medium Tactical Vehicle. Complete production-level drawing and instructions. Prepare for full-rate production decision.			500	
FY09: Develop PQAS with modified B-2 level testing capability.				1500
FY08: Continue improvements for the Family of Fuel System Supply Points (FSSPs). Conduct system level demonstrations and evaluations of common 600 Gallon Per Minute (GPM) Fuel/Water tactical pump and prepare technical data package and logistic support data.			1000	
FY08-09: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP)and Rverse Osmosis Water Purification Units, Hippo Sytem 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 into the TWPS, LWP, and ROWPUs 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.			1000	1200
FY08: Complete Production Verification Testing on 450 and 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.		3391	1500	
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		196		
Total	2651	7218	9012	5091

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	2601	4575	2458	442	3303	2854	4826	3000	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	8394	10530	41981	44338	37000	23715	23715	7089	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	68634	110194	34056	49954	86659	86920	13545	20834	Continuing	Continuing
OPA 3, MB6400, Quality Surveillance Equipment	3245	1288	1293	1294						7120

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L41

Comment:

C. Acquisition Strategy System Development and transitions to competitive procurement for most items under this project. Exceptions include Small Business Set Aside for the Rapidly Installed Fuel Transfer System (RIFTS).

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rapidly Installed Fuel Transfer System (RIFTS) - BLOCK I	In-House	TARDEC, Warren, MI	2312	200	1-4Q	135	1Q					Cont.	Cont.	Cont.
RIFTS - BLOCK I	C-CPFF	Southwest Research Institute, San Antonio, TX	9320	1707	1Q	2500	1-4Q					Cont.	Cont.	Cont.
RIFTS - BLOCK II	C-CPFF	Southwest Research Institute, San Antonio, TX					1-4Q	3132	1Q	291	1Q	Cont.	Cont.	Cont.
RIFTS - BLOCK II	In-House	TARDEC, Warren, MI					1-4Q	220	1Q	150	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI						200	1Q	200	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	C-CPFF	TBD						700	2Q	300	1Q	Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS) Up-Armored	In-House	TARDEC, Warren, MI						50	1Q			Cont.	Cont.	Cont.
PQAS Up-Armored	MIPR	Rock Island Arsenal, Rock Island, IL						150	1Q			Cont.	Cont.	Cont.
PQAS Modified B-2	In-House	TARDEC, Warren, MI								100	1Q	Cont.	Cont.	Cont.
PQAS Modified B-2	MIPR	Rock Island Arsenal, Rock Island, IL								350	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP) Improvements P3I	In-House	TARDEC, Warren, MI						50	1Q			Cont.	Cont.	Cont.
FSSP Improvements (P3I)	C-CPFF	MTC, Dayton, OH						400	1Q			Cont.	Cont.	Cont.
Water Purification Systems Improvements (P3I)	In-House	TARDEC, Warren, MI						100	1Q	50	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements (P3I)	MIPR	NFESC, Port Hueneme, CA						400	1Q	150	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	In-House	TARDEC, Warren, MI				150	1Q	100	1Q			Cont.	Cont.	Cont.
Subtotal:			11632	1907		2785		5502		1591		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L41

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rapidly Installed Fuel Transfer System (RIFTS) - Block I	In-House	TARDEC, Warren, MI				25	1Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) - Block I	C-CPFF	Southwest Research Institute San Antonio, TX				290	2Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) - Block II	In-House	TARDEC, Warren, MI	76					60	1Q	50	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI						50	1Q	50	1Q	Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS) Modified B-2	In-House	TARDEC, Warren, MI								50	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	In-House	TARDEC, Warren, MI						25	1Q			Cont.	Cont.	Cont.
Water Purification Systems Improvements (P3I)	In-House	TARDEC, Warren, MI						50	1Q	100	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	In-House	TARDEC, Warren, MI				100	1Q	75	1Q			Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	C-CPFF	TBD				1394	1Q	125	1Q			Cont.	Cont.	Cont.
Subtotal:			76			1809		385		250		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rapidly Installed Fuel Transfer System (RIFTS) - PQT-Block I	MIPR	Yuma Proving Ground, Yuma, AZ	3624	604	2-4Q	500	2Q					Cont.	Cont.	Cont.
RIFTS (Block I) PQT	In-House	TARDEC, Warren, MI								500	2Q	Cont.	Cont.	Cont.
RIFTS (Block II)	In-House	TARDEC, Warren, MI						100	1Q	100	1Q	Cont.	Cont.	Cont.
RIFTS (Block II)	MIPR	TARDEC, Warren, MI						600	4Q	600	1Q	Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE								PROJECT			
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev								L41			
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI						50	1Q	50	1Q	Cont.	Cont.	Cont.
Petroleum Quality Analysis System (PQAS) Up-Armored	MIPR	Rock Island Arsenal, Rock Island, IL						200	1Q			Cont.	Cont.	Cont.
Fuel System Supply Point Improvements (P3I)	In-House	TARDEC, Warren, MI						75	1Q			Cont.	Cont.	Cont.
FSSP Improvements (P3I)	MIPR	Yuma Proving Ground, Yuma, AZ						450	1Q			Cont.	Cont.	Cont.
Water Purification P3I Improvements (P3I)	MIPR	NFESC, Port Hueneme, CA	332					400	1Q	900	1Q	Cont.	Cont.	Cont.
Water Purification P3I Improvements (P3I)	In-House	TARDEC, Warren, MI						50	1Q	200	1Q	Cont.	Cont.	Cont.
Water Purification P3I Improvements (P3I)	MIPR	Aberdeen Proving Ground, Aberdeen, MD								900	3Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 450/900 Gallon	MIPR	Yuma Proving Ground, Yuma, AZ				1800	3Q	1200	1Q			Cont.	Cont.	Cont.
Subtotal:			3956	604		2300		3125		3250		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support-Rapidly Installed Fuel Transfer System (RIFTS)	In-House	TARDEC, Warren, MI	877	100	1Q		1Q					Cont.	Cont.	Cont.
Program Management Support - RIFTS	Contract	ICI, Dayton, OH		40	2Q	128	2Q					Cont.	Cont.	Cont.
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)						196							196	196
Subtotal:			877	140		324						Cont.	Cont.	Cont.

Remarks: Not Applicable

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - System Development and Demonstration

0604804A - Logistics and Engineer Equipment - Eng Dev

L41

Project Total Cost:

16541

2651

7218

9012

5091

Cont.

Cont.

Cont.

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L41

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13							
	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				
Develop, Design, Fabricate, Test, RIFTS, Block I	RIFTS																																			
Developmental Testing (POT) - RIFTS, Block I																																				
Develop, Design, Fabricate, Test - RIFTS, Block II													RIFTS, Block II																							
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests													Develop, Design, Fabricate, Test - PTK																							
PQAS Up-Armored: complete system interfaces, tests and verification																																				
PQAS Modified B-2 Upgrade: Develop, Design, Fabricate, and Test																																				
P3I Family of Fuel System Supply Points (FSSPs): Performance of common pumps																																				
P3I: Evaluate Improvements to Water Purification and Distribution Systems																																				
Unit Water Pod (Camel): Technical and User Testing, Support Data, Log Demo																																				

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev						PROJECT L41	
<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>	
Develop, Design, Fabricate, Test, RIFTS, Block I	1Q - 4Q	1Q - 4Q							
Developmental Testing (PQT) - RIFTS, Block I	3Q - 4Q	1Q - 2Q							
Develop, Design, Fabricate, Test - RIFTS, Block II			1Q - 4Q	1Q - 4Q					
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests			1Q - 4Q	1Q - 4Q					
PQAS Up-Armored: complete system interfaces, tests and verification			1Q - 2Q	4Q					
PQAS Modified B-2 Upgrade: Develop, Design, Fabricate, and Test				1Q - 4Q					
P3I Family of Fuel System Supply Points (FSSPs): Performance of common pumps			1Q - 4Q						
P3I: Evaluate Improvements to Water Purification and Distribution Systems			1Q - 4Q						
Unit Water Pod (Camel): Technical and User Testing, Support Data, Log Demo		2Q - 4Q	1Q - 3Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev							PROJECT L43	
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L43 ENGINEER SUPPORT EQUIPMENT - ED		307	513	517	6622	4967	10000	5100		28026

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 (SKO's).

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Conduct market investigation, develop performance specifications and conduct pre-production award effort for Diving Equipment.		150		
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 (SKO's) optimization efforts for Expedited Modernization Initiative Program / Board Of Directors and individual tool procurement for modernizing SKO's.			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.		75	200	55
Modernize the Surface Swimmer Support Set and Individual Swimmer Support Set.			100	
Update Engineering type SKO's 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.		73		170
Description For Purchase development and procurement of test articles for the Surface Supplied Diving Set.				200
SBIR / SITR		9		
Total		307	513	517

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3 ML5301, ENG Items Less than \$5.0M	4252	11808	20099	19647	20161	30155	20900	22400	Continuing	Continuing

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L43

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 COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev									L43		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Diving equipment	MIPR/IN-HOUSE	NAVY/PM SKOT Rock Island	1455			150	1-3Q					Cont.	Cont.	Cont.
HEPPOE	IN-HOUSE	PM SKOT Rock Island						100	1-3Q	80	1-3Q	Cont.	180	Cont.
Surface Swimmer Support Set	IN-HOUSE	PM SKOT Rock Island						50	1-3Q			Cont.	50	Cont.
Individual Swimmer Support Set	IN-HOUSE	PM SKOT Rock Island						50	1-3Q			Cont.	50	Cont.
Market Samples of Engineering SKO's	IN-HOUSE	PM SKOT Rock Island				73				170	1-3Q	Cont.	Cont.	Cont.
Subtotal:			1455			223		200		250		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Allied Trade ORG & GP	IN-HOUSE	PM SKOT Rock Island				75	1-3Q	200	1-3Q	55	1-3Q	Cont.	330	Cont.
Pioneer Land Clearing and Building Erection	IN-HOUSE	PM SKOT Rock Island						10	1-3Q			Cont.	10	Cont.
Pioneer Support Set								21	1-3Q			Cont.	21	Cont.
Future Combat Systems								70	1-3Q			Cont.	70	Cont.
Subtotal:						75		301		55		Cont.	431	Cont.
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Organization/General Purpose Tools	IN-HOUSE	PM SKOT Rock Island	51									Cont.	51	Cont.
Surface Supplied Diving Set	MIPR/IN-HOUSE	Navy/PM SKOT Rock Island								200	1-3Q	Cont.	200	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev								PROJECT L43		
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Subtotal:				51						200		Cont.	251	Cont.
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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
EMIP / BOD Procurement of Technical Tools	IN-HOUSE	PM SKOT Rock Island						12	1-3Q	12	1-3Q	Cont.	24	Cont.
SIBR/STTR						9							9	
Subtotal:						9		12		12		Cont.	33	Cont.

Project Total Cost:				1506		307		513		517		Cont.	Cont.	Cont.
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Schedule Detail (R4a Exhibit)	February 2007
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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	0604804A - Logistics and Engineer Equipment - Eng Dev	L43

Schedule Detail: Not applicable for this item.

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev							PROJECT L46		
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L46 Maintenance Support Equipment		1409	1455	1523	3363	8231	8257	4000		28238

A. Mission Description and Budget Item Justification: This project supports development of Initial Capabilities Documents, Capabilities Development Document, Capability Production Document, and Description For Purchase Documents. Modernize and procure new technical tools for Sets, Kits, and Outfits (SKO's) optimization based on field feedback to include special forces, Industrial Plant Equipment (IPE), and air compressors. Funding includes efforts to update Uniform Identification Codes, Future Combat Systems, Composite Manipulation, and Machinist Tool Sets. Modernization and reconfiguration of Flatracks for the Forward Repair System, and revision of the four (4) Manned Shop Equipment Contact Maintenance Vehicle. Funding efforts include procurement of test articles from Allied Trade Configurations, and optimization of antiquated Sets, Kits, Outfits, and Tools to support modularity in a two level maintenance environment.

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Optimization of antiquated SKOTs to support modularity in a 2 level maintenance environment		1145		
Standard Automotive Tool Set (SATS) future field modules and feasibility of incorporating LHS capability		225		
Modernize and update tool loads - Procure and verify additional items based on field feedback.			200	70
Procure new technical tools and subsequent evaluations of tools for SKO optimization			12	12
Revised SECM 4 Manned Team / Rapid Maintenance				300
Uniform Identification Codes			80	37
Future Combat Systems			220	70
Fund efforts to create documentation for Industrial Plan Equipment and air compressors to allow creation of Purchase Descriptions and procurement of test articles			360	360
Perform testing on Flat Rack design for the Forward Repair System (FRS)			100	50
Procure test articles of Allied Trade configurations			200	150
Composite Manipulation			183	70
Machinist Tool Sets Shelter and Non-Shelter			100	70
Create Purchase Descriptions and procure IPE and Air Compressors				334
SBIR / SITR		39		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT L46
Total		1409 1455 1523

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 1, D16400, FHTV FORWARD REPAIR SYSTEM	60321	82195	93359	113060	110553	9526			Continuing	Continuing

Comment:

C. Acquisition Strategy Programs will progress from Initial Capabilities Document, Capabilities Development Document, and Capabilities Production Document, and testing into Low Rate Initial Production for future procurement and fielding. Efforts will be performed to transition into production and incorporate enhanced future technologies to support the war fighter in a two level maintenance environment. Procurement and testing of new technologies as well as updating and enhancing current systems will support modularity, modernize and enhance war fighting capabilities, and ensure stability and progression of systems into the future.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MSE Life Cycle Configuration Analyses and Initial Capabilities Document (ICD) Development Support	In-House	PM SKOT Rock Island	505			360	1-3Q					Cont.	Cont.	Cont.
SATS Additional Field Maintenance Module Development and feasibility of incorporating LHS capability	In-House	PM SKOT Rock Island	183			125	1Q					Cont.	125	Cont.
Modernization of Industrial Plant Equipment	MIPR / In-House	CASCOM / PM SKOT Rock Island								334	1-3Q	Cont.	Cont.	Cont.
EMIP/BOD Procurement of new Technical Tools	In-House	PM SKOT Rock Island						12	1-3Q	12	1-3Q	Cont.	24	Cont.
Machinest Tool Sets, Shelter / Non-Shelter	In-House	PM SKOT Rock Island						100	1-3Q	70	1-3Q	Cont.	170	Cont.
Allied Trades Test Article Configurations	In-House	PM SKOT Rock Island						200	1-3Q	150	1-3Q	Cont.	350	Cont.
Subtotal:			688			485		312		566		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	In-House	PM SKOT Rock Island	52			100	1-2Q					Cont.	152	Cont.
Future Combat Systems	In-House	PM SKOT Rock Island						220	1-3Q	70	1-3Q	Cont.	290	Cont.
Modernization of Tool Loads based on Field Feedback	In-House	PM SKOT Rock Island						200	1-3Q	70	1-3Q	Cont.	270	Cont.
Industrial Plant Equipment Documentation for new test articles	MIPR / In-House	CASCOM / PM SKOT Rock Island						360	1-3Q	360	1-3Q	Cont.	720	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT L46
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Subtotal:	52			100		780		500		Cont.	1432	Cont.
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III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 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 Ordinance Center & School, Ft. Lee	430			400	1-2Q					Cont.	830	Cont.
SATS Additional Field Maintenance Modules and feasibility of incorporating LHS capability			163			100	1-3Q					Cont.	263	Cont.
Forward Repair System Flattrack Redesign	In-House	PM SKOT Rock Island						100	1-3Q	50	1-3Q	Cont.	150	Cont.
Revised SECM four (4) Manned Team / Rapid Maintenance	In-House	PM SKOT Rock Island								300	1-3Q	Cont.	300	Cont.
Subtotal:			593			500		100		350		Cont.	1543	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Conduct SKO Modernization Efforts	MIPR/In-House	Army Test & Evaluation Command & PM SKOT Rock Island	268			285	1-2Q					Cont.	Cont.	Cont.
Composite Manipulation	In-House	PM SKOT Rock Island						183	1-3Q	70	1-3Q	Cont.	253	Cont.
Unique Identification Codes	In-House	PM SKOT Rock Island						80	1-3Q	37	1-3Q	Cont.	Cont.	Cont.
SBIR/STTR						39							39	
Subtotal:			268			324		263		107		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev						PROJECT L46				
Project Total Cost:	1601			1409		1455		1523	Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L46

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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
Configuration Analyses & ICD Support for Current-to-Future SKO, Continue in FY07																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L46

<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>
Configuration Analyses & ICD Support for Current-to-Future SKO, Continue in FY07	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Configuration Analyses for Current-to-Future and SBCT SKOT and ICD Support

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev						PROJECT L47		
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L47 IMPROVED ENVIRONMENTAL CONTROL UNITS ED			4465	5989	3500	1500				15454

A. Mission Description and Budget Item Justification: The 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 ECUs. The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. 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 increase 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 BTU/H IECU: The 60K BTU/H IECU is a joint program between the Army and Air Force. The 60K BTU/H IECU will be a replacement for the existing Army 54K BTU/H Environmental Control Unit (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. In FY07, PM MEP will begin acquisition planning for these variants. FY08 and FY09 will fund Milestone B System Development and Demonstration (SDD) Phase activities for 9, 18 and 36K IECU's and Milestone B and C activities for the 60K IECU.

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY08: 9, 18 and 36K IECU SDD contract award.			3435	
FY08: Milestone C Decision for the 60K BTU/H IECU			1030	
FY09: Continue SDD for the 9, 18 and 36K IECUs.				5559
FY09: Complete Type Classification Materiel Release (MR) and other actions required for Milestone C Full Rate Production (FRP) decision for the 60K IECU.				430
Total			4465	5989

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDT&E:PE0603804A - Logistics & Engineer Equipment - Adv Dev K39	1628	1202								2830
RDT&E:PE0604804A - Logistics and Engineer Equipment - Eng Dev 194		1000								1000
OPA 3, Improved Environmental Control Units , MF9303	2719	3846	11628	16992	11220	11684				58089

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L47

Comment:

C. Acquisition Strategy 9, 18 and 36K BTU/H IECU: PM-MEP will award one Developmental Phase contract based on "Best Value" using Full and Open Competition (FAOC). Successful completion of development and production qualification testing will result in the award of a Production Phase contract. The initial Developmental Phase contract will be Cost-Plus Fixed Fee (CPFF) and include as deliverables: prototypes of each configuration, PQT, Logistics Demonstration (LD), Validation/Verification (Val/Ver) and User Evaluation (UE). The Production Phase contract will be Firm Fixed Price (FFP) with the contractor producing Production Test Quantities to prove out Transition to Production by First Article Testing (FAT). Subsequent delivery orders will be placed according to programmed funding.

60K BTU/H IECU: Conduct Product Qualification Testing (PQT), logistics demonstration, validation/verification and user evaluation. Prepare, update and revalidate the Operational Requirements Documents (ORD) and other acquisition documentation prior to Milestone C decision.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

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 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	CPFF	Various						2595	2Q	4219	2Q		6814	
60K IECU	CPFF	Various						500	1Q				500	
Subtotal:								3095		4219			7314	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA						450	2Q	450	2Q		900	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA						250	2Q	250	2Q		500	
Subtotal:								700		700			1400	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA								500	3Q		500	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA						100	3Q				100	
Subtotal:								100		500			600	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE								PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev								L47		
	Type		Cost		Date		Date		Date		Date	e	Contract
9, 18 and 36K IECU	In-house	PM-MEP, Ft Belvoir, VA						390	1-4Q	390	1-4Q		780
60K IECU	In-house	PM-MEP, Ft Belvoir, VA						180	1-4Q	180	1-4Q		360
Subtotal:								570		570			1140
Project Total Cost:								4465		5989			10454

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
L47

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13																															
	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																																									▲ 1																			
(2) Conduct Product Qualification Testing (PQT)																																																	▲ 2											
(3) Conduct Logistics Demonstration																																																	▲ 3											
(4) Conduct User Evaluation and Validation/Verification																																																	▲ 4											
(5) Milestone C Decision																																																					▲ 5							
(6) Complete TC, MR, etc. for Full Rate Production (FRP) Decision																									▲ 6																																			
60K BTU/H IECU																																																												
(7) Milestone C Decision																																									▲ 7																			
(8) Complete TC, MR and other actions required for Milestone C FRP Decision (60K)													▲ 8																																															

Schedule Detail (R4a Exhibit)

February 2007

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 2006</u>	<u>FY 2007</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>
9, 18 and 36K BTU/H IECU								
SDD Contract Award			2Q					
Conduct Product Qualification Testing (PQT)					2Q			
Conduct Logistics Demonstration					3Q			
Conduct User Evaluation and Validation/Verification					3Q - 4Q			
Milestone C Decision						2Q - 3Q		
Complete TC, MR, etc. for Full Rate Production (FRP) Decision						4Q		
60K BTU/H IECU								
Milestone C Decision			2Q - 4Q					
Complete TC, MR and other actions required for Milestone C FRP Decision (60K)				2Q - 4Q				