

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE							
5 - System Development and Demonstration		0604804A - Logistics and Engineer Equipment - Eng Dev							
COST (In Thousands)	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	33205	47108	37718	47619	51519	57492	46595	Continuing	Continuing
194 ENGINE DRIVEN GEN ED	11036	11026	6368	1396	1397	2366	1549	Continuing	Continuing
H01 COMBAT ENGINEER EQ ED	2443	3365	3270	10640	10659	9770	7979	Continuing	Continuing
H02 TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	2565	9270	12251	12144	12520	14935	16923	Continuing	Continuing
H14 MATERIALS HANDLING EQUIPMENT - ED	268	411	454	513	985	1099	1249		5927
L39 Field Sustainment Support ED	8183	7441	2091	4629	6640	6572	4223	Continuing	Continuing
L41 WATER AND PETROLEUM DISTRIBUTION - ED	7030	8955	5058	3335	3359	2035	3940	Continuing	Continuing
L42 CAMOUFLAGE SYSTEM ED		247	248	1573	1365	2582	1689		9240
L43 ENGINEER SUPPORT EQUIPMENT - ED	300	510	514	6575	4932	9932	5068		28937
L46 Maintenance Support Equipment	1380	1446	1513	3339	8173	8201	3975	Continuing	Continuing
L47 IMPROVED ENVIRONMENTAL CONTROL UNITS ED		4437	5951	3475	1489				15352

**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.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

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

**B. Program Change Summary**

	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	42330	45009	35971
Current BES/President's Budget (FY 2009)	33205	47108	37718
Total Adjustments	-9125	2099	1747
Congressional Program Reductions		-301	
Congressional Rescissions			
Congressional Increases		2400	
Reprogrammings	-7962		
SBIR/STTR Transfer	-1163		
Adjustments to Budget Years			1747

Change Summary Explanation: Funding - FY 2007: \$7.962 million was reprogrammed to support Army high priority programs.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>194</b>	
COST (In Thousands)	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	11036	11026	6368	1396	1397	2366	1549	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 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.

<b>Accomplishments/Planned Program:</b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY07: Awarded 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	8536		
FY07: Conducted product enhancement efforts to extend service life and minimize operator maintenance requirements for the 2 kW Military Tactical Generator (MTG).	1500		
FY07: Conducted market research analysis and user requirements study to better define acquisition strategy for the 9, 18, 36K Improved Environmental Control Unit (IECU)	1000		
FY08: Complete AMMPS pre-production test sets. Continue engineering and logistics data deliverables.		8420	
FY08: 2KW Military Tactical Generator Product Improvement		2318	
FY09: Complete DT and begin Operational Test (OT) for AMMPS. Prepare 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.			6368
Small Business Innovative Research/Small Business Technology Transfer Program		288	
<b>Total</b>	<b>11036</b>	<b>11026</b>	<b>6368</b>

<b>B. Other Program Funding Summary</b>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603804A - Logistics and Engineer Equipment - Adv Dev G11	1889	3151	3357	2898	2915	1624	729	Continuing	Continuing
OPA3, MA9800, Generators and Associated Equipment	141581	110723	217749	162861	130790	133008	9854	Continuing	Continuing

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

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

PROJECT

**194**

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 2008

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 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	16492	8081	3-4Q	7806	2-4Q	700	2Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	CPFF	Various	1800	1500	2Q	2318	4Q				5618	
IECU	CPFF	Various		613	2-4Q					Cont.	Cont.	
Subtotal:			18292	10194		10124		700		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	2275			400	2Q	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:			2340	372		400		400		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	153	2Q	200	2Q	4966	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Beloir, VA	216								216	
IECU												
Subtotal:			2094	153		200		4966		Cont.	Cont.	

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>	PE NUMBER AND TITLE <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>	PROJECT <b>194</b>
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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	1969	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:			1969	317		302		302		Cont.	Cont.	

<b>Project Total Cost:</b>			<b>24695</b>	<b>11036</b>		<b>11026</b>		<b>6368</b>		<b>Cont.</b>	<b>Cont.</b>	
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# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**194**

Event Name	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
AMMPS Program																												
Award Phase II / Conduct DT & OT																												
(1) MS C																												
Production Release																												
(2) Transition to Production																												
Tactical Quiet Generators																												
Service Life Extension Program																												
STEP (Small Tact. Electric Power)																												
Prepare Performance Spec																												
2kW Follow-on Improvement Program																												
Award Multiple Contracts																												
IECU 9, 18, 36K Program																												
Prepare Contract Solicitation																												
LAMPS (Large Advanced Mobile Power Systems)																												
Prepare Performance Spec																												



**Schedule Detail (R4a Exhibit)**

**February 2008**

**BUDGET ACTIVITY**  
**5 - System Development and Demonstration**

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

**PROJECT**  
**194**

<u>Schedule Detail</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 - 3Q			
Award Phase II / Conduct DT & OT		1Q - 4Q	1Q - 4Q	1Q			
MS C				2Q			
Production Release				2Q - 3Q			
Transition to Production					3Q		
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 - 4Q					
IECU 9, 18, 36K Program							
Prepare Contract Solicitation	2Q - 4Q						
LAMPS (Large Advanced Mobile Power Systems)							
Prepare Performance Spec					4Q	1Q - 4Q	
MS B							1Q

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>H01</b>	
COST (In Thousands)	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	2443	3365	3270	10640	10659	9770	7979	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.

<b>Accomplishments/Planned Program:</b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY07-FY09: Conducts market research and update specs for future engineer transformation.	50	20	20
FY07-FY09: Continues development of engineer and acquisition documents required for Milestone Decisions.	475	20	20
FY07-FY09: Conducts Test and Evaluation of future engineer equipment.	460		150
FY07-FY09: Design armor kits for Construction Equipment.	1336	1592	
FY07-FY08: Conducts Armor Test and Evaluation for Construction Equipment Systems	122	1639	
FY07: Productivity analysis of commercial tactic, techniques and procedures (TTP) for load and haul.			
FY09: Development of Robotics Research			1580
FY09: Simulator Development			1500
Small Business Innovative Research/Small Business Technology Transfer Program		94	
<b>Total</b>	<b>2443</b>	<b>3365</b>	<b>3270</b>

<b>B. Other Program Funding Summary</b>	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	28513	25637	24309	24997	25762	13080	495	Continuing	Continuing
OPA3, R05910, High Mobility Engineer Excavator III	17346	14179	30199	22088	2185	2279	248		88524
OPA3, R03801, Grader, Mtd, Hvy	13879	14908	37698	28023	25694	25938	22753	Continuing	Continuing
OPA3, R14200, Scraper, Elevating SP 11 CY Min Sec	29407	22980			9168	3662			65217
OPA3, M06400, Loader, Scoop Type, 2 1/2 CU YD		6547	14212	9578	6840	6700	6753		50630

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
<b>5 - System Development and Demonstration</b>		<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>H01</b>	
OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD	17725	13205	13776	11189	496	765	248		57404
OPA3, X01500, Hydraulic Excavator	4580	3904	9565	10262	9025	3419			40755
OPA3, M08100, Plant, Asphalt Mixing			7960	14278	14712				36950
OPA3, M06100, Tractor Full Tracked, Med T-9	5259	8134	33727	33642	12795	25565	24477		143599

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 2008

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 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	1353	50	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Continue development of engineer and acquisition documents	various	multiple activities	1127	475	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Design armor kits for Construction Equipment	various	multiple activities	1748	1200	1-4Q	1592	1-2Q			Cont.	Cont.	Cont.
Conduct feasibility studies to armor Construction Equipment Systems	various	multiple activities	100							Cont.	Cont.	Cont.
Initiate SDD for A/G LOC Repair and Construction	TBD	TBD								Cont.	Cont.	Cont.
Development of Robotic Research for Construction Equipment	TBD	TBD						1580	1-4Q		1580	
Armor Development for HMEE I Light & Heavy Loaders and HYEX	TBD	TBD	4115	122	1-2Q	1639	2-4Q				5876	
Development of Simulator	MIPR	PEO Stricom, Orlando, FL						1500	1-4Q		1500	
Subtotal:			12890	1847		3271		3120		Cont.	Cont.	Cont.
II. Support Costs												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	MIPR	DA/Pentagon,	156								156	156

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>			PE NUMBER AND TITLE <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>								PROJECT <b>H01</b>	
Support		Washington, DC										
Construction Equipment Lease Study	MIPR	DA/Pentagon, Washington, DC	200								200	400
Subtotal:			10936							Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	342							Cont.	Cont.	Cont.
Future Engineer Equipment (various)	MIPR	ATEC, Aberdeen, MD	2287	460	1-4Q			150	1-4Q	Cont.	Cont.	Cont.
Productivity analysis of TTP	various	multiple			2-4Q						122	1500
Subtotal:			3413	460				150		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	94	1-2Q				230	
Subtotal:			762	136		94				Cont.	Cont.	Cont.

<b>Project Total Cost:</b>			<b>28001</b>	<b>2443</b>		<b>3365</b>		<b>3270</b>		<b>Cont.</b>	<b>Cont.</b>	<b>Cont.</b>
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# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**H01**

Event Name	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
Market Surveillance/Investigation of Future Engineer Equipment	[Redacted]																											
T&E of Technologies for Engineer Equip (from components to major systems)	[Redacted]																											
Design Armor Kits	[Redacted]																											
SDD of Air & Ground Line of Communication (LOC) enabling technologies	[Redacted]																											
T&E of Air & Ground LOC technologies (graders, scrapers, earthmover)	[Redacted]																											
Develop Acquisition Documents	[Redacted]																											
T&E of Armor Systems	[Redacted]																											
Productivity analysis for tactic, technique & procedures for load & haul	[Redacted]																											
Engineering Lease Study	[Redacted]																											
Simulator Development for Construction Equipment	[Redacted]																											

## Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE					PROJECT	
<b>5 - System Development and Demonstration</b>		<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>					<b>H01</b>	
<u>Schedule Detail</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			
T&E of Technologies for Engineer Equip (from components to major systems)	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					
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			
T&E of Armor Systems	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				
Test and Evaluation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Design Armor Kits for various Construction Equipment systems	1Q - 4Q	1Q - 4Q						

Air & Ground Line Of Communication (LOC) SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Air & Ground LOC Test & Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
T&E Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Productivity analysis for tactic, technique & procedure for load & haul							
Engineering Lease Study							
Simulator Development for Construction Equipment			2Q - 4Q				

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>H02</b>	
COST (In Thousands)	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	2565	9270	12251	12144	12520	14935	16923	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: Assessment of the Rapidly Emplaced Bridging System (REBS) for the Stryker Brigade Combat Team (SBCT) the development, integration and testing of forty-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 of the Bridge Erection Boat(BEB) SLEP, test Line of Communication (LOC) bridge Program of Record (POR), refurbishment of Joint Assault Bridge (JAB) assets, development of a 4-8m self contained and independent bridge for Interim 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 and start Multi-Functional Gap Crossing effort.

<b><u>Accomplishments/Planned Program:</u></b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY07-FY09: Continues Development, integration, and test for the DSB 46 meter bridge.	2565	2140	1000
FY09: LOC Bridge POR Testing			2000
FY09: JAB refurbishment of Test Assets.			2200
FY08-FY09: BEB Engine		3000	2830
FY09: Market investigations (BEB,Multifunctional Bridging, alternative material solution)			150
FY09: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT).			100
FY09: IBCT/FBCT 4-8 m Platform Independent Gap Defeat Solution Broad Agency Announcement, Demostration and Government Test.			1500
FY09: Multi-Functional Gap Crossing Effort: Feasibility Study & Investigation of a Bridge Launcher for current bridges.			400
FY08-FY09: Bridging Product Improvements		3870	2071
Small Business Innovative Research/Small Business Technology Transfer Program		260	
<b>Total</b>	<b>2565</b>	<b>9270</b>	<b>12251</b>

<b><u>B. Other Program Funding Summary</u></b>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MX0100, Tactical Bridge	143328	50102	93930	86100	73769	75769	58950	Continuing	Continuing
OPA3, MA8890, Tactical Bridging, Float Ribbon	163268	74280	147270	149457	114037	73035	52322	Continuing	Continuing

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

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

PROJECT

**H02**

Comment:

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

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

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 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	866					1000	1Q	Cont.	Cont.	1366
DSB System	SS-CPFF	WFEL, Stockport, England	237	2484	1Q	6260	2Q	2000	1Q	6000	16981	8944
JAB refurbishment of Test Assets								2200	1Q		2200	
BEB Engine		FBM Babcock Marine Ltd, United Kingdom				3000	3Q	2830	1Q		5830	
Market Investigation BEB, Multifunctional Bridging								150	1Q		150	
IBCT/FBCT 4-8 m Gap Defeat		KMWMMB, Mainz Germany/Qinetiq, Hampshire, UK/UCSD, San Diego, CA						1500	1Q		1500	
Feasibility Study & Investigation of a Bridge Launcher for current bridges.		TBD						400	2Q	Cont.	Cont.	
REBS Auto Launch-Retrieve		GDELS, Germany, DE					1Q	100	4Q		100	
LOC Bridge POR Testing		GDSBS, Germany, DE					4Q	2000	1Q		2000	
Subtotal:			1103	2484		9260		12180		Cont.	Cont.	10310
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	130		1Q	10	1Q	10	1Q		150	
Subtotal:			130			10		10			150	

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**H02**

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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, UK	246									208
Subtotal:			246									208
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	1Q			61	1Q		142	
Subtotal:			727	81				61			869	
<b>Project Total Cost:</b>			<b>2206</b>	<b>2565</b>		<b>9270</b>		<b>12251</b>		<b>Cont.</b>	<b>Cont.</b>	<b>10518</b>

# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**H02**

Event Name	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
Dev, Integ, & Test DSB 46 Meter Bridge																												
Dev, Integr. & Test BEB SLEP																												
Dev, Integr. & Test REBS Auto Launch-Retrieve																												
Integrate , test REBS Bridge on Stryker Chassis																												
Develop Modular Comps and Lightweight Mat for Bridging Applications																												
LOC POR testing																												
JAB Refurbishment of Test Assets.																												
Develop IBCT/FBCT Demonstrators																												
Test IBCT/FBCT Demonstrators																												
Develop Dismounted Demonstrators																												
Test Dismounted Demonstrators																												
Multifunctional Gap Crossing Effort: Feasibility Study & Investigation																												

## Schedule Detail (R4a Exhibit)

February 2008

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 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>
Dev, Integ, & Test DSB 46 Meter Bridge	1Q - 4Q	1Q - 4Q	1Q - 3Q				
Dev, Integr, & Test BEB SLEP		1Q - 4Q	1Q - 2Q				
Dev, Integr, & Test REBS Auto Launch-Retrieve			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Integrate , test REBS Bridge on Stryker 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
LOC POR testing		2Q - 4Q	1Q - 4Q	1Q - 4Q			
Test BEB SLEP	1Q - 4Q	1Q - 2Q					
Test BEB SLEP		3Q - 4Q	1Q - 2Q				
Test BEB SLEP		1Q - 4Q	1Q - 3Q				
Develop REBS Fully Automated Launch/Retrieve		1Q - 4Q					
Integrate REBS Fully Automated Launch/Retrieve			1Q - 2Q				
Test REBS Fully Automated Launch/Retrieve			3Q - 4Q				
Develop Modular Comps and Lightweight Material for Bridging Applications			1Q - 4Q	1Q - 4Q			
JAB Refurbishment of Test Assets.			2Q - 4Q				
Develop IBCT/FBCT Demonstrators			1Q - 4Q	1Q - 4Q			
Test IBCT/FBCT Demonstrators				1Q - 4Q	1Q - 4Q		
Develop Dismounted Demonstrators					1Q - 4Q		
Test Dismounted Demonstrators			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Multifunctional Gap Crossing Effort: Feasibility Study & Investigation				4Q			

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>L39</b>	
COST (In Thousands)	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	8183	7441	2091	4629	6640	6572	4223	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.

<b><u>Accomplishments/Planned Program:</u></b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 07: Completed Developmental Testing (DT) and conducted Operational Testing (OT) of Mobile Integrated Remains Collection System (MIRCS) prototypes. FY 08: Complete documentation package and obtain Milestone C approval for MIRCS to transition into production.	1737	333	
FY 07: Procured Joint Precision Airdrop System 2K (JPADS 2K) Design Validation (DV) and Developmental Test (DT) prototypes and conducted DV. FY 08: Start and complete JPADS 2K DT and OT. FY09: Obtain JPADS 2K Milestone C and transition into production.	6446	1888	333
FY 08: Procure JPADS 10K DT and OT test articles, and initiate DT/OT test activities. FY 09: Complete JPADS 10K DT and OT.		5012	1758
Small Business Innovative Research/Small Business Technology Transfer Program		208	
<b>Total</b>	<b>8183</b>	<b>7441</b>	<b>2091</b>

<b><u>B. Other Program Funding Summary</u></b>	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		9874	17803	18335	5282			Continuing	Continuing
OPA 3, MA7806 Precision Airdrop		199	17953	21826	22850	15355	14970	Continuing	Continuing

Comment:

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

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 2008

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 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	1648	944	1-4Q	1940	1-4Q	582	1-4Q	Cont.	Cont.	3241
Soldier Support Equipment	In-House	CECOM, FT Belvoir	1441							Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	7929	3873	1-2Q	5070	1-4Q	546	1-4Q	Cont.	Cont.	
Subtotal:			11018	4817		7010		1128		Cont.	Cont.	3241
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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 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	812	774	1-4Q					Cont.	Cont.	130
Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ, AEC	3972	2112	1-4Q			900	1-4Q	Cont.	Cont.	76
Subtotal:			4784	2886				900		Cont.	Cont.	206
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	444	245	1-4Q	223	1-4Q	63	1-4Q	Cont.	Cont.	
SBIR/STTR				235		208					443	

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE						PROJECT		
<b>5 - System Development and Demonstration</b>	<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>L39</b>		
Subtotal:	444	480		431		63	Cont.	Cont.	
<b>Project Total Cost:</b>	<b>16246</b>	<b>8183</b>		<b>7441</b>		<b>2091</b>	<b>Cont.</b>	<b>Cont.</b>	<b>3447</b>

# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**L39**

Event Name	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) Milestone C MIRCS, (2) Milestone C JPADS 2K, (3) Milestone C JPADS 10K					▲1				▲2				▲3															
DT/OT on JPADS 2K																												
DT/OT on MIRCS																												
DT on JPADS 10K																												
OT on JPADS 10 K, DT/OT on ACPRS																												
OT on JPADS 30k																												
(4) Milestone C on JPADS 30k																												
(5) Milestone C on ACPRS																												
(6) Milestone C on Helicopter External/Internal Cargo Delivery																												
(7) Milestone C on ALVADS-L																												
Conduct DV on ALVADS-L																												
Conduct DT/OT on ALVADS-L																												
Conduct DV on ACPRS																												
Conduct DV on JPADS 2K																												

**Schedule Detail (R4a Exhibit)**

**February 2008**

**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 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>
Milestone C MIRCS		1Q					
Milestone C JPADS 2K			1Q				
Milestone C JPADS 10K				2Q			
DT/OT on JPADS 2K		2Q - 3Q					
DT/OT on MIRCS	1Q - 2Q						
DT on JPADS 10K		4Q	1Q - 2Q				
OT on JPADS 10 K			3Q - 4Q				
DT/OT on ACPRS				4Q	1Q - 2Q		
OT on JPADS 30k						1Q - 4Q	
Milestone C on JPADS 30k							1Q
Milestone C on ACPRS					4Q		
Milestone C on Helicopter External/Internal Cargo Delivery							
Milestone C on ALVADS-L						4Q	
Conduct DV on ALVADS-L				2Q - 4Q			
Conduct DT/OT on ALVADS-L					1Q - 4Q		
Conduct DV on ACPRS				1Q - 2Q			
Conduct DV on JPADS 2K	3Q - 4Q	1Q					

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>L41</b>	
COST (In Thousands)	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	7030	8955	5058	3335	3359	2035	3940	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 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 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: FY 2009 funding will focus on efforts for the Fuel System Supply Points (FSSP). Water distribution and purification systems will be transitioned from component development efforts under Project K41 (06043804). Selected components and other improvements will be integrated into the parent system. 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 via an Engineering Change Proposal (ECP), into fielded systems via a Modification Work Order (MWO), or via Modernization thru Spares. Petroleum System P3I efforts will include reliability data collection and analysis to improve reliability of the Fuel System Supply Point (FSSP), as well as procuring, integrating and testing automated tank gauging and flow metering components into a surrogate FSSP to verify system operation, maintenance, software, and human interface requirements. Water Distribution and Purification efforts will include performing engineering integration analysis and system design to incorporate in-line water quality monitoring, chlorine dosing and controls into the Tactical Water Purification System (TWPS), Lightweight Water Purifier (LWP) and Reverse Osmosis Water Purification Units (ROWPUs). P3I efforts will also include integrating water monitoring equipment into a military water treatment system and performing technical and operational testing. A development contract will be awarded for a Petroleum Test Kit (PTK) to design and integrate a comprehensive set of fuel quality analysis instruments and to conduct technical acceptance testing. Production-level prototype PTKs will be fabricated, a logistics and test support package will be procured, Production Prove Out Testing and Limited User Testing will be conducted, a tailored logistics 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.

<b><u>Accomplishments/Planned Program:</u></b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY07: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block I development. Complete production qualification testing. Prepare Milestone C program documents.	3639		
FY07-FY08: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block II development, prototype design, fabrication and test.		3755	

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT	
<b>5 - System Development and Demonstration</b>	<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>	<b>L41</b>	
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
FY08-09: 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.		1500	2267
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 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 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.		749	1591
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.	3391	1500	
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		251	
<b>Total</b>	<b>7030</b>	<b>8955</b>	<b>5058</b>

<b><u>B. Other Program Funding Summary</u></b>	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	4451	2442	439	3280	2834	4793	2981	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	19931	43719	51164	44915	18976	20960	4845	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	111423	34173	61545	105999	91800	12440	9984	Continuing	Continuing
OPA 3, MB6400, Quality Surveillance Equipment	43508	1284	1285						46077

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 2008

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 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	2512	135	1Q					Cont.	Cont.	Cont.
RIFTS - BLOCK I	C-CPFF	Southwest Research Institute, San Antonio, TX	11027	2312	1-4Q					Cont.	Cont.	Cont.
RIFTS - BLOCK II	C-CPFF	Southwest Research Institute, San Antonio, TX				3075	1Q			Cont.	Cont.	Cont.
RIFTS - BLOCK II	In-House	TARDEC, Warren, MI				220	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	900	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP) Improvements	In-House	TARDEC, Warren, MI				50	1Q	200	2Q	Cont.	Cont.	Cont.
FSSP Improvements	C-CPFF	MTC, Dayton, OH				600	1Q	900	2Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements	In-House	TARDEC, Warren, MI				100	1Q	150	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements	MIPR	NFESC, Port Hueneme, CA				149	1Q	200	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	In-House	TARDEC, Warren, MI		150	1Q	100	1Q			Cont.	Cont.	Cont.
Subtotal:			13539	2597		5194		2550		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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,		290	2Q					Cont.	Cont.	Cont.

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
<b>5 - System Development and Demonstration</b>			<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>							<b>L41</b>		
		TX										
Rapidly Installed Fuel Transfer System (RIFTS) - Block II	In-House	TARDEC, Warren, MI	76			60	1Q			Cont.	Cont.	Cont.
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.
Water Purification Systems Improvements)	In-House	TARDEC, Warren, MI				50	1Q	100	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	In-House	TARDEC, Warren, MI		100	1Q	75	1Q			Cont.	Cont.	Cont.
Unit Water Pod (Camel) 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 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	4228	500	2Q					Cont.	Cont.	Cont.
RIFTS (Block I) PQT	In-House	TARDEC, Warren, MI								Cont.	Cont.	Cont.
RIFTS (Block II)	In-House	TARDEC, Warren, MI				100	1Q			Cont.	Cont.	Cont.
RIFTS (Block II)	MIPR	TARDEC, Warren, MI				600	4Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI				50	1Q	50	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point Improvements	In-House	TARDEC, Warren, MI				275	1Q	200	1Q	Cont.	Cont.	Cont.
FSSP Improvements	MIPR	Yuma Proving Ground, Yuma, AZ				450	1Q	867	2Q	Cont.	Cont.	Cont.
Water Purification Improvements	MIPR	NFESC, Port Hueneme, CA	332			400	1Q	300	1Q	Cont.	Cont.	Cont.
Water Purification Improvements	In-House	TARDEC, Warren, MI				50	1Q	351	1Q	Cont.	Cont.	Cont.
Water Purification Improvements	MIPR	Aberdeen Proving Ground, Aberdeen, MD						490	3Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	MIPR	Yuma Proving Ground,		1800	3Q	1200	1Q			Cont.	Cont.	Cont.

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>			PE NUMBER AND TITLE <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>							PROJECT <b>L41</b>		
		Yuma, AZ										
Subtotal:			4560	2300		3125		2258		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	977							Cont.	Cont.	Cont.
Program Management Support - RIFTS	Contract	ICI, Dayton, OH	40	128	2Q					Cont.	Cont.	Cont.
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)				196		251					447	196
Subtotal:			1017	324		251				Cont.	Cont.	Cont.

Remarks: Not Applicable

<b>Project Total Cost:</b>			<b>1912</b>	<b>7030</b>		<b>8955</b>		<b>5058</b>		<b>Cont.</b>	<b>Cont.</b>	<b>Cont.</b>
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# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**L41**

Event Name	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
Develop, Design, Fabricate, Test, RIFTS, Block I	RIFTS																											
Developmental Testing (POT) - RIFTS, Block I	Developmental Testing - 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																							
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)**

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>					<b>PROJECT</b> <b>L41</b>	
<u>Schedule Detail</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							
Developmental Testing (PQT) - RIFTS, Block I	1Q - 2Q							
Develop, Design, Fabricate, Test - RIFTS, Block II		1Q - 4Q						
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	
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 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>L46</b>	
COST (In Thousands)	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	1380	1446	1513	3339	8173	8201	3975	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** This project supports requirements generation for Sets, Kits, and Outfits (SKOs), and creation of purchase descriptions for Industrial Plant Equipment (IPE) and Air Compressors. Modernize and procure new technical tools for SKO's optimization based on field feed back to include Rapid Deployment SKO, and modernization of the Forward Repair System (FRS) tool load. Funding includes efforts to update Machinist Tool Sets, Engineering, and Quality Assurance in support of SKO's, and modernization and redesign of the Shop Equipment Contact Maintenance Vehicle (SECM) in support of next generation vehicles.

<b><u>Accomplishments/Planned Program:</u></b>	<b><u>FY 2007</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>
Optimization of antiquated SKOTs to support modularity in a 2 level maintenance environment	1380		
Modernize and update tool loads - Procure and verify additional items based on field feedback.		200	
Uniform Identification Codes		80	
Future Combat Systems		220	
Fund efforts to create documentation for Industrial Plan Equipment and air compressors to allow creation of Purchase Descriptions and procurement of test articles		360	
Procure test articles of Allied Trade configurations		151	
Composite Manipulation		183	
Machinist Tool Sets Shelter and Non-Shelter		100	70
Perform testing on Flat Rack design for the 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
Modernization / Redesign efforts of SECM for next generation of vehicles.			392
Support for requirements generation.			360
Create Purchase Descriptions and procure IPE and Air Compressors			334
Develop Rapid Deployment SKO - Special Tool Initiative.			154
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.			141

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>	<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>	<b>PROJECT</b> <b>L46</b>
<b>SBIR/STTR</b>		40
<b>Total</b>	1380	1446

<b><u>B. Other Program Funding Summary</u></b>	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	90259	95146	127577	119127	17400	2659		Continuing	Continuing
OPA 1, DL5110 ITEMS LESS THAN \$5M, TACTICAL VEHICLES	12382	8000	511	309		325	333	Continuing	Continuing
OPA 3, M61500, Shop Equipment, Contact Maintenance	137444	26913	17807	51449	56380	8637		Continuing	Continuing
OPA 3, ML5345, ITEMS LESS THAN \$5M Maintenance Equipment,	93612	1238	1329	898	1057	3086		Continuing	Continuing

Comment:

**C. Acquisition Strategy** Programs will progress from product development to market samples and First Article Testing. 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 2008

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 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		1Q					Cont.	Cont.	Cont.
Modernization of Industrial Plant Equipment	MIPR / In-House	TBD / 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.	Cont.	Cont.
Machinest 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			Cont.	Cont.	Cont.
Modernization / Redesign efforts of SECM for next generation vehicles	In-House	PM SKOT Rock Island						392	1-3Q	Cont.	Cont.	Cont.
Develop Rapid Deployment SKO - Special Tool Initiative.	In-House	PM SKOT Rock Island						154	1-3Q	Cont.	Cont.	Cont.
Subtotal:			688	360		263		962		Cont.	Cont.	Cont.
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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.	Cont.	Cont.
Future Combat Systems	In-House	PM SKOT Rock Island				220	1-3Q			Cont.	Cont.	Cont.

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
<b>5 - System Development and Demonstration</b>			<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>							<b>L46</b>		
Modernization of Tool Loads based on Field Feedback	In-House	PM SKOT Rock Island				200	1-3Q			Cont.	Cont.	Cont.
Industrial Plant Equipment Documentation for new test articles	MIPR / In-House	TBD / PM SKOT Rock Island				360	1-3Q	360	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	Cont.	Cont.	Cont.
Subtotal:			52	100		780		501		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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.	Cont.	Cont.
SATS Additional Field Maintenance Modules and feasibility of incorporating LHS capability		PM SKOT Rock Island	163	100	1-3Q					Cont.	Cont.	Cont.
Forward Repair System Flatrack Redesign. FY09 Modernize/Update Tool Load.	In-House	PM SKOT Rock Island				100	1-3Q	50	1-3Q	Cont.	Cont.	Cont.
Subtotal:			593	500		100		50		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	268	420	1-2Q					Cont.	Cont.	Cont.

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
<b>5 - System Development and Demonstration</b>			<b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>							<b>L46</b>		
		Rock Island										
Composite Manipulation	In-House	PM SKOT Rock Island				183	1-3Q			Cont.	Cont.	Cont.
Unique Identification Codes	In-House	PM SKOT Rock Island				80	1-3Q			Cont.	Cont.	Cont.
SBIR/STTR						40					40	
Subtotal:			268	420		303				Cont.	Cont.	Cont.
<b>Project Total Cost:</b>			<b>1601</b>	<b>1380</b>		<b>1446</b>			<b>1513</b>	<b>Cont.</b>	<b>Cont.</b>	<b>Cont.</b>

# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**L46**

Event Name	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
Modernization / Redesign efforts of SECM for next generation of vehicles.																												

**Schedule Detail (R4a Exhibit)**

**February 2008**

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 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>
Modernization / Redesign efforts of SECM for next generation of vehicles.	1Q - 4Q						

Modernization / Redesign efforts of SECM for next generation of vehicles.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>5 - System Development and Demonstration</b>		<b>PE NUMBER AND TITLE</b> <b>0604804A - Logistics and Engineer Equipment - Eng Dev</b>						<b>PROJECT</b> <b>L47</b>	
COST (In Thousands)	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		4437	5951	3475	1489				15352

**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 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 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 the System Development and Demonstration (SDD) Phase activities for 9, 18 and 36K IECUs.

<b><u>Accomplishments/Planned Program:</u></b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY08: 9, 18 and 36K IECU System Development and Demonstration (SDD) contract award.		3269	
FY08: Milestone C Decision for the 60K BTU/H IECU		600	
FY08: Complete Type Classification Materiel Release (MR) and other actions required for Milestone C Full Rate Production (FRP) decision for the 60K IECU.		444	
FY09: Continue SDD for the 9, 18 and 36K IECUs.			5951
Small Business Innovative Research/Small Business Technology Transfer Program		124	
<b>Total</b>		<b>4437</b>	<b>5951</b>

<b><u>B. Other Program Funding Summary</u></b>	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	1202								1202
RDT&E:PE0604804A - Logistics and Engineer Equipment - Eng Dev 194	1000								1000
OPA 3, Improved Environmental Control Units , MF9303	3846	11549	11201	12032	11668	110			50406

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

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

PROJECT

**L47**

Comment:

**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 BTU/H IECU: 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 2008

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 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				2773	4Q	4611	2Q	Cont.	Cont.	
60K IECU	CPFF	Various				500	2Q			Cont.	Cont.	
Subtotal:						3273		4611		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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				458	2Q	450	2Q	Cont.	Cont.	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA				264	2Q			Cont.	Cont.	
Subtotal:						722		450		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	Cont.	Cont.	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA				100	3Q			Cont.	Cont.	
Subtotal:						100		500		Cont.	Cont.	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE						PROJECT		
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev						L47		
	Type				Date		Date		Date		Contract
9, 18 and 36K IECU	In-house	PM-MEP, Ft Belvoir, VA				162	1-4Q	390	1-4Q	Cont.	Cont.
60K IECU	In-house	PM-MEP, Ft Belvoir, VA				180	1-4Q			Cont.	Cont.
Subtotal:						342		390		Cont.	Cont.
<b>Project Total Cost:</b>											
						4437		5951		Cont.	Cont.

# Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY  
**5 - System Development and Demonstration**

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

PROJECT  
**L47**

Event Name	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																								
9, 18 and 36K BTU/H IECU																																																				
(1) SDD Contract Award																																																				
SDD Phase I																																					■															
SDD Phase II																																									■											
(2) Conduct User Evaluation & Validation/Verification																																																				
(3) Milestone C Decision																																																				
60K BTU/H IECU																																																				
(4) Milestone C Decision																																	▲																			
Complete TC, MR and other actions required for Milestone C FRP Decision (60K)																																					■															

**Schedule Detail (R4a Exhibit)**

**February 2008**

**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 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		4Q	1Q				
SDD Phase I			1Q - 4Q	1Q - 2Q			
SDD Phase II				2Q - 4Q	1Q - 4Q	1Q - 2Q	
Conduct User Evaluation & Validation/Verification					4Q		
Milestone C Decision						3Q	
Complete TC, MR, etc. for Full Rate Production (FRP) Decision						4Q	1Q
60K BTU/H IECU							
Milestone C Decision		2Q					
Complete TC, MR and other actions required for Milestone C FRP Decision (60K)			2Q - 4Q				