

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

February 2005

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

COST (In Thousands)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		84398	90517	13353	35374	33341	43785	46345	65097	Continuing	Continuing
194	ENGINE DRIVEN GEN ED	7017	5241	6735	10100	3809	4387	1683	1689	0	47954
461	MARINE ORIEN LOG EQ ED	59127	62641	0	0	0	0	0	0	0	151770
H01	COMBAT ENGINEER EQ ED	4000	4054	997	4799	3350	3240	10536	30214	0	66843
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	1857	2375	997	2859	9262	22991	12039	12404	0	65804
H14	MATERIALS HANDLING EQUIPMENT - ED	471	0	499	509	509	510	509	508	Continuing	Continuing
L39	FIELD SUSTAINMENT SUPPORT ED	8034	4411	1938	8322	10880	6999	6556	6578	0	54699
L41	WATER AND PETROLEUM DISTRIBUTION - ED	1613	8021	2187	7078	3578	3646	3607	3635	0	40833
L42	CAMOUFLAGE SYSTEM ED	637	1536	0	0	0	0	1592	1625	0	5719
L43	ENGINEER SUPPORT EQUIPMENT - ED	1171	1107	0	305	509	510	6515	4883	0	17862
L46	MAINTENANCE SUPPORT EQUIPMENT	471	1131	0	1402	1444	1502	3308	3561	0	12819

**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 2005****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604□04A - Logistics and Engineer Equipment - Eng Dev****B. Program Change Summary**

	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	89151	38534	45332
Current Budget (FY 2006/2007 PB)	90517	13353	35374
Total Adjustments	1366	-25181	-9958
Net of Program/Database Changes			
Congressional Program Reductions	-1366		
Congressional Rescissions			
Congressional Increases	5300		
Reprogrammings			
SBIR/STTR Transfer	-2568		
Adjustments to Budget Years		-25181	-9958

Change Summary Explanation: Funding - FY06 and FY07 funds realigned in support of higher Army requirements.

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

February 2005

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

## PROJECT

**1□4**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
194 ENGINE DRIVEN GEN ED	7017	5241	6735	10100	3809	4387	1683	1689	0	47954

**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.

<b>Accomplishments/Planned Program</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>
Completed testing and began transition of 100/200kW Tactical Quiet Generators (TQG) to production and deployment.	200	0	0	0
Awarded two Phase I contracts for Advanced Medium Mobile Power Sources (AMMPS) and began Phase I testing.	4736	4212	0	0
Continue Phase I test for AMMPS	0	1029	0	0
Initiate Follow-on 2kW Improvement Program	2081	0	0	0
Downselect to 1 contractor/Award Phase II for AMMPS/Develop and assembly of pre-production test models with commensurate engineering and logistics data.	0	0	6735	0
Conduct Developmental Tests (DT) and continue engineering and logistics data deliverables	0	0	0	10100
<b>Totals</b>	<b>7017</b>	<b>5241</b>	<b>6735</b>	<b>10100</b>

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

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604□04A - Logistics and Engineer Equipment -  
Eng Dev

PROJECT

1□4

<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
0603804A - Logistics and Engineer Equipment Adv Dev G11	1409	1449	1846	1980	2158	2353	1130	1138	Continuing	Continuing
OPA3, MA9800, Generators and Associated Equipment	71645	57175	43067	33516	34284	28550	24716	25946	Continuing	Continuing

**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 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**1□4**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . AMMPS(5-60kW)	CPFF	Various	9016	3912	2Q	6335	2Q	4825	2Q	Continue	24088	0
b . Follow-on 2kW Improvement Program	CPFF	Various	1800	0		0		0		0	1800	0
Subtotal:			10816	3912		6335		4825		Continue	25888	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . 100/200kW	In-house	CECOM, Ft Belvoir, VA	1335	0		0		0		0	1335	0
b . AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	1975	200	1Q	200	1Q	200	1Q	Continue	2575	0
c . Follow-on 2kW Improvement Program	In-house	CECOM, Ft Belvoir, VA	65	0		0		0		0	65	0
Subtotal:			3375	200		200		200		Continue	3975	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604□04A - Logistics and Engineer Equipment - Eng Dev					1□4			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . AMMPS(5-60kW)	MIPR	Various	927	953	2Q	0		4825	2Q	Continue	6705	0	
b . Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Belvoir, VA	216	0		0		0		0	216	0	
Subtotal:			1143	953		0		4825		Continue	6921	0	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . 100/200kW	In-house	CECOM, Ft Belvoir, VA	1122	0		0		0		0	1122	0	
b . AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	1557	176	1-4Q	200	1Q	250	1Q	Continue	2183	0	
Subtotal:			2679	176		200		250		Continue	3305	0	
Project Total Cost:			18013	5241		6735		10100		Continue	40089	0	

# Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY  
5 - System Development and Demonstration

PE NUMBER AND TITLE  
0604□04A - Logistics and Engineer Equipment - Eng Dev  
PROJECT  
1□4

Event Name	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	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																																
(1) MS B, (2) Release Solic.	▲	▲																														
Award Phase I / Phase I Test																																
Award Phase II / Conduct DT & OT																																
(3) MS C / Production Release, (4) Transition to Production																				▲	▲											
100/200kW TQG																																
(5) Complete DT, (6) Complete OT (7) MS C/Production Release	▲	▲		▲																												
STEP (Small Tact. Electric Power)																																
(8) Prepare Performance Spec., (9) Award Phase I / Phase I Test / MS B, (10) DT / OT, (11) MS C / Production Release																				▲												
2kW Follow-on Improvement Program																																
(12) Publish CBD Announcement, (13) Awd. Cont(s)., 24 Mon. Proto. Dev.																																
LAMPS (Large Advanced Mobile Power Systems)																																
(14) Prepare Performance Spec. / MS B																																

## Schedule Detail (R4a Exhibit)

**February 2005**

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604 □ 04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**1 □ 4**

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Complete 100/200kW TQG Developmental Test	1Q							
Complete 100/200kW TQG Operational Test	1Q							
AMMPS Milestone B	1Q							
Complete solicitation package for AMMPS/Release Solicitation	2Q							
Publish CBD Announcement requesting White Papers for Follow-on 2kW Improvement Program	2Q							
Transition 100/200kW TQG to Procurement - (Milestone C)	3Q							
Award Follow-on 2kW Improvement Program contract(s)	4Q							
Award two or more Phase I contracts for AMMPS	4Q							
Continue Phase I for AMMPS		2Q						
Downselect to 1 contractor/Award Phase II for AMMPS/develop test model			2Q					
Conduct AMMPS DT & continue engineering & logistics data deliverables				2Q				
Begin preparation of Performance Specification for Small Tactical Electric Power (STEP)					1Q			
Complete DT/OT & documentation in support of Milestone C for AMMPS					1Q			
Transition AMMPS to Milestone C					2Q			
Transition AMMPS to Production					3Q			
Award STEP Phase I contracts/Milestone B						2Q		
DT/OT for STEP							1Q	
Begin Performance Specification for Large Advanced Mobile Power Sources (LAMPS)								1Q
STEP Milestone C/Production Release								4Q



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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**461**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
461 MARINE ORIEN LOG EQ ED	59127	62641	0	0	0	0	0	0	0	151770

**A. Mission Description and Budget Item Justification:** This project supports the engineering and pre-production development of equipment for the Army's Logistics-Over-The-Shore (LOTS), In-theatre Port Control, and Riverine logistics missions. Chief among this equipment is the Joint High Speed Vessel (JHSV). The JHSV will operate at speeds up to four times greater than the current fleet. This will provide the Army with the capability to support operational maneuver from standoff distance; bypass land-based chokepoints, and reduce the logistics footprint in the Area of Responsibility. This ability to transport both troops and their equipment, and to provide an Enroute Mission Planning and Rehearsal System, does not exist today.

<b>Accomplishments/Planned Program</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>
FY04-FY05: Continue Theater Support Vessel (TSV) program.	38474	52194	0	0
FY04: Continue Army support for the High Speed Vessel (HSV) Lease	9000	0	0	0
FY04-FY05: Continue Army support for the TSV Lease.	11653	10447	0	0
<b>Totals</b>	<b>59127</b>	<b>62641</b>	<b>0</b>	<b>0</b>

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**461**

<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
RDTE, 0603804A,526, Marine Oriented Logistics, Advanced Development	4469	284	2992	3052	3056	3056	3054	3052	Continuing	Continuing
OPA 3, M11203, Theatre Support Vessel (TSV)	0	996	15000	15361	299351	301615	154195	154356	Continuing	Continuing

**C. Acquisition Strategy:** The JHSV Acquisition Strategy calls for evolutionary development of commercially based technology with military adaptations. JHSV will be acquired competitively and production will be based in the United States. The HSV-X1 lease will expire 1st quarter FY06 with an option for 300 additional days. The TSV-1X lease will expire 1st quarter FY06 with the possibility of adding two additional option years on the contract, with Justification and Approval (J&A). Currently fielded Logistics Support Vessels (LSV) will remain the only Army intra-theater capability until TSV is fielded. A JHSV Memorandum of Intent between Army, Navy and Marine Corps has been signed to form a Navy-led Joint Program Office and integrate Army, Navy and Marine Corps requirements. A Memorandum of Agreement (MOA) directed transition of JHSV portion of this effort to Navy NLT 31 Jan 05. TSV Advanced Concept Technology Demonstration (ACTD) effort is maintained by Army through FY05.

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>461</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TSV	MIPR	NSWC, Suffolk, VA	4828	1500	1-2Q	0		0		Continue	6328	0
b . HSV Lease(ARMY portion)/Insurance	Competitive FFP/Requirements Type Contract	Bollinger/INCAT	14869	0	1-2Q	0		0		0	14869	Continue
c . TSV-1X Lease/Insurance	Competitive Fixed Price Contract	Bollinger/INCAT	23305	10447	1-2Q	0		0		0	33752	Continue
d . TSV/HSV Modifications	PWD	TBD	17151	0		0		0		0	17151	Continue
e . TSV Self Defense	PWD/MIPR	TBD	0	6600	1-2Q	0		0		0	6600	0
f . TSV/HSV Operations/Demonstration/Maintenance	PWD/MIPR	Multiple	23774	21257	1-2Q	0		0		0	45031	0
g . HSV Cargo Handling	MIPR	TBD	5200	0		0		0		0	5200	0
h . TSV C4I	PWD/MIPR	TBD	5800	3800	1-2Q	0		0		0	9600	0
i . TSV Helo Operations	MIPR	Ft. Rucker, Alabama	1000	0		0		0		0	1000	0

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604 04A - Logistics and Engineer Equipment - Eng Dev

PROJECT

461

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . HSV Lease Close Out	Competitive FFP/Requir ements Type Contract	Bollinger/INCAT	0	1200	2-3Q	0		0		0	1200	0
k . TSV Lease Close Out	Competitive FFP/Requir ements Type Contract	Bollinger/INCAT	0	1000	2-3Q	0		0		0	1000	0
l . TSV/HSV Demil Cost	Competitive FFP/Requir ements Type Contract	Bollinger/INCAT	0	2634	3-4Q	0		0		0	2634	0
Subtotal:			95927	48438		0		0		Continue	144365	Continue

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**461**

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TSV/Matrix Support	MIPR	TACOM, PSID	0	186	1-2Q	0		0		0	186	0
b . TSV/Matrix Support	MIPR	TACOM, Legal	0	66	1-2Q	0		0		0	66	0
c . TSV/Matrix Support	MIPR	TACOM, Resource Management	0	52	1-2Q	0		0		0	52	0
d . TSV/Matrix Support	MIPR	TACOM, Acquisition Center	0	186	1-2Q	0		0		0	186	0
e . TSV/Matrix Support	MIPR	TACOM Safety Office	65	28	1-2Q	0		0		Continue	93	0
f . TSV	MIPR	DRM, Ft Eustis	90	0		0		0		0	90	0
g . TSV	MIPR	NSWC, West Bethesda, MD	100	0		0		0		0	100	0
h . TSV/Matrix Support	MIPR	TACOM, Environmental	130	28	1-2Q	0		0		0	158	0
i . TSV/Matrix Support	MIPR	TACOM, LCCE	0	60	1-2Q	0		0		Continue	60	0
j . TSV/Matrix	MIPR	TACOM, NET	0	25	1-2Q	0		0		0	25	0
k . TSV/Matrix Support	MIPR	CASCOM, Ft. Lee, VA	0	500	1-2Q	0		0		0	500	0
l . TSV/Matrix Support	MIPR	TACOM, TARDEC	0	28	1-2Q	0		0		0	28	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>461</b>		
II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
m . HSV/Matrix Support	MIPR	USAPAC	0	90	1-2Q	0		0		0	90	0
Subtotal:			385	1249		0		0		Continue	1634	0
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . HCCC	MIPR	TECOM , ATC, Aberdeen, MD	50	0		0		0		0	50	730
b . TSV/Matrix Support	MIPR	LCCE, TACOM, Warren	133	0		0		0		Continue	133	0
c . TSV	PWD	Tirrenia, Napoli, Italy	437	0		0		0		0	437	0
d . TSV	MIPR	ATEC/AEC, Aberdeen, MD	0	200	1-2Q	0		0		0	200	0
Subtotal:			620	200		0		0		Continue	820	730

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration					0604□04A - Logistics and Engineer Equipment - Eng Dev					461		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . HCCC/Matrix	MIPR	PM Force Projection R&D/TARDEC, TACOM, Warren, MI	212	0		0		0		0	212	0
b . TSV/In-house	MIPR	PM TSV, Warren, MI	3172	2754	1Q	0		0		Continue	5926	0
d . Joint High Speed Vessel Start Up Cost		PEO Ships, Washington Navy Yard, DC	0	10000	2-3Q	0		0		0	10000	0
Subtotal:			3384	12754		0		0		Continue	16138	0
Project Total Cost:			100316	62641		0		0		Continue	162957	Continue

Schedule Profile (R4 Exhibit)	
-------------------------------	--

February 2005

BUDGET ACTIVITY	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

## 5 - System Development and Demonstration

PE NUMBER AND TITLE	PROJECT
---------------------	---------

**060404A - Logistics and Engineer Equipment - Eng**

PROJECT

461

[illegible]



Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>				PROJECT <b>461</b>
<u><b>Schedule Detail</b></u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
High Speed Vessel Lease (HSV X1, Joint Venture)	1-4Q	1-4Q	1-4Q					
Theater Support Vessel Lease (TSV 1X, Spearhead)	1-4Q	1-4Q	1Q					
HSV X1: FY06 an option is available, however, this is not funded in the current budget.								
TSV 1X: FY06-08 options are available with Justification and Approval, however, this is not funded in the current budget.								

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**H01**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
H01 COMBAT ENGINEER EQ ED	4000	4054	997	4799	3350	3240	10536	30214	0	66843

**A. Mission Description and Budget Item Justification:** This project supports the System Development and Demonstration (SDD) of military tactical Construction Equipment (CE) used in support of horizontal construction missions in the Current Force and the transformation of engineers into the Brigade Combat Team (BCT) (unit of action) for the Future Force. This project also supports SDD of enabling systems meeting the capabilities of joint interdependence through the Air and Ground (A/G) Line of Communication (LOC), high speed excavation, infrastructure repair, and restoration integrated concept teams. Equipment includes items such as: High Mobility Engineer Excavator (HMEE, Types II and III); Scrapers, Scoop Loaders and Graders. The HMEE Type II will be lighter and tailored to meet the needs of the SBCTs and Light Forces (Airborne and Air Assault). The HMEE Type III will support medium and heavy combat engineer battalions and construction units. All of these systems support the Current Force of Combat Heavy Engineer Battalions, Construction Support Companies, Airborne/Air Assault Units, and the Army's Division Redesign Study (ADRS), which converts National Guard units from Combat to Combat Service Support (CSS) units.

<b>Accomplishments/Planned Program</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>
Completed development of non-split rim wheel for construction equipment to address the Army's safety concerns.	400	0	0	0
Completed Test and Evaluation (6 prototypes) for HMEE Type II.	736	0	0	0
Continue SDD Contracts for HMEE Type II.	528	413	0	0
Conduct market research and update specs for future engineer transformation.	813	420	135	445
Continue Cooperative Research with Industry.	500	500	100	400
Continue development of engineer and acquisition documents required for Milestone Decisions.	618	465	140	475
Conduct Test and Evaluation of future engineer equipment.	405	456	150	495
Design Armor Kits for IHMEE, HMEE Type II, DEUCE.	0	1800	0	0
Conduct feasibility study to Armor HMEE Type III and Family of Loaders (FOL).	0	0	472	900
Initiate Systems Development and Demonstration of systems enabling A/G LOC Repair and Construction capabilities	0	0	0	1139
Initiate Test & Evaluation of systems enabling A/G LOC Repair and Construction capabilities.	0	0	0	945
<b>Totals</b>	<b>4000</b>	<b>4054</b>	<b>997</b>	<b>4799</b>

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**H01**

<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA3, R05900, High Mobility Engineer Excavator	3845	8642	13472	16400	16455	14831	30299	31257	Continuing	Continuing
OPA3, R03801, Grader, Mtzd, Hvy	0	0	0	2904	12634	4201	8738	12863	Continuing	Continuing
OPA3, RA0100, Scrapers, Earthmoving	0	0	0	0	3179	5923	10280	0	0	19382
OPA3, M09900, Pneumatic Tool Compressor Outfit 250cfm Trl	0	0	0	0	352	0	4523	8644	Continuing	Continuing

**C. Acquisition Strategy:** Construction Equipment- programs will transition into a competitive procurement.

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>H01</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Non-split rim wheel development	FFP	Hutchinson Tire, Hutchinson, KS	400	0		0		0		0	400	0
b . Continue SDD Contracts for HMEE Type II	FFP	ADI, Australia; JCB, Pooler, GA	4047	413	1-2Q	0		0		0	4460	7341
c . Market Research, Studies, Update Specs for future engineer	various	multiple activities	813	420	1-4Q	135	1-4Q	445	1-4Q	Continue	1813	Continue
d . Continue Cooperative Research with Industry	various	multiple activities	500	500	1-4Q	100	1-4Q	400	1-4Q	Continue	1500	Continue
e . Continue development of engineer and acquisition documents	various	multiple activities	618	465	1-4Q	140	1-4Q	475	1-4Q	Continue	1698	Continue
f . Design Armor Kits for IHMEE, HMEE Type II, DEUCE.	MIPR	TACOM, Warren, MI	0	1338	2-4Q	0		0		0	1338	0
g . Conduct feasibility study to armor HMEE Type III and FOL	TBD	TBD	0	0		197	2-4Q	615	2-4Q	0	812	Continue
h . Initiate SDD for A/G LOC Repair and Construction	TBD	TBD	0	0		0		1139	1-4Q	0	1139	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>H01</b>		
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			6378	3136		572		3074		Continue	13160	Continue
Subtotal:												
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Matrix Support	MIPR	TACOM, Warren, MI	10219	315	1-2Q	135	1-2Q	140	1-2Q	Continue	10809	Continue
b . Engineering Operational Integrator Support	MIPR	DA/Pentagon, Washington, DC	156	0		0		0		0	156	156
c . Construction Equipment Lease Study	MIPR	DA/Pentagon, Washington, DC	200	0		0		0		0	200	200
Subtotal:			10575	315		135		140		Continue	11165	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604 04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>H01</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . HMEE Type II (6 prototypes)	MIPR	ATEC, Aberdeen, MD	784	0		0		0		0	784	2048
b . Future Engineer Equipment (various)	MIPR	ATEC, Aberdeen, MD	1696	456	1-4Q	150	1-4Q	495	1-4Q	Continue	2797	Continue
c . Air & Ground LOC Test & Evaluation	MIPR	ATEC, Aberdeen, MD	0	0		0		945	1-4Q	Continue	945	Continue
Subtotal:			2480	456		150		1440		Continue	4526	Continue
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Mgt	In-house	PM CE/MHE, Warren, MI	529	147	1-2Q	140	1-2Q	145	1-2Q	Continue	961	Continue
Subtotal:			529	147		140		145		Continue	961	Continue
Project Total Cost:			19962	4054		997		4799		Continue	29812	Continue

# Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604□04A - Logistics and Engineer Equipment - Eng Dev

PROJECT

H01

Event Name	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	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																																
T&E of Technologies for Engineer Equip (from components to major systems)																																
HMEE System Demonstration Testing (PPT & LUT)																																
(1) HMEE MS C/ TC Generic																																
Design Armor Kits																																
Air & Ground LOC SDD contracts (graders, scrapers, compressors, earthmover)																																
Air & Ground Line of Communication (LOC) T&E (graders, scrapers, compressor)																																
Cooperative Research with Industry																																

## Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604 □ 04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**H01**

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Market Surveillance/Investigation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Test and Evaluation of Future Engineer Equipment	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Test of HMEE Type II	3-4Q							
HMEE Type II, Milestone C		3Q						
Design Armor Kits for various Construction Equipment systems		2-4Q						
Air & Ground LOC SDD				1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Air & Ground LOC Test & Evaluation				1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Cooperative Research with Industry	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q



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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**H02**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
H02 TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	1857	2375	997	2859	9262	22991	12039	12404	0	65804

**A. Mission Description and Budget Item Justification:** This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include: the assessment of the Rapidly Emplaced Bridging System (REBS) for the Stryker Brigade Combat Team (SBCT) and its integration into the Future Combat System (FCS) chassis; upgrade of the Bridge Erection Boat (BEB) engine; development of new technology for the REBS and the Dry Support Bridge (DSB); and development of modular components and lightweight material for future bridging applications.

<u>Accomplishments/Planned Program</u>	FY 2004	FY 2005	FY 2006	FY 2007
Test Improved Bridge Anchorage System	2	0	0	0
Develop, integrate, and test DSB 46 meter bridge	405	676	997	1584
Operational testing of the REBS	1450	1699	0	0
Develop REBS improved bridge	0	0	0	500
Develop REBS fully automated launch/retrieve	0	0	0	450
Integrate, purchase and install BEB Electronic Controlled Engine	0	0	0	325
Totals	1857	2375	997	2859

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**H02**

<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA3, MX0100, Tactical Bridge	39728	34005	26611	29421	26448	44393	60323	60959	Continuing	Continuing
OPA3, MA8890, Tactical Bridging, Float Ribbon	59390	27005	5913	10819	19431	31497	24543	24879	Continuing	Continuing

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

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**H02**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . DSB 46 meter bridge	SS-CPFF	WFEL, Stockport, England	0	676	1-2Q	997	1-2Q	1000	1-2Q	Continue	2673	0
b . REBS Improved Bridge	SS-CPFF	General Dynamics SBS, Kaiserslautern, GE	0	0		0		500	1Q	Continue	500	0
c . REBS Fully Automated Launch/Retrieve	SS-CPFF	General Dynamics SBS, Kaiserslautern, GE	0	0		0		450	2Q	Continue	450	0
d . Integrate and Purchase BEB Electronic Engine	SS-REQ	FBM Babcock Marine	0	0		0		325	1-3Q	Continue	325	0
Subtotal:			0	676		997		2275		Continue	3948	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Other Government Agencies	MIPR	TACOM, Warren, MI-- Various	120	0		0		0		0	120	0
Subtotal:			120	0		0		0		0	120	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>H02</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Anchorage System	MIPR	APG, Aberdeen, MD	43	0		0		0		0	43	0
b . REBS OT	MIPR	HQ OTC, Ft Hood, TX	912	1699	1-2Q	0		0		0	2611	0
c . DSB 46 meter Bridge	SS-CPFF	WFEL, Stockport, UK	246	0		0		584	1Q	0	830	0
Subtotal:			1201	1699		0		584		0	3484	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management Support	NA	TACOM, Warren, MI	727	0		0		0		0	727	0
Subtotal:			727	0		0		0		0	727	0
Project Total Cost:			2048	2375		997		2859		Continue	8279	0

Schedule Profile (R4 Exhibit)																				February 2005													
BUDGET ACTIVITY 5 - System Development and Demonstration												PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev																PROJECT H02					
Event Name		FY 04				FY 05				FY 06				FY 0□				FY 0□				FY 0□				FY 10				FY 11			
		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				
Anchorage System Test																																	
REBS Operational Test																																	
Dev, Integ, & Test DSB 46 Meter Bridge																																	
Dev, Integ & Test REBS Improved Bridge																																	
Dev, Integr, & Test BEB Elect. Controlled Engine																																	
Dev, Integr, & Test REBS Fully Auto. Launch/Retrieve																																	
Develop and Integrate REBS on FCS Chassis																																	
Plan and Develop Modular Components and Lightweight Materials																																	

## Schedule Detail (R4a Exhibit)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**H02**

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Anchorage System Testing	2Q							
REBS Operational Test	3-4Q	1-3Q						
Develop REBS Improved Bridge				1-4Q				
Integrate REBS Improved Bridge					1-3Q			
Test New REBS Improved Bridge					4Q			
Develop DSB 46 Meter Bridge	3-4Q	1-4Q						
Integrate DSB 46 Meter Bridge			1-4Q					
Test DSB 46 Meter Bridge	1-2Q			1-3Q				
Develop BEB Elect. Controlled Engine				1-4Q				
Purchase and Install BEB Elect. Controlled Engine					1-4Q			
Test BEB Electronic Controlled Engines						1-4Q	1-2Q	
Develop REBS Fully Automated Launch/Retrieve				1-4Q				
Integrate REBS Fully Automated Launch/Retrieve					1-4Q			
Test REBS Fully Automated Launch/Retrieve						1-4Q		
System development of REBS for Future Combat System (FCS) Chassis						1-4Q		
Integrate the REBS into the FCS Chassis							1-4Q	1-2Q
Plan and Develop Modular Components and Lightweight Materials								2-4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)							February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev				PROJECT L3□		
COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L39 FIELD SUSTAINMENT SUPPORT ED	8034	4411	1938	8322	10880	6999	6556	6578	0	54699
<p><b>A. Mission Description and Budget Item Justification:</b> 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 such as Tactical Operation Center's environmental control systems for with added capabilities and enhanced survivability. 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, which reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), the lift demands, the combat zone footprint, and costs for logistical support.</p>										
<b>Accomplishments/Planned Program</b>						FY 2004	FY 2005	FY 2006	FY 2007	
FY 04: Completed Developmental Testing (DT) and Operational Testing (OT) of Large Capacity Field Heater (LCFH) and obtained Milestone C Low Rate Initial Production (LRIP) decision.						544	0	0	0	
FY 04: Due to a loss of funding development of the small Improved Environmental Control Units (IECUs) was terminated. Received deliverables and closed out the SDD prototype contract for the 9K, 18K and 36K variants of the IECU. Procurement of the currently fielded systems will continue.						580	0	0	0	
FY 04: Conducted requirements review and alternative design evaluations for the Mobile Integrated Remains Collection System (MIRCS) including adaptation of the Multi-Temperature Refrigerated Container System (MTRCS). Prepared documentation for Milestone B and procurement. FY 05: Obtain Milestone B, fabricate MIRCS prototypes and prepare documentation to support testing. FY 06: Complete fabrication of MIRCS prototypes and conduct Developmental Testing (DT) and initiate Operational Testing (OT). FY 07: Complete Operational Testing. Complete documentation and prepare for Milestone C package for MIRCS to transition into production.						1200	1701	1425	694	

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**L3□**

## Accomplishments/Planned Program (continued)

	FY 2004	FY 2005	FY 2006	FY 2007
FY 04: Completed development and reliability testing of 60k British Thermal Unit (BTU) Space Heater Convective (SHC) test prototypes. Prepared technical and logistic documentation for Defense Supply Center Philadelphia (DSCP) Low Rate Initial Production (LRIP) contract solicitation. FY 05: Award LRIP contract, conduct Field Evaluation, complete First Article Testing (FAT), obtain Milestone C Full Rate Production decision for the 60k BTU SHC.	770	60	0	0
FY 04: Conducted Design Validation (DV) for 500' Low Velocity Airdrop System (LVADS). Modified contract to change design features and fabricated new DV test items. FY 05: Complete DV for 500' Low Velocity Airdrop System (LVADS). FY 06: LVADS program terminated due to funding decrements under PDB 701.	1575	1425	0	0
FY 04: Conducted DV testing of platform and nets on the Enhanced Container Delivery System (ECDS). Procured DT platform and net test items. FY 05: Conduct DT testing of platform and nets on the ECDS. Procure OT test items. Start OT. FY 06: Complete OT and obtain Milestone C for ECDS.	1235	725	200	0
FY 04: Completed DT on the Trailer Mounted Environmental Control System (TMECS) for Stryker Brigade Combat Team (SBCT).	1445	0	0	0
FY 04: Conduct technical feasibility testing of Extraction Parachute Jettison System (Heavy) (EPJS(H)) to evaluate the integration of subsystems and components coupled with aircraft compatibility. FY 05: Conclude technical feasibility and conduct DT of EPJS(H). Procure OT test items. FY 06: Complete OT, obtain Milestone C and transition into production.	685	500	313	0
FY 07: Initiate Joint Precision Airdrop System (JPADS) 2k System DT. Procure JPADS 10k System DT prototypes and initiate DT.	0	0	0	7628
<b>Totals</b>	<b>8034</b>	<b>4411</b>	<b>1938</b>	<b>8322</b>



<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R2a Exhibit)</b>	<b>February 2005</b>
---	----------------------

BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>	PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>	PROJECT <b>L3□</b>
--	---	-----------------------

<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA3, MF9000, Environmental Control Units (ECU)	20717	17486	3420	5766	6090	4867	4174	4178	Continuing	Continuing

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

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**L3□**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Soldier Support Equipment	In-House	PM FSS, Natick	1005	426	1-4Q	280	1-4Q	810	1-4Q	Continue	2521	3241
b . Soldier Support Equipment	In-House	CECOM, FT Belvoir	1441	0	1-4Q	0	1-4Q	0	1-4Q	Continue	1441	0
c . Soldier Support Equipment	Contracts	Various	4817	3039	1-2Q	1300	1-2Q	4448	1-2Q	Continue	13604	0
Subtotal:			7263	3465		1580		5258		Continue	17566	3241

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

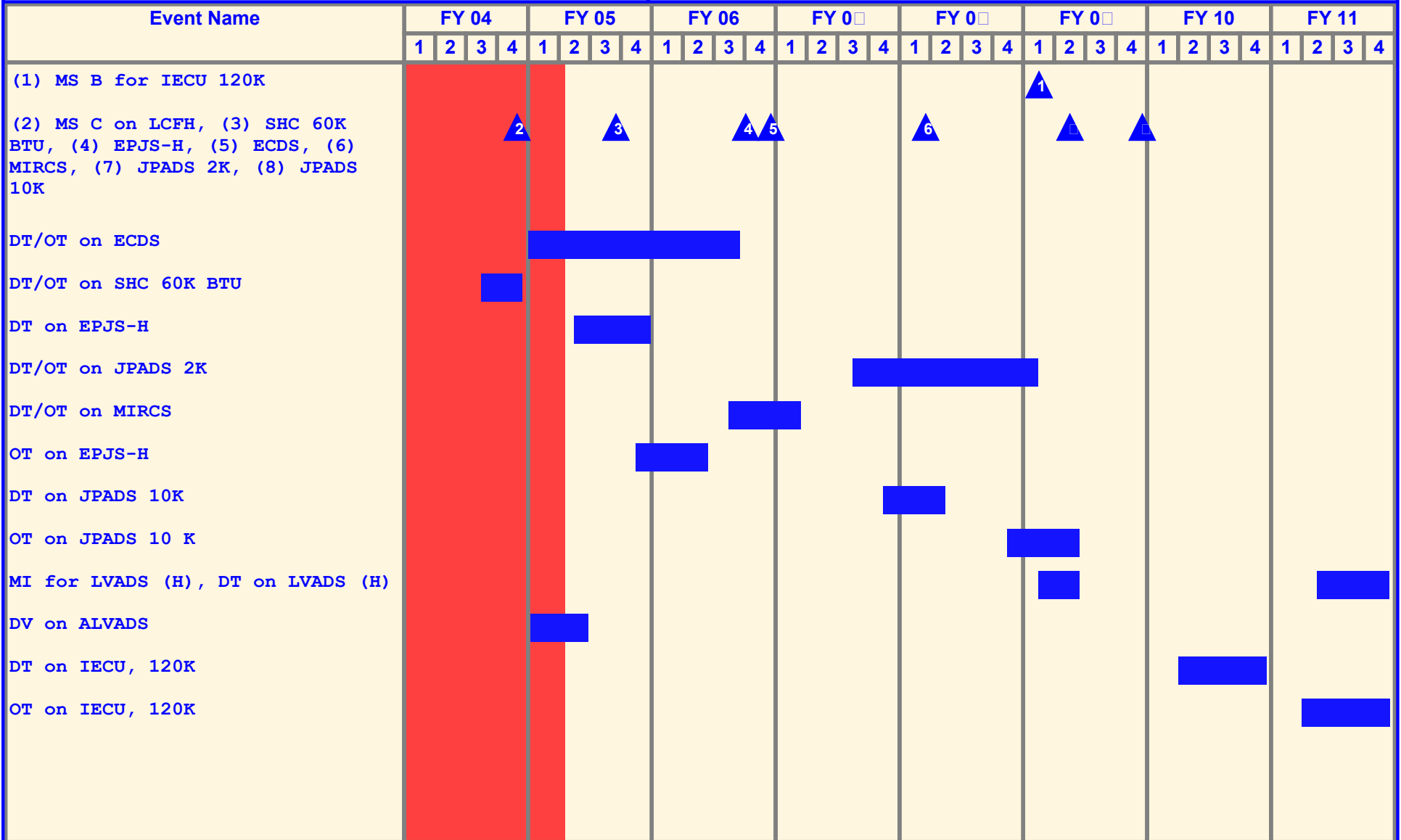
ARMY RDT&E COST ANALYSIS(R3)									February 2005				
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>L3□</b>			
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	580	132	1-4Q	100	1-4Q	694	1-4Q	Continue	1506	130	
b . Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ	1896	676	1-4Q	200	1-4Q	2125	1-4Q	Continue	4897	76	
Subtotal:			2476	808		300		2819		Continue	6403	206	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Project Management Support		PM FSS, Natick	250	138	1-4Q	58		245		Continue	691	0	
Subtotal:			250	138		58		245		Continue	691	0	
Project Total Cost:			9989	4411		1938		8322		Continue	24660	3447	

# Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY  
5 - System Development and Demonstration

PE NUMBER AND TITLE  
0604□04A - Logistics and Engineer Equipment - Eng L3□  
Dev



## Schedule Detail (R4a Exhibit)

February 2005

### BUDGET ACTIVITY

**5 - System Development and Demonstration**

### PE NUMBER AND TITLE

**0604 04A - Logistics and Engineer Equipment - Eng Dev**

### PROJECT

**L3**

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Conduct Milestone C LRIP decision on the Large Capacity Field Heater .	4Q							
Conduct DT/OT on the Mobile Integrated Remains Collection System (MIRCS).			3-4Q	1Q				
Conduct Milestone C Decision on the MIRCS and transition into production.					1Q			
Complete DT/Operational Testing (OT) on 60k British Thermal Unit (BTU) Space Heater Convective (SHC)	3-4Q							
Conduct Milestone C Decision on the 60k BTU SHC.		3Q						
Conduct DV on Advanced Low Velocity Airdrop System (LVADS).		1-2Q						
Conduct Market Investigation for LVADS (H).						1-3Q		
Obtain Milestone B approval for LVADS (H).							1Q	
Conduct DT for LVADS (H).								2-4Q
Initiate DT and OT on Enhanced Containerized Delivery System (ECDS).		1Q						
Complete DT and OT on ECDS.			3Q					
Conduct Milestone C Decision on ECDS.			4Q					
Conduct DT on Extraction Parachute Jettison System - Heavy (EPJS-H).		2-4Q						
Conduct OT on EPJS-H.		4Q	1-2Q					
Conduct Milestone C Decision on EPJS-H.			4Q					
Initiate JPADS 2k System DT.				3Q				
Complete JPADS 2k System DT.					1Q			
Initiate JPADS 2k System OT.					1Q			
Complete JPADS 2k System OT.						1Q		
Conduct Milestone C on JPADS 2k System.						2Q		
Initiate JPADS 10k System DT.				4Q				
Complete JPADS 10k System DT.					2Q			

Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>				PROJECT <b>L3□</b>
<b><u>Schedule Detail (continued)</u></b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>
Initiate JPADS 10k System OT.					4Q			
Complete JPADS 10k System OT.						2Q		
Conduct Milestone C on JPADS 10k System.						4Q		
Conduct Milestone B for IECU 120k.						1Q		
Conduct DT on IECU 120k.							2-4Q	
Conduct OT on IECU 120k.								2-4Q

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

February 2005

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

## PROJECT

**L41**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L41 WATER AND PETROLEUM DISTRIBUTION - ED	1613	8021	2187	7078	3578	3646	3607	3635	0	40833

**A. Mission Description and Budget Item Justification:** All services depend on ample supplies 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 the 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 Fluid Transfer System (RIFTS) is being developed to 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. Versatile Tank and Pump Unit (VTPU) will support limited fuel storage and retail distribution missions from platoon through theater level and objective force velocity management. Petroleum, Oils and Lubricant (POL) Quality Analysis System (PQAS) replaces the air mobile lab and reduces the number of operators. Furthermore, 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 it with the means to be highly mobile and self-sustaining in very hostile theaters of operation. FY05 includes \$4.958 million of Congressional Plus-up funding.

<u>Accomplishments/Planned Program</u>	FY 2004	FY 2005	FY 2006	FY 2007
Continue Petroleum, Quality Analysis System (PQAS) Pre-Planned Product Improvements (P3I).	66	0	0	0
Evaluated commercial water treatment components for P3I for water purification systems.	0	104	0	0
Rapidly Installed Fluid Transfer System (RIFTS) development, prototype design, fabrication, and test.	504	2800	0	0
Rapidly Installed Fluid Transfer System (RIFTS) Block I development and testing.	1043	5117	2187	0
Rapidly Installed Fluid Transfer System (RIFTS) Block II development, prototype design, fabrication and test.	0	0	0	4411
Develop purchase description for Versatile Tank & Pump Unit (VTPU) and prepare program management documents.	0	0	0	300
Versatile Tank & Pump (VTPU) development, prototype design, fabrication and test.	0	0	0	1000
Develop Water From Exhaust Prototypes	0	0	0	1367

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)								February 2005			
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT			
5 - System Development and Demonstration				0604□04A - Logistics and Engineer Equipment - Eng Dev				L41			
<u>Accomplishments/Planned Program (continued)</u>								FY 2004	FY 2005	FY 2006	FY 2007
Totals								1613	8021	2187	7078
<u>B. Other Program Funding Summary</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost	
RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	448	3825	3312	4427	3614	3526	3390	3416	Continuing	Continuing	
OPA 3, R02106, Mission Modules - Water Distribution Module	3688	262	600	7819	3116	38254	40498	35033	Continuing	Continuing	
OPA 3, R05200, Water Purification Systems	0	4561	7220	5862	5872	4858	5884	885	Continuing	Continuing	
OPA 3, MA6000, Distribution Systems, Petroleum & Water	36542	37944	66055	66320	93964	136339	137832	132762	Continuing	Continuing	
OPA 3, Inland Petroleum Distribution System	2831	0	0	0	0	0	0	0	0	2831	
<p><u>C. Acquisition Strategy:</u>Development of and transition to competitive procurement for most items under this project. Exceptions include Small Business Set Aside for the CAMEL and RIFTS.</p>											



# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**L41**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PQAS	In-House	TARDEC, Warren, MI	876	0		0		0		0	876	876
b . PQAS	MIPR	Rock Island Arsenal, Rock Island, IL	2397	0		0		0		0	2397	2397
c . RIFTS - BLOCK I	In-House	TARDEC, Warren, MI	1402	910	1-4Q	200	1-4Q	0		Continue	2512	Continue
d . RIFTS - BLOCK I	C-CPFF	Southwest Research Institute, San Antonio, TX	5833	3490	2Q	1087	1Q	0		Continue	10410	Continue
e . RIFTS - BLOCK II	C-CPFF	Southwest Research Institute, San Antonio, TX	0	0		0		980	2Q	Continue	980	Continue
f . RIFTS - BLOCK II	In-House	TARDEC, Warren, MI	0	0		0		285	1-4Q	Continue	285	Continue
g . Water Purification P3I	In-House	TARDEC, Warren, MI	175	0		0		0		Continue	175	Continue
h . Water Purification P3I	Purchase Orders	TBD	100	0		0		0		Continue	100	Continue
i . VTPU	In-House	TARDEC, Warren, MI	70	0		0		0		Continue	70	Continue
j . VTPU	In-House	TARDEC, Warren, MI	0	0		0		300	2Q	Continue	300	Continue
k . VTPU	Contract - CPFF	TBS	0	0		0		1000	2Q	Continue	1000	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration					0604 04A - Logistics and Engineer Equipment - Eng Dev					L41		
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
I . Family of Water Harvesting/Purification Systems	Contract - CPFF	TBS	0	0		0		1000	2Q	Continue	1000	Continue
Subtotal:			10853	4400		1287		3565		Continue	20105	Continue
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PQAS	In-House	TACOM, Warren, MI	164	0		0		0		0	164	164
b . Water Purification P3I	MIPR	CHPPM, APG, MD	25	0		0		0		0	25	Continue
c . Water Purification P31	In-House	TACOM, Warren, MI	250	0		0		0		0	250	Continue
d . LMFF	In-House	TACOM, Warren, MI	50	0		0		0		0	0	50
e . RIFTS - Block II	In-House	TACOM, Warren, MI	76	0		0		300	2Q	Continue	376	Continue
f . Water Harvesting /Purification System	In House	TARDEC, WARREN, MI	0	0		0		367	1Q	Continue	367	Continue
Subtotal:			565	0		0		667		Continue	1182	Continue

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604□04A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L41

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PQAS DT/OT	MIPR	TECOM, Aberdeen, MD	545	0		0		0		0	545	545
b . RIFTS DT/OT - Block I	MIPR	TECOM, Aberdeen, MD	300	3517	2Q	900	1-2Q	0		0	4717	Continue
c . RIFTS - Block II	MIPR	TECOM, Aberdeen, MD	0	0		0		2846	2Q	Continue	2846	Continue
d . Water Purification P3I	In-House	TARDEC, Warren, MI	457	104	1Q	0		0		0	561	Continue
e . Water Purification P3I	MIPR	Dugway PG, Dugway, MD	220	0		0		0		0	220	Continue
f . Water Purification P3I	MIPR	NFESC, Port Hueneme, CA	35	0		0		0		0	35	Continue
g . LMFF	MIPR	CASCOM, AEC, Aberdeen Proving Ground, MD	100	0		0		0		0	100	100
Subtotal:			1657	3621		900		2846		Continue	9024	Continue

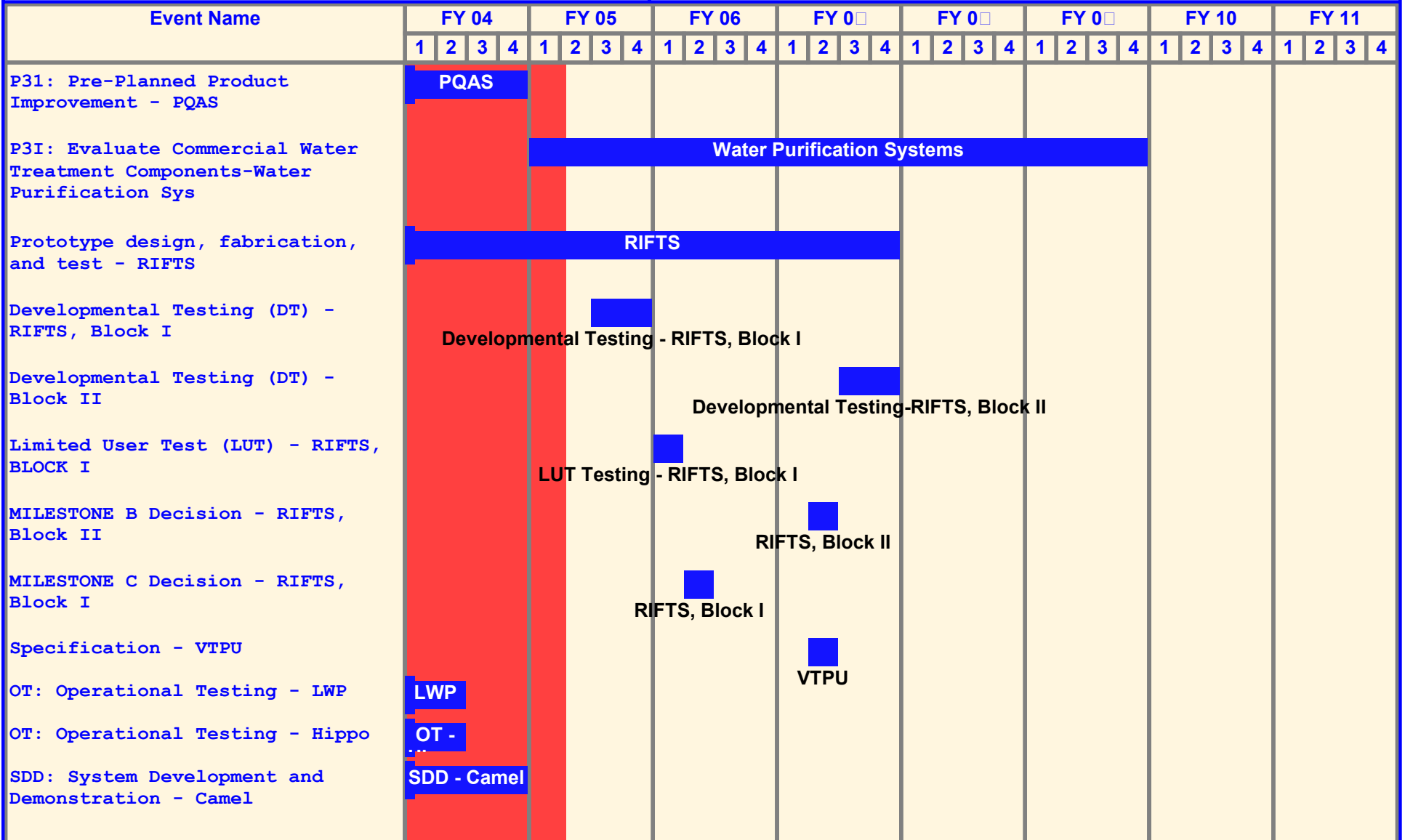
<b>ARMY RDT&amp;E COST ANALYSIS(R3)</b>									<b>February 2005</b>			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>L41</b>		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management Support	In-House	TACOM, Warren, MI	877	0		0		0		0	877	877
Subtotal:			877	0		0		0		0	877	877
Remarks: Not Applicable												
Project Total Cost:			13952	8021		2187		7078		Continue	31188	Continue

# Schedule Profile (R4 Exhibit)

February 2005

BUDGET ACTIVITY  
5 - System Development and Demonstration

PE NUMBER AND TITLE  
0604□04A - Logistics and Engineer Equipment - Eng Dev  
PROJECT  
L41



## Schedule Detail (R4a Exhibit)

**February 2005**

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604 □ 04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**L41**

<u>Schedule Detail</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Conduct PQAS P3I.	1-4Q							
Evaluate commercial water treatment components for P3I for water purification systems.		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
RIFTS development, prototype design, fabrication, and test.	1-4Q	1-4Q	1-4Q	1-4Q				
RIFTS Developmental Testing (DT) - Block I and Block		3-4Q		3-4Q				
RIFTS - Limited User Test (LUT) - Block I			1Q					
RIFTS - Milestone B - Block II				2Q				
RIFTS - Milestone C - Block I			2Q					
Develop purchase description for Versatile Tank & Pump Unit (VTPU) .				2Q				
LWP OT	1Q							
Conduct HIPPO technical and operational testing	1-2Q							
Camel SDD	1-4Q							
Camel MS C decision	4Q							
Family of Water Harvesting/Purification Systems - Contract Award				3Q				
Family of Water Harvesting/Purification Systems - Prototype Fabricate & Test				3Q	1-4Q			
Package Water System - Prototype Testing						1-4Q		

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R2a Exhibit)</b>							<b>February 2005</b>			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>				PROJECT <b>L42</b>		
COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L42 CAMOUFLAGE SYSTEM ED	637	1536	0	0	0	0	1592	1625	0	5719
<p><b>A. Mission Description and Budget Item Justification:</b> This project provides for System Development and Demonstration of low cost, low observable camouflage systems to counter emerging enemy threat technologies such as Thermal Sensors, Near Infrared (Night Vision) sensors, Short Wave Infrared Sensors by suppression of visual, near-infrared, thermal radar, and acoustic signatures of highly critical mobile and semi-mobile weapon systems and strategic equipment. Efforts include development of Arctic/Snow variants, as well as system unique Ultra Lightweight Camouflage Net System (ULCANS) for the Future Combat Systems. This project also includes development of a threat database that includes spectral, visual and topographic data for primary threat areas supporting mission unique and Special Operations camouflage requirements.</p> <p>This program develops a critical capability that supports the Army's Future Force by providing signature suppression and counter-surveillance superiority that reduces vulnerability to expeditionary forces. In addition, this program is clearly focused on dramatically reducing the logistics footprint by providing substantial reductions in weight and cube, while providing superior camouflage protection to the warfighter. Further, more efficient and easier to employ systems will provide vast improvements in mobility to keep pace with rapidly moving Joint Operational Forces.</p>										
<b>Accomplishments/Planned Program</b>							FY 2004	FY 2005	FY 2006	FY 2007
FY 04: Completed transition of Ultra Lightweight Camouflage Net System (ULCANS) Desert Radar Scattering, Desert Radar Transparent, and Woodland Radar Transparent variants into production. Initiated development of Arctic/Snow (ULCANS) variants. FY 05: Complete Developmental Testing (DT) and Operational Testing (OT) on Arctic/Snow ULCANS variants. Prepare for Milestone C on Arctic/Snow ULCANS variants.							637	1146	0	0
FY 05: Incorporate technology enhancements for Woodland and Desert ULCANS variants to counter emerging enemy detection technologies.							0	390	0	0
Totals							637	1536	0	0

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**L42**

<b>B. Other Program Funding Summary</b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
RDTE, 0622712.AH35, Camouflage Technology	2572	2530	2619	2689	2801	2833	2858	2879	Continuing	Continuing

**C. Acquisition Strategy:** Develop camouflage systems for Services and transition developmental items into procurement with a competitive award. Continual upgrade to counter technology improvements of sensors, and to counter new emerging technologies. Continual leveraging of technology with other special operations programs.



ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>L42</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Camouflage Equipment	MIPR	CECOM, FT Belvoir	144	0		0		0		0	144	0
b . ULCANS Arctic/Snow	MIPR	CECOM, FT Monmouth	100	307	1-4Q	0		0		0	407	0
c . ULCANS Technology Insertion	CPFF	CECOM, FT Monmouth	244	457	1-4Q	0		0		Continue	701	0
Subtotal:			488	764		0		0		Continue	1252	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>L42</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ULCANS, Arctic/Snow	MIPR	TECOM, WSMR	115	409		0		0		0	524	0
Subtotal:			115	409		0		0		0	524	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering Support	MIPR	CECOM, FT Belvoir	467	253	1-4Q	0		0		Continue	720	0
b . Program Support	Contract	Radian, INC	210	110	1-4Q	0		0		Continue	320	0
Subtotal:			677	363		0		0		Continue	1040	0
Project Total Cost:			1280	1536		0		0		Continue	2816	0

Schedule Profile (R4 Exhibit)																				February 2005												
BUDGET ACTIVITY 5 - System Development and Demonstration										PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev														PROJECT L42								
Event Name	FY 04				FY 05				FY 06				FY 0□				FY 0□				FY 0□				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
(1) Technology Enhancement to Woodland ULCANS/Desert ULCANS					▲1																											
Conduct DT/OT for Arctic/Snow ULCANS					■																											
(2) Conduct MS C on Arctic/Snow ULCANS					▲2																											

Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>				PROJECT <b>L42</b>
<u><b>Schedule Detail</b></u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Initiated development of Arctic/Snow Ultra Lightweight Camouflage Net System (ULCANS).	1Q							
Initiate Developmental Testing (DT) and Operational Testing (OT) of Arctic/Snow ULCANS.		2Q						
Complete DT and OT of Arctic/Snow ULCANS.		3Q						
Initiate Technology Enhancement to Woodland ULCANS and Desert ULCANS.		1Q						
Conduct Milestone C on Arctic/Snow ULCANS.		4Q						

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**L43**

COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L43 ENGINEER SUPPORT EQUIPMENT - ED	1171	1107	0	305	509	510	6515	4883	0	17862

**A. Mission Description and Budget Item Justification:** This project supports systems development and demonstration within the Engineer Support Equipment (ESE) arena for assault boats, diving equipment, well drilling modules, woodworking shops, tool outfits, large power generator and electrical distribution systems, and floodlights, which are used for field operations in support of the Future and Joint Expeditionary Force. This project also develops Maintenance equipment associated with Sets, Kits, Outfits and Tools (SKOTs).

<u>Accomplishments/Planned Program</u>	FY 2004	FY 2005	FY 2006	FY 2007
Conduct market investigation, develop performance specifications and conduct pre-production award effort for diving equipment.	530	543	0	305
Allied Trade effort to conduct market investigation, engineering effort, and develop performance specifications for Organizational / General Purpose Shop Set.	268	171	0	0
Conduct Life Cycle Modernization Analyses for Engineer Support Equipment (ESE) Sets, Kits, Outfits and Tools (SKOTs).	132	143	0	0
Develop scope of work for major product improvement for the newly, re-designed Hydraulic System Test and Repair Unit (HYSTRU).	241	250	0	0
Totals	1171	1107	0	305

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

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment -  
Eng Dev**

PROJECT

**L43**

<b><u>B. Other Program Funding Summary</u></b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA 3, ML5325, Items Less than \$5.0M (Engineering Support Equipment)	9173	4709	3282	566	11165	9349	13852	14792	Continuing	Continuing

**C. Acquisition Strategy:**Programs will progress from System Development and Demonstration (SDD) and transition into production.

ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>L43</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Diving equipment	IN-HOUSE	PM SKOT Rock Island	1355	100	2Q	0		50	2Q	Continue	1505	Continue
b . Organizational / General Purpose Shop Set	IN-HOUSE	PM SKOT Rock Island	396	20	1-2Q	0		0		Continue	416	Continue
c . Hydraulic System Test and Repair Unit (HYSTRU)	IN-HOUSE	PM SKOT Rock Island	241	10	1-2Q	0		0		Continue	251	Continue
d . Conduct Life Cycle Modernization Analyses for Engineer Support Equipment (ESE) SKOT Soldier Portable	IN-HOUSE	PM SKOT Rock Island	192	79	2Q	0		0		Continue	271	Continue
Subtotal:			2184	209		0		50		Continue	2443	Continue

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**L43**

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Diving Equipment	IN-HOUSE	PM SKOT Rock Island	0	100	2Q	0		105	2Q	Continue	205	0
b . Organization/General Purpose	IN-HOUSE	PM SKOT Rock Island	0	100	1-3Q	0		0		Continue	100	0
c . Hydraulic System Test and Repair Unit (HYSTRU)			0	90	1-3Q	0		0		Continue	90	0
d . Life Cycle Modernization Analyses for Engineer Support Equipment (ESE) SKOTs	IN-HOUSE	PM SKOT Rock Island	0	14		0		0		Continue	14	0
Subtotal:			0	304		0		105		Continue	409	0



# ARMY RDT&E COST ANALYSIS(R3)

February 2005

BUDGET ACTIVITY

**5 - System Development and Demonstration**

PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

PROJECT

**L43**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Diving Equipment	MIPR/IN-HOUSE	Navy/PM SKOT Rock Island	0	343	1-3Q	0		150	1-3Q	Continue	493	0
b . Organization/General Purpose	IN-HOUSE	PM SKOT Rock Island	0	51	1-3Q	0		0		Continue	51	0
c . Hydraulic System Test and Repair Unit (HYSTRU)	IN-HOUSE	PM SKOT Rock Island	0	150	1-3Q	0		0		Continue	150	0
d . Life Cycle Modernization Analyses for Engineer Support Equipment (ESE) SKOTs	IN-HOUSE	PM SKOT Rock Island	0	50	1-3Q	0		0		Continue	50	0
Subtotal:			0	594		0		150		Continue	744	0

ARMY RDT&E COST ANALYSIS(R3)										February 2005		
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev					PROJECT L43		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			0	0		0		0		0	0	0
Subtotal:												
Project Total Cost:			2184	1107		0		305		Continue	3596	Continue

Schedule Profile (R4 Exhibit)																February 2005																
BUDGET ACTIVITY 5 - System Development and Demonstration										PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev																PROJECT L43						
Event Name	FY 03				FY 04				FY 05				FY 06				FY 0□				FY 0□				FY 0□				FY 10			
	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
Conduct Mkt. Investigate, Dev. Perf. Spec., & Prog. Spt. for Diving Equip.																																
Conduct Sys. Demo for Modernization of Hydraulic Sys. Test & Repair Unit																																
Life Cycle Modernization Analysis for ENG SKOT SBCT Transformation																																
Conduct Mkt. Invest., Dev. Specs & Pgm. Spt. for Org./Gen. Purpose Shop Set																																

Schedule Detail (R4a Exhibit)							February 2005	
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>				PROJECT <b>L43</b>
<u><b>Schedule Detail</b></u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Conduct market investigation, develop performance specs, and program support for Diving Equipment	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct Systems Demonstration for modernization of Hydraulic System Test and Repair Unit (HYSTRU).	1-4Q	1-4Q						
Life Cycle modernization analyses for ENG SKOT SBCT Transformation	1-4Q	1-4Q						
Conduct market investigation , Develop Specs and program support for Org / General Purpose Shop Set	1-4Q	1-4Q						

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R2a Exhibit)</b>							<b>February 2005</b>			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>				PROJECT <b>L46</b>		
COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L46      MAINTENANCE SUPPORT EQUIPMENT	471	1131	0	1402	1444	1502	3308	3561	0	12819
<p><b><u>A. Mission Description and Budget Item Justification:</u></b> This project supports systems development and demonstration within the Maintenance Support Equipment (MSE) arena for automotive tool sets, forward repair mobile maintenance systems, individual &amp; unit tool kits, ground &amp; aviation shop sets and allied trades Sets Kits and Outfits and Tools (SKOT) used in support of the Army.</p>										
<b><u>Accomplishments/Planned Program</u></b>							FY 2004	FY 2005	FY 2006	FY 2007
Conduct Maintenance SKOT Modernization Improvements, Perf Spec Dev, Tech & Program support.							298	958	0	1190
Standard Automotive Tool System (SATS) advanced development.							173	173	0	212
<b>Totals</b>							471	1131	0	1402

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)								February 2005			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>					PROJECT <b>L46</b>	
<b><u>B. Other Program Funding Summary</u></b>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost	
OPA 3 ML5345/MA9650 SATS	3972	5418	1300	0	19534	18122	18139	18000	Continuing	Continuing	
<b><u>C. Acquisition Strategy:</u></b> Programs will progress from System Development and Demonstration(SDD) and transition into production.											

# ARMY RDT&E COST ANALYSIS(R3)

February 2005

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604□04A - Logistics and Engineer Equipment - Eng Dev**

## PROJECT

**L46**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MSE Life Cycle Configuration Analyses and Initial Capabilities Document (ICD) Development Support	In-House	PM SKOT Rock Island	158	348	1-2Q	0		400	1-3Q	Continue	906	Continue
b . Standardized Automotive Tool System Prototype Dev	In-House	PM SKOT Rock Island	173	10	1Q	0		0		Continue	183	Continue
Subtotal:			331	358		0		400		Continue	1089	Continue

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Life Cycle Configuration Analyses & Support to Initial Capabilities Document Dev	In-House	PM SKOT Rock Island	15	37	1-2Q	0		100	1-2Q	Continue	152	Continue
b . Standard Automotive Tool System (SATS)			0	0		0		112	1-2Q	Continue	112	0
Subtotal:			15	37		0		212		Continue	264	Continue

ARMY RDT&E COST ANALYSIS(R3)								February 2005				
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604□04A - Logistics and Engineer Equipment - Eng L46</b> <b>Dev</b>							
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Life Cycle Configuration Analyses & Support to ICD Development	MIPR/In-House	Army Test & Evaluation Command(ATEC)/PM SKOT Rock Island & CASCOM Ord Cntr & School, Ft Lee	0	430	1-2Q	0		400	1-2Q	Continue	830	Continue
b . Standard Automotive Tool System	MIPR/In-House	Army Test and Evaluation Command (ATEC) & PM SKOT Rock Island	0	163	1-3Q	0		100	1-3Q	Continue	263	0
Subtotal:			0	593		0		500		Continue	1093	Continue



ARMY RDT&E COST ANALYSIS(R3)									February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev					PROJECT L46		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Conduct SKOT Modernization Efforts	MIPR/In-House	Army Test & Evaluation Command & PM SKOT Rock Island	125	143	1-2Q	0		290	1-3Q	Continue	558	0
Subtotal:			125	143		0		290		Continue	558	0
Project Total Cost:			471	1131		0		1402		Continue	3004	Continue

Schedule Profile (R4 Exhibit)	
-------------------------------	--

February 2005

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

PE NUMBER AND TITLE	PROJECT
<b>0604□04A - Logistics and Engineer Equipment - Eng Dev</b>	<b>L46</b>

PROJECT  
**L46**

[illegible]

Schedule Detail (R4a Exhibit)						February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604□04A - Logistics and Engineer Equipment - Eng Dev				PROJECT L46			
<u>Schedule Detail</u>			FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Configuration Analyses for Current-to-Future and SBCT SKOTand ICD Support			2-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Standard Automotive Tool Systems (SATS) Award for Prototype Dev			3-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
</										