

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	11997	12863	10485	16822	17608	17164	17740	0	117897
526 MARINE ORIEN LOG EQ AD	6443	4707	296	296	297	297	296	0	18077
G11 ADV ELEC ENERGY CON AD	1481	1484	1510	2879	2495	3072	3257	0	17749
G14 MATERIALS HANDLING EQUIPMENT - AD	125	195	0	198	198	198	197	0	1380
K39 FIELD SUSTAINMENT SUPPORT AD	0	6005	4689	10067	10157	10089	10563	0	53117
K41 WATER AND PETROLEUM DISTRIBUTION - AD	3948	472	3990	3382	4461	3508	3427	0	27574

A. Mission Description and Budget Item Justification: This program supports advanced component development and prototypes of new and improved technologies for combat support and combat service support equipment essential to sustaining combat operations. Advancements in watercraft, bridging, electric power generators and batteries, potable water, material-handling, environmental control and petroleum equipment are necessary to improve safety and increase the tactical mobility, operational capability, lethality and survivability on the digital battlefield and to provide for greater sustainment while reducing the logistics support burden.

This project supports the Stryker Brigade Combat Team (SBCT) and the Current-to-Future transition path of the Army's Transformation Campaign Plan (TCP).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)**February 2004**

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

<u>B. Program Change Summary</u>	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	9243	12008	10713
Current Budget (FY 2005 PB)	11997	12863	10485
Total Adjustments	2754	855	-228
Congressional program reductions	-1760	-122	
Congressional rescissions	-156		
Congressional increases			
Reprogrammings	4930	977	
SBIR/STTR Transfer	-260		
Adjustments to Budget Years			-228

Explanation of changes:K39 Renamed to Field Sustainment Support from Environmental Systems and adds funding.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	February 2004
--	----------------------

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev	PROJECT 526
---	---	-----------------------

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
526 MARINE ORIEN LOG EQ AD	6443	4707	296	296	297	297	296	0	18077

A. Mission Description and Budget Item Justification: This project supports advanced component development and prototype equipment for the Army's Logistics-Over-The-Shore (LOTS) missions. Chief among this equipment is the Theater Support Vessel (TSV). The Objective TSV will operate at speeds up to four times as great as the current Logistics Support Vessel (LSV) fleet. This will provide the Army with capability to support operational maneuver from standoff distance; by-pass 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.

The evolutionary acquisition features the current lease of a commercial fast ferry (in cooperation with the U.S. Navy (HSV X-1)), and a lease of a (more capable) fast ferry (TSV-1X), for technology demonstration purposes, currently funded in PE 0604804A.

These systems support the Future transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Continue support for TSV advanced development to include programmatic documentation.	6443	4589	296
Small Business Innovative Research/Small Business Technology Transfer Programs.	0	118	0
Totals	6443	4707	296

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

526

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE, 0604804A, 461, Marine Oriented Logistics, Engineering	30002	61280	65380	3323	5155	5147	2982	Continuing	Continuing
OPA 3, M11200, Logistic Support Vessel (LSV)	10800	0	0	0	0	0	0	0	36617
OPA 3, M11203, Theatre Support Vessel(TSV)	0	0	0	33177	42714	356529	373837	Continuing	Continuing

C. Acquisition Strategy: TSV technical efforts will be conducted primarily with the Naval Surface Warfare Center (NSWC). NSWC can call on both in-house and contract resources (based on workload and expertise) to cover Army requirements. The Acquisition Strategy calls for evolutionary/spiral development of commercial based technology with military adaptations.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					526		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TSV Studies/Development	PWD	TBD	1942	0		1476	1-4Q	0		Continue	3418	0
b . TSV - composite prototype hull design	MIPR	Naval Underwater Warfare Center, Newport, R.I.	0	3300	2-4Q	911		0		0	4211	0
c . SBIR/SBTT			0	0		0		0		0	0	0
Subtotal:			1942	3300		2387		0		Continue	7629	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TSV/Matrix Support	MIPR	TACOM CBU, Warren, MI	139	421	2-3Q	420	1-4Q	0		Continue	980	0
b . TSV - composite prototype hull design	MIPR	CASCOM, Ft. Lee, VA	229	400	2-3Q	400	2Q	0		Continue	1029	0
c . TSV/Matrix Support	MIPR	TARDEC, Warren, MI/ICI	170	0		0		0		0	170	0
d . TSV/In-house	MIPR	PM Force Projection, Warren, MI	832	672	2Q	1000	2Q	296	2Q	Continue	2800	0
e . TSV - composite prototype hull design	MIPR	USAEC, Ft. Eustis, VA	100	0		0		0		0	100	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

526

II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
f . Harbormaster Command and Control Center (HCCC)/Matrix Support	MIPR	TARDEC, Warren, MI	107	0		0		0		0	107	0
g . HCCC/In-house	MIPR	PM Force Projection, Warren, MI	53	0		0		0		0	53	0
Subtotal:			1630	1493		1820		296		Continue	5239	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TSV	MIPR	DTC/ATEC, MD	421	150	2-3Q	500	2Q	0		Continue	1071	0
b . Harbormaster Command and Control Center (HCCC	MIPR	USATCFE, Ft. Eustis, VA	100	0		0		0		0	100	0
c . TSV	MIPR	PM WIN-T	0	1500	4Q	0		0		0	1500	0
Subtotal:			521	1650		500		0		Continue	2671	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					526			
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . TSV/In-house	MIPR	PM Force Projection, TACOM, Warren, MI	510	0		0		0		0	510	0	
Subtotal:			510	0		0		0		0	510	0	
Project Total Cost:			4603	6443		4707		296		Continue	16049	0	

Schedule Profile (R4 Exhibit)																				February 2004																					
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes										PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev																		PROJECT 526													
Event Name										FY 02				FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09			
										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
HSV-X1 - Joint Venture										Awarded Jul 01 - Lease Continuing																															
TSV-1X - Spearhead - Army										Awarded Sep 02 - Lease Continuing																															
(1) Log. Demo.										1																															
(2) OTTR										2																															
(3) FRP DR										3																															
Production TSV-1										TSV-1																															
Production TSV-2										TSV-2																															
Production TSV 3										TSV-3																															
Production TSV 4										TSV-4																															

Schedule Detail (R4a Exhibit)									
-------------------------------	--	--	--	--	--	--	--	--	--

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
526

<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Theatre Support Vessel Concept Development	1-4Q	1-4Q	1-4Q	1-4Q	1Q		
Logistic Demonstration				3Q			
Operational Test Technical Review					1Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

G11

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
G11 ADV ELEC ENERGY CON AD	1481	1484	1510	2879	2495	3072	3257	0	17749

A. Mission Description and Budget Item Justification: The Mobile Electric Power (MEP) program was established by the Department of Defense to develop a Modernized, Standard Family of Mobile Electric Power Sources for all Services throughout the Department of Defense. This project provides concept and technology development that will improve the performance, mobility, readiness and survivability of the next generation power sources in support of the Army. It support initiatives that are essential to the development and fielding to modernized Mobile Electric Power (MEP) sources from 0.5 KW to 920 KW that comply with environmental statutes and provide lower noise, improved fuel and electrical efficiency, significantly reduced weight, enhanced portability, improved reliability, and maintainability.

This system supports the Current to Future transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
Initiated Small Tactical Electric Power (STEP) Program. (Formerly known as Man Portable Power (MPP) Program.)	1381	0	0
Investigated availability of commercial technology and components to be used for development of a new intelligent Power Management Distribution System (PMDS) and continue hardware test and evaluation.	100	100	0
Test and assess commercially available components for STEP.	0	1345	0
Develop STEP proof of principle prototype.	0	0	1510
Small Business Innovative Research / Small Business Technology Transfer Programs	0	39	0
Totals	1481	1484	1510

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	February 2004
--	----------------------

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev	PROJECT G11
---	---	-----------------------

<u>B. Other Program Funding Summary</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost	
RDT&E:PE0604804A, 194 Engine Driven Generators	7293	7272	5954	7625	9541	2716	3337	Continuing	Continuing	
OPA 3, MA9800 Generators and Associated Equipment	76088	72418	54397	49681	50191	50667	50850	Continuing	Continuing	

C. Acquisition Strategy:Complete advanced development and transition to system development and demonstration phase and transition to production.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev					PROJECT G11		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . AMMPS Prototypes	Various	Various	141	0		0		0		Continue	Continue	0
b . STEP Components	MIPR	CECOM - Belvoir	0	721	1Q	250	1Q	0		Continue	971	0
c . PMDS Components	TBD		0	60	1Q	0		0		Continue	Continue	0
d . STEP Prototypes	MIPR	CECOM - Belvoir	0	0		0		893	1Q	Continue	893	0
Subtotal:			141	781		250		893		Continue	Continue	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . AMMPS Prototypes	Various	Various	730	0		0		0		Continue	Continue	0
b . STEP Components	MIPR	CECOM-Belvoir	0	360	1Q	310	1Q	0		Continue	Continue	0
c . PMDS Components	MIPR	CECOM-Belvoir	0	40	1Q	40	1Q	0		Continue	Continue	0
d . STEP Prototypes	MIPR	CECOM-Belvoir	0	0		0		425	1Q	Continue	Continue	0
Subtotal:			730	400		350		425		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev					PROJECT G11		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . AMMPS Prototypes	Various	Various	441	0		0		0		Continue	Continue	0
b . STEP Components	MIPR	CECOM-Belvoir	0	150	1Q	634	1Q	42	1Q	Continue	826	0
c . PMDS Components	MIPR	CECOM-Belvoir	0	0		60	1Q	0		Continue	Continue	0
d . STEP Prototypes	MIPR	CECOM-Belvoir	0	0		0		0		Continue	Continue	0
Subtotal:			441	150		694		42		Continue	Continue	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . AMMPS Prototypes	Various	Various	250	0		0		0		Continue	Continue	0
b . STEP Components	In-house	PEO In-house	0	150	1Q	151	1Q	0		Continue	301	0
c . STEP Prototypes	In-House	PEO In-house	0	0		0		150	1Q	Continue	Continue	0
d . SIBR / STTR			0	0	1Q	39		0		0	39	0

ARMY RDT&E COST ANALYSIS(R3)										February 2004		
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev					PROJECT G11		
IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			250	150		190		150		Continue	Continue	0
Project Total Cost:			1562	1481		1484		1510		Continue	Continue	0

Schedule Profile (R4 Exhibit)																					February 2004																				
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes										PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev																			PROJECT G11												
Event Name										FY 02				FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09			
										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
STEP Program																																									
(1) Initiate STEP Program														1																											
(2) Test and Assess Commercially Available Components																		2																							
(3) Develop Proof of Principle Prototype (Comm. Components)																						3																			
(4) Complete Proof of Principle Prototype																										4															
(5) Initiate Test and Evaluation																										5															
PMDS Program																																									
(6) Initiate PMDS Program														6																											
(7) Initiate Testing of Components																		7																							
LAMPS Program																																									
(8) Initiate LAMPS Program																										8															
(9) Complete Engineering Assessment and Component Market Survey																														9											
(10) Test and Assess Commercial Components																																		10							

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY			PE NUMBER AND TITLE			PROJECT	
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev			G11	
Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Initiated STEP Program	1Q						
Initiated PMDS Program	1Q						
Initiate testing of the PMDS components		1Q					
Test and assess commercially available STEP		1Q					
Develop STEP proof of principle prototype using best available commercial components			1Q				
Complete STEP proof of principle prototype				2Q			
Initiate test and evaluation of STEP proof of principle prototype				3Q			
Complete test and evaluation of STEP proof of principle prototype					2Q		
Transfer STEP program to System Development and Demonstration					2Q		
Initiate Large Advanced Mobile Power Sources (LAMPS) Program					2Q		
Complete engineering assessment and component market surveys for LAMPS						2Q	
Test and assess commercially available components for LAMPS							1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

K39

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
K39 FIELD SUSTAINMENT SUPPORT AD	0	6005	4689	10067	10157	10089	10563	0	53117

A. Mission Description and Budget Item Justification: This project supports development of critical soldier support and sustainment systems such as shelter systems (rigid and soft wall), showers, latrines, heaters, environmental control units and other combat service support equipment that will improve unit sustainability and combat effectiveness. This project also supports Advanced Component Development and Prototyping of Critical Distribution Capabilities to include cargo aerial delivery systems that provide improved safety and accuracy while increasing survivability of aircraft, personnel, and equipment. Supports the development of shelter systems which provide highly mobile, joint service platforms for the digitization of the battlefield, housing of critical vehicle-mounted battlefield systems, medical care capabilities and high tech maintenance. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Future Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment through aerial delivery initiatives and by reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support .

This project supports the Stryker Brigade Combat Team (SBCT) and Future Force Capabilities for projecting and sustaining Joint Expeditionary Forces.

<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005
Conduct testing of Low Cost Aerial Delivery System (LCADS) to evaluate subsystems, components and aircraft compatibility. FY 04: Obtain Milestone C on LCADS low cost container. FY 05: Obtain Milestone C on LCADS Low Velocity (LV) and High Velocity (HV) parachutes.	0	1890	911
Fabricate 60k British Thermal Unit (BTU) Space Heater Convective (SHC) prototypes for initial evaluation of operational suitability. Transition SHC into System Development and Demonstration (SDD).	0	990	0
FY 04: Obtain Milestone B approval and fabricate 60k BTU Improved Environmental Control Unit (IECU) prototypes. Conduct initial evaluation of operational suitability. FY 05: Conduct Production Qualification Testing (PQT) and obtain Milestone C.	0	1788	928
Complete Market Investigation and consolidate existing data to support a Milestone B Decision on the Advanced Low-Velocity Airdrop (Heavy) Capability. Initiate evaluation of integrated technologies and assess integration risks.	0	0	850

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)										February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					K39			
Accomplishments/Planned Program (continued)										FY 2003	FY 2004	FY 2005	
Conduct technical feasibility testing on Precision Extended Glide Airdrop Systems 2k (PEGASYS).										0	1337	0	
Obtain Milestone B approval. Prepare Request For Proposals (RFP) and conduct testing on prototypes of PEGASYS 2k.										0	0	1650	
Conduct market investigation for Chameleon.										0	0	350	
Totals										0	6005	4689	
B. Other Program Funding Summary					FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
OPA3, MF9000 Control Unit, Environmental					14423	13544	1998	2000	2000	2000	0	Continuing	Continuing
C. Acquisition Strategy: Accelerate PEGASYS product development and testing to transition to System Development & Demonstration and/or Production.													

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev					PROJECT K39		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Soldier Support Equipment	In-House	PM Force Sustainment Sys (FSS), Natick	0	0		1020	1-4Q	735	1-4Q	Continue	1755	0
b . Soldier Support Equipment	In-house	CECOM, Ft Belvoir	0	0		420	1-4Q	259	1-4Q	Continue	679	0
c . Soldier Support Equipment	Contracts	Various	879	0		2150	1-2Q	1100	1-2Q	Continue	4129	0
Subtotal:			879	0		3590		2094		Continue	6563	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 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 2004			
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev					PROJECT K39		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	0	0		200	1-3Q	172	1-4Q	Continue	372	0
b . Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ	0	0		1500	1-3Q	1830	1-4Q	Continue	3330	0
Subtotal:			0	0		1700		2002		Continue	3702	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Project Management Support	In-House	PM Force Sustainment Sys (FSS), Natick	0	0		715	1-4Q	593	1-4Q	Continue	1308	0
Subtotal:			0	0		715		593		Continue	1308	0
Project Total Cost:			879	0		6005		4689		Continue	11573	0

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

K39

Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				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
(1) MS A for PEGASYS 10K, (2) MS A for PEGASYS 30K									▲1								▲2															
(3) MS B for IECU 60K, (4) MS B for PEGASYS 2K, (5) MS B on ALVA-H, (6) MS B for PEGASYS 10K, (7) MS B for Chameleon, (8) MS B for PEGASYS 30 K, (9) MS B for Soldier Integrated Hygiene System							▲3			▲4	▲5		▲6	▲7						▲8	▲9											
(10) MS C on LCADS, (11) MS C on LCADS HV parachute, (12) MS C for IECU 60K, (13) MS C on LCADS LV parachute								▲10	▲11	▲12		▲13																				
OT for LCADS Container																																
DT/OT on LCADS HV Parachute, DT/OT on LCADS LV parachute																																
(14) Conduct DV on LCADS LV parachute							▲14																									
(15) Conduct Initial Evaluation of Operational Suitability for IECU 60K, (16) Conduct PQT for IECU 60K							▲15	▲16																								
Contract for Chameleon Advanced component development																																
Subsystem Integration for Chameleon																																

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY			PE NUMBER AND TITLE				PROJECT
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev				K39
Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Conduct Milestone B Decision on the Advanced Low-Velocity Airdrop (Heavy) Capability.			3Q				
Conduct Operational Testing on LCADS low cost container.		1Q					
Receive Milestone C decision on LCADS low cost container.		4Q					
Conduct DT on LCADS High Velocity (HV) parachute.		1-2Q					
Conduct OT on LCADS HV parachute.		3-4Q					
Conduct Design Validation (DV) on LCADS Low Velocity (LV) parachute.		2Q					
Receive Milestone C decision on LCADS HV parachute.			1Q				
Conduct DT on LCADS LV parachute.			1-2Q				
Conduct OT on LCADS LV parachute.			3Q				
Receive Milestone C decision on LCADS LV parachute.			4Q				
Conduct Milestone B for Chameleon.				3Q			
Contract for Chameleon Advanced Component Development (ACD).					1-4Q		
Initiate integration of subsystems and evaluate Chameleon prototypes.						1-4Q	
Complete subsystem integration for Chameleon and transition to System Development and Demonstration.						4Q	
Conduct Milestone B for Soldier Integrated Hygiene System.							1Q
Obtain Milestone B decision for Precision Extended Glide Airdrop System 2k (PEGASYS) .			3Q				
Obtain Milestone A for PEGASYS 10k.			1Q				
Award contract Advance Component Development for PEGASYS 2k.			1Q				
Obtain Milestone B decision for PEGASYS 10k.				2Q			

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev			PROJECT K39	
<u>Schedule Detail (continued)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Obtain Milestone A decision for PEGASYS 30k.					1Q		
Obtain Milestone B for PEGASYS for 30k.						4Q	
Conduct Initial Evaluation of Operational Suitability for IECU 60k.		2Q					
Obtain Milestone B for IECU 60k.		3Q					
Conduct Production Qualification Testing for IECU 60k.		4Q					
Obtain Milestone C for IECU 60k.			2Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

K41

COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
K41	WATER AND PETROLEUM DISTRIBUTION - AD	3948	472	3990	3382	4461	3508	3427	0	27574

A. Mission Description and Budget Item Justification: Develops and demonstrates the potential of prototype equipment and technologies to satisfy petroleum storage, distribution, and quality surveillance system requirements. This Concept and Technology Development program supports the development and enhancement of rapidly deployable Petroleum and Water equipment. The mission includes developing onboard fuels and lubrication quality analysis systems; achieving greater capabilities in the removal of Nuclear, Biological, Chemical (NBC) and other contaminants from water sources; reducing the logistics foot print; developing water reutilization systems to reduce the requirement for transport of water into the theatre (this includes the water from exhaust); and material and systems to decrease the logistics foot print and employment time for the transfer of liquid logistics in the theatre. The Army cannot fight without clean fuel and drinking water. This vital equipment enables the Army to achieve its transformation vision by providing the Army with the means to be highly mobile and self-sustaining in very hostile theatres of operations.

These systems support the Current-to-Future transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Pre-Planned Product Improvements (P3I) to evaluate water purification components as improvements to the Lightweight Water Purifier (LWP), Tactical Water Purification System (TWPS).	0	189	1622
Develop technical requirements and initiate design of advanced petroleum test kits.	314	0	0
Continue development of advanced Petroleum Test Kit (PTK) and initiate performance testing.	0	272	1239
Program management support.	464	0	0
Rapidly Installed Fuel Transfer System (RIFTS) demonstration and validation effort.	2292	0	0
Investigate feasibility of producing potable water from diesel generator exhaust.	250	0	0
Conduct TWPS operational testing.	328	0	0
Perform First Article Test (FAT) of Load Handling System (LHS) Flatrack Water Tank (HIPPO).	300	0	0
Develop improved water quality analysis equipment for LWP and TWPS.	0	0	1129
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)	0	11	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes				PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev				PROJECT K41	

<u>Accomplishments/Planned Program (continued)</u>							FY 2003	FY 2004	FY 2005
Totals							3948	472	3990

<u>B. Other Program Funding Summary</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE, 0604804.L41, Logistics and Engineer Equipment - Engineering Development	7468	1681	3104	5605	7122	3650	3749	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	9674	15692	12581	16865	11771	0	0	Continuing	Continuing
OPA 3, MB6400, Quality Surveillance	1083	0	0	0	0	0	0	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	24881	24475	38091	46656	80451	93924	150310	Continuing	Continuing
OPA 3, MA4501, Modification Kits	2943	824	838	828	829	829	831	0	7922

C. Acquisition Strategy: Develop engineering prototypes or select Non-Developmental Item based on market surveys and proposals from industry.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					K41		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . LWP	CPFF	MECO, New Orleans, LA	2999	0		0		0		0	2999	2840
b . Water Purification Components (P3I)	MIPR	NFESC, Port Hueneme, CA	0	0		0		350	1Q	Continue	350	Continue
c . Water Purification Components (P3I)	Purchase Orders	TBD	150	0		32	2Q	250	1Q	Continue	432	Continue
d . Advanced Petroleum Test Kit	In-House	TARDEC, Warren, MI	100	224	1Q	172	1Q	379	1Q	Continue	875	Continue
e . Advanced Petroleum Test Kit	CPFF	TBD	0	0		0		100	2Q	Continue	100	Continue
f . RIFTS	CPFF	Southwest Research Institutel, San Antonio, TX	19	2292	2Q	0		0		Continue	2311	Continue
g . Water Purification Components (P3I)	In-House	TARDEC, Warren, MI	320	0		100	1Q	200	1Q	Continue	620	Continue
h . Water Purification Components (P3I)	Task Order Contract	ICI, Dayton, OH	0	0		0		150	2Q	Continue	150	Continue
i . Water Analysis for TWPS/LWP	In-House	TARDEC, Warren, MI	0	0		0		250	1Q	0	250	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					K41		
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . Water Analysis for TWPS/LWP	Purchase Order	TBD	0	0		0		150	2Q	0	150	0
k . Water from Engine Exhaust	CPFF	Lexcarb, Lexington KY	0	250	3Q	0		0		0	250	0
l . FSSP (P3I)			140	0	2Q	11		0		0	151	0
m . SBIR / STTR			0	0		0		0		0	0	0
Subtotal:			3728	2766		315		1829		Continue	8638	Continue
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Water Purification Components (P3I)	In-House	TARDEC, Warren, MI	100	0		0		200	1Q	Continue	300	Continue
b . Advanced petroleum test kit	In-House	TACOM, Warren, MI	25	40	1Q	40	1Q	25	1Q	Continue	130	Continue
c . Water Analysis for TWPS/LWP	In-House	TARDEC, Warren, MI	0	0		0		200	1Q	0	200	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					K41		
II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			125	40		40		425		Continue	630	Continue
Subtotal:												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . LWP	MIPR	ATEC, Aberdeen Proving Grounds, MD	513	0		0		0		0	513	513
b . LWP	In House	TARDEC, Warren, MI	534	0		0		0		0	534	534
c . LWP	MIPR	NFESC, Port Huaneme, CA	157	0		0		0		Continue	157	Continue
d . Water Purification Components (P3I)	In House	TARDEC, Warren, MI	322	0		57	1Q	472	1Q	Continue	851	Continue
e . Advanced petroleum test kit	In-house	TARDEC, Warren, MI	0	25	2Q	40	1Q	839	1Q	Continue	904	Continue
f . LWP	MIPR	TEXCOM, Ft Hood, TX	30	0		0		0		0	30	30
g . TWPS	MIPR	TEXCOM	0	328	3Q	0		0		0	328	0
h . HIPPO	MIPR	ATC	0	300	3Q	0		0		0	300	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603804A - Logistics and Engineer Equipment - Adv Dev					K41		
III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
i . Water Analysis for TWPS/LWP	In House	TARDEC, Warren, MI	0	0		0		100	1Q	0	100	0
j . Water Analysis for TWPS/LWP	MIPR	CHPPM	0	0		0		300	1Q	0	300	0
Subtotal:			1556	653		97		1711		Continue	4017	Continue
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Advanced Petroleum Test Kit	In-House	TACOM, Warren, MI	25	25	1Q	20	1Q	25	1Q	Continue	95	0
b . Program Management Support	In-House	TACOM, Warren, MI	768	464	1-2Q	0		0		Continue	1232	0
Subtotal:			793	489		20		25		Continue	1327	0
Project Total Cost:			6202	3948		472		3990		Continue	14612	Continue

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev
PROJECT
K41

Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				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				
IOTC					TWPS																											
P3I - for Hardware for the LWP/TWPS					Evaluate commercially available water purification to LWP/TWPS																											
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test					Petroleum Test Kits																											
Demonstration and Validation									RIFTS																							
Water from Engine Exhaust																																
First Article Test					HIPPO																											
Develop Improved Water Quality Analysis Equip for Water Systems																																

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev			PROJECT K41	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
TWPS IOTC	3-4Q						
(P3I) Evaluate commercially available water purification components as improvements to LWP & TWPS.		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Develop technical requirements, design, and test of advanced petroleum test kits.	1-4Q	1-4Q	1-4Q	1-3Q			
RIFTS demonstration and validation effort.	4Q						
Water from engine exhaust	3-4Q	1-4Q					
Program Management Support	1-4Q						
HIPPO FAT	2-4Q						
Develop improved water quality analysis equipment for LWP/TWPS			1-4Q	1-4Q	1-4Q	1-4Q	