

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE			
4 - Advanced Component Development and Prototypes		0603804A - Logistics and Engineer Equipment - Adv Dev			
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	133007	43995	56373	Continuing	Continuing
526 MARINE ORIEN LOG EQ AD	2975	3068	3033	Continuing	Continuing
G11 ADV ELEC ENERGY CON AD	3067	3346	2636	Continuing	Continuing
G14 MATERIALS HANDLING EQUIPMENT - AD	259	210			469
K39 Field Sustainment Support AD	11923	9759	12394	Continuing	Continuing
K41 WATER AND PETROLEUM DISTRIBUTION - AD	2375	437	3224	Continuing	Continuing
K42 MATERIEL SUSTAINMENT SUPPORT AD	5974	5190	2951	Continuing	Continuing
L04 JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD	106434	21985	32135	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element 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, shelter systems, cargo aerial delivery, field service systems, mortuary affairs equipment 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.

Increase from FY08 to FY09 reflect USD(AT&L) direction to move Joint Light Tactical Vehicle from MS B to MS A. This reflects adjustments in the 6.5 and 6.4 funding.

Increase from FY 2009 to FY 2010 reflects additional funds to support the Field Sustainment Support for Advanced Low Velocity Air drop System (ALVADS).

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BUDGET ACTIVITY

PE NUMBER AND TITLE

4 - Advanced Component Development and Prototypes

0603804A - Logistics and Engineer Equipment - Adv Dev

B. Program Change Summary

	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	37993	44141	52426
Current BES/President's Budget (FY 2010)	133007	43995	56373
Total Adjustments	95014	-146	3947
Congressional Program Reductions		-146	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	96073		
SBIR/STTR Transfer	-1059		
Adjustments to Budget Years			3947

Change Summary Explanation: Funding - FY 2008: Funds reprogrammed to support multi-contractor prototyping for JLTV. FY 2010: Increase supports JLTV and Field Sustainment Advanced Low Velocity Airdrop System (ALVADS).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

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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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
526 MARINE ORIEN LOG EQ AD	2975	3068	3033	Continuing	Continuing

A. Mission Description and Budget Item Justification: FY10 funding supports project advanced component development and prototype equipment for the Army's Logistics-Over-The-Shore (LOTS) missions. The primary mission of Army Watercraft Systems is inherently tied to the required capability to move tonnage/cargo from major sea going vessels to the shore in support of LOTS/Joint Logistic over the Shore (JLOTS) and various watercraft missions. The Army utilizes a combination of Modular Causeway Systems (MCS), Barge Derricks (BD), Barges, Landing Crafts (Landing Crafts Utility (LCUs), Logistic Support Vessels (LSVs), Landing Crafts Mechanized (LCM-8s) and Tug Boats to offload deep draft vessels. The time phased mix of numbers and types of vessels outlined are essential in maintaining a given level of capability to support JLOTS operations. This capability is only as strong as the weakest link and takes the full combination of all assets to accomplish. Efforts to extend the service life of LSVs & LCUs will also be made as well as conducting business case analyses such as one for Performance Based Logistics.

FY10 Funding for the Joint Enable Theater Access-Sea Ports of Debarkation (JETA-SPOD) Advanced Concept Technology Demonstration (ACTD) will be used to support the Vessel-to-Shore Bridging (VSB) component of the program. This includes funding for VSB core developmental requirements and Operational Testing/Military Utility Assessment (MUA) and follow-on research and development funding to support the transition of VSB to an acquisition program. This funding will provide R&D of the full scale operational prototype in addition to a broader and more robust MUA designed to adequately test and assess the VSB for military utility under the lead of the USPACOM ACTD Operational Manager (OM). Performance risk will be mitigated by ensuring the technology receives optimum test and evaluation to meet the warfighting operational requirements to include an extended user evaluation. Funding will also allow the development of an additional 50-60 foot section that will result in expanded technical development, testing, and utility assessment for the multiple operational uses and employment methods (eg. Army/Service Watercraft, Joint High Speed Vessel (JHSV), dry/wet gap crossings, and aerial delivery). Funding provided for the Habor Master Command & Control Center production representative systems development (FY08).

VSB will optimize the throughput capabilities of the JHSV, current Army/USMC watercraft, and bridging requirements across extended mudflats/tidal estuaries by providing a more rapid and increased flow of combat power and sustainment through multiple austere theater access points. VSB is transported on and rapidly employed by these vessels to provide the Joint and Combined force commanders a means to mitigate threat anti-access activities and increases flexibility to conduct operational maneuver from strategic distances. The ACTD complements the JHSV program by optimizing throughput and warfighting operational capabilities not currently available in support of Lines of Communication (LOC) in the theater of operations.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-FY10: JETA-SPOD	2391	2273	2162
FY08-FY10: Program Support.	584	405	371
FY09-FY10 Watercraft market surveys and business analysis		304	500
Small Business Innovative Research/Small Business Technology Transfer Program		86	
Total	2975	3068	3033

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev	PROJECT 526
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<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
MA4500, Modification of In-Service Equipment (OPA3)	93130	45606	609834		748570

Comment: Other program funding. MA4500, Modification on In-Service Equipment (OPA3) includes funding for modifications to systems other than watercraft.

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

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 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
TSV - composite prototype hull design	MIPR	Naval Underwater Warfare Center, Newport, R.I.	4211								4211	
Watercraft market surveys/business analysis	MIPR	Volpe, DOT	100	384		304		500			1788	
HCCC Design	MIPR	PEOC3T									10649	
JETA-SPOD-Vessel to Shore Bridging (VSB)	MIPR	ERDC, Vicksburg, MS	3600	2391		2273		2162		Cont.	Cont.	
Subtotal:			7911	2775		2577		2662		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
TSV/Matrix Support	MIPR	TACOM CBU, Warren, MI	4366							Cont.	4366	
TSV - composite prototype hull design	MIPR	CASCOM, Ft. Lee, VA	5240							Cont.	5240	
TSV/Matrix Support	MIPR	TARDEC, Warren, MI/ICI	170								170	
TSV/In-house	MIPR	PM Force Projection, Warren, MI	2190							Cont.	2190	
TSV-Demil	MIPR	TACOM, PSID, Warren, MI	424							Cont.	Cont.	
JETA-SPOD-VSB	MIPR	TACOM, PSID, Warren, MI								Cont.	Cont.	
Subtotal:			12390							Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev	PROJECT 526
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III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
TSV	MIPR	DTC/A TEC, MD	1071							Cont.	1071	
TSV	MIPR	PM WIN-T	1500								1500	
HCCC	MIPR	USAFTCFE, Ft. Eustis, VA								Cont.	Cont.	
Subtotal:			2571							Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Support	MIPR	PM Force Projection, TACOM, Warren, MI	1392	200		405		371			2368	
JETA-SPOD-VSB	MIPR	PM Force Projection, TACOM, Warren, MI								Cont.	Cont.	
SBIR/STTR	MIPR	PM Force Projection, TACOM, Warren, MI				86				Cont.	Cont.	
Subtotal:			1392	200		491		371		Cont.	Cont.	

Project Total Cost:	24264	2975		3068		3033		Cont.	Cont.
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Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE																PROJECT														
4 - Advanced Component Development and Prototypes		0603804A - Logistics and Engineer Equipment - Adv Dev																526														
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Reconfig & testing demonstration hardware from an LSV to a JHSV application																																
Developing force protection capabilities for LSV & LCU																																
Developing a common operating picture capability(e.g. GCCS-M)																																
Designing & testing new power plant interfaces.																																

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603804A - Logistics and Engineer Equipment - Adv Dev						526	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
Reconfig & testing demonstration hardware from an LSV to a JHSV application	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Developing force protection capabilities for LSV & LCU	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Developing a common operating picture capability(e.g. GCCS-M)	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Designing & testing new power plant interfaces.	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
G11 ADV ELEC ENERGY CON AD	3067	3346	2636	Continuing	Continuing	

A. Mission Description and Budget Item Justification: The Mobile Electric Power (MEP) program was established by the Department of Defense to develop modernized, standard families of mobile electric power sources for all Services throughout the Department of Defense. This Project Office derives concept and technology developments that will improve the performance, mobility, readiness and survivability of the next generation of tactical power sources in support of all Services. It supports initiatives that are essential to the development and fielding of modernized Mobile Electric Power (MEP) sources from Watts to Megawatts level that comply with environmental statutes and provide noise and signature-suppressed, energy efficiency, lightweight, deployable and reliable equipment. FY09 will fund test and evaluation technologies for Small Tactical Electric Power (STEP) and initiate market survey and begin evaluation of components for Large Advanced Mobile Power Sources (LAMPS).

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08: Evaluation and testing of various technologies related to Tactical Electric Power across the Army power spectrum aimed at technology gaps to meet Army User requirements. These efforts support the Small Tactical Power (STEP) program, the Advanced Medium Mobile Power Sources (AMMPS) program and the Large Advanced Mobile Power Sources (LAMPS) program.	3067		
FY09: Evaluation and testing of various technologies related to Tactical Electric Power across the Army power spectrum aimed at technology gaps to meet Army User requirements. These efforts support the Small Tactical Electric Power (STEP) program and the Large Advanced Mobile Power Sources (LAMPS) program.		3256	
FY10: Evaluation and testing of various technologies related to Tactical Electric Power across the Army spectrum aimed at technology gaps to meet Army user requirement. These efforts support the STEP program and the LAMPS program.			2636
Small Business Innovative Research/Small Business Technology Transfer Programs		90	
Total	3067	3346	2636

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
RDT&E:PE0604804A, Logistics and Engineer Equipment - Eng Dev 194	11439	6348	1390	Continuing	Continuing
OPA 3, Generators and Associated Eq. MA9800	241798	254809	208277	Continuing	Continuing

Comment:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

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BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

G11

C. Acquisition Strategy Complete advanced development and transition to system development and demonstration phase (Milestone B) and subsequent transition to production (Milestone C).

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev							G11		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	MIPR	CERDEC -APG	1721	193	2Q	315	1Q	215	1Q	Cont.	Cont.	
AMMPS Components	MIPR	CERDEC APG	3264	279	2Q	384	1Q	165	1Q	Cont.	Cont.	
LAMPS Components	MIPR	CERDEC -APG		120	2Q	280	1Q	345	1Q	Cont.	Cont.	
Subtotal:			4985	592		979		725		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	MIPR	CERDEC-APG	1651	347	2Q	495	1Q	316	1Q	Cont.	Cont.	
AMMPS Components	MIPR	CERDEC-APG	942	504	2Q	462	1Q	288	1Q	Cont.	Cont.	
LAMPS Components	MIPR	CERDEC-APG		220	2Q	495	1Q	528	1Q	Cont.	Cont.	
Subtotal:			2593	1071		1452		1132		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	MIPR	CERDEC-APG	789	421	2Q	210	2Q	210	2Q	Cont.	Cont.	
AMMPS Components	MIPR	CERDEC-APG	300	543	2Q	200	2Q	100	2Q	Cont.	Cont.	
LAMPS Components	MIPR	CERDEC-APG		257	2Q	209	2Q	209	2Q	Cont.	Cont.	
Subtotal:			1089	1221		619		519		Cont.	Cont.	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	FY 2010 Cost	FY 2010 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev							G11		
	Type				Date		Date		Date		Contract	
STEP Components	In-house	PM MEP, Ft Belvoir VA	459	60	1-4Q	97	1-4Q	120	1-4Q	Cont.	Cont.	
AMMPS Components	In-House	PM MEP, Ft Belvoir VA	427	60	1-4Q	97	1-4Q	120	1-4Q	Cont.	Cont.	
LAMP Components				63	1-4Q	102	1-4Q	20	1-4Q	Cont.	Cont.	
Subtotal:			886	183		296		260		Cont.	Cont.	
Project Total Cost:			9553	3067		3346		2636		Cont.	Cont.	

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT																																		
4 - Advanced Component Development and Prototypes	0603804A - Logistics and Engineer Equipment - Adv Dev	G11																																		
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
STEP Program																																				
Assess Technologies to Meet Gaps																																				
Test Technologies to Meet Gaps																																				
Develop Proof of Principle Prototype (Commercial Components)																																				
LAMPS Program																																				
Assess Technologies to Meet Gaps																																				
Test Technologies to Meet Gaps																																				
Develop Proof of Principle Prototype (Commercial Components)																																				
(1) Complete Proof of Principle Prototype													▲ 1																							
(2) Complete Test and Evaluation																	▲ 2																			
AMMPS Program																																				
Assess Technologies to Meet Gaps																																				
Test Technologies to Meet Gaps																																				

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603804A - Logistics and Engineer Equipment - Adv Dev						G11	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
STEP Program	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Assess Technologies to Meet Gaps	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Test Technologies to Meet Gaps	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Develop Proof of Principle Prototype (Commercial Components)			1Q - 4Q						
LAMPS Program	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Assess Technologies to Meet Gaps	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Test Technologies to Meet Gaps	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Develop Proof of Principle Prototype (Commercial Components)		1Q - 4Q	1Q - 3Q						
Complete Proof of Principle Prototype			3Q						
Complete Test and Evaluation			4Q						
AMMPS Program	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Assess Technologies to Meet Gaps	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Test Technologies to Meet Gaps	1Q - 4Q	1Q - 4Q	1Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev			PROJECT G14	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
G14 MATERIALS HANDLING EQUIPMENT - AD	259	210			469	

A. Mission Description and Budget Item Justification: This project supports Advanced Component Development and Prototypes of Material Handling Equipment (MHE) and stays abreast of current needs and available technologies to be integrated into military MHE. This program develops selected technologies and transitions to procurement a series of MHE items. Categories of MHE include warehouse forklifts, cranes and tow tractors, rough terrain forklifts, container handlers and cranes as well as ancillary equipment.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Complete engine obsolescence effort/investigation for the All Terrain Lifting Army System.	19		
Conduct Engine Feasibility Studies and program support for ATLAS.	67		
Rough Terrain Container Handler Crew Protection Kit Development.	173	204	
Small Business Innovative Research/Small Business Technology Transfer Programs		6	
Total	259	210	

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
0604804A, Logistics and Engineer Equipment, Engineering Development (H14)	134	452	501		1087

Comment:

C. Acquisition Strategy RDTE - Engineering efforts include: The completion of an engine obsolescence effort/investigation for the All Terrain Lifting Army System (ATLAS) as the system transitions from Tier II to Tier III powertrains; Conduct and complete engine feasibility studies and program support for ATLAS to ensure compatibility and testing of new engine into the existing engine compartment; The development of the Rough Terrain Container Handler Crew Protection Kit.

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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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
K39 Field Sustainment Support AD	11923	9759	12394	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development of critical soldier support and sustainment systems including shelter systems (rigid and soft wall), cargo aerial delivery, field service systems, mortuary affairs equipment, heaters and other combat service support equipment. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. This project also supports Advanced Component Development and Prototyping of Critical Distribution Capabilities to include cargo aerial delivery systems; which provide improved safety and accuracy while increasing survivability of aircraft, personnel, and equipment. The project supports the development of tactical heater systems that support mobile Joint Service command and control, medical, and maintenance platforms. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular 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 reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY 08/09 Execute Low Cost Aerial Delivery System (LCADS) P3I efforts to include Type Classification of the Low Cost Low Altitude (LCLA) capability and transition to sustainment. Execute Low Cost Aerial Delivery System (LCADS) P3I efforts to include evaluating LCADS Hi-V and Low-V parachutes as options for expanded 5-10K pound, high altitude Improved Container Delivery System (CDS) capability. FY10: Continue execution of LCADS P3I effort to expand LCADS/LCLA capability based upon theater feedback and CASCOM guidance.	676	757	941
FY08: Procure Joint Precision Airdrop System (JPADS) 10K DV test assets, spares and test support. Obtain Milestone A for JPADS 30K, continue prototype testing and shelve technology based on CASCOM guidance. FY09/10: Complete JPADS 10K design validation and Developmental Tests (DT).	6614	4271	2000
FY 10: Execute JPADS 2K pre-planned product improvement efforts.			1500
FY 08: Obtain Milestone A for Advanced Low Velocity Airdrop System (ALVADS), Advanced Cargo Parachute Release System (ACPRS) and conduct advanced component flight tests of prototypes. FY09: Obtain Milestone B for ACPRS and award competitive development contract. FY10: Conduct ACPRS DV and down-select to single contractor.	2112	2827	2200
FY 10: Obtain MS B for ALVADS-L and award contracts and begin fabrication for DV testing.			3000
FY 08/09: Execute Enhanced Containerized Delivery System (ECDS) P3I efforts focused on expanding recovery parachute options to include G-11 recovery parachutes and a standard rigging configuration for C-130 and C-17 aircraft.	1205	687	
FY 08/09: Evaluated design improvements to Mobile Integrated Remains Collection System (MIRCS) to facilitate alternative platform and reduce cost. Designed and tested improvements to mitigate electromagnetic interference. Assisted in generating/refining Mortuary Affairs requirements.	490		

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT		
4 - Advanced Component Development and Prototypes	0603804A - Logistics and Engineer Equipment - Adv Dev	K39		
FY 08: Award Advanced Component development contract for the Space Heater Convective, 120,000 British Thermal Unit Heating (BTUH) (SHC 120K). FY09: Complete Advanced Development of the SHC 120K and transition to Developmental Testing (DT) and Operational Testing (OT). FY 10: Complete Advanced Development of the SHC 120K, complete Developmental Testing (DT) and Operational Testing (OT), and obtain Milestone C.	826	943	800	
FY 10: Conduct Milestone B and award contract for development of prototypes and related documentation for Next Generation Human Remains Transfer Case.			800	
FY 10: Conduct Milestone B and initiate competitive contract action for development of the Joint Modular Intermodal Distribution System (JMIDS) Joint Modular Intermodal Container System (JMICS). Award developmental contract and complete JMICS design.			1153	
Small Business Innovative Research/Small Business Technology Transfer Program		274		
Total	11923	9759	12394	

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
OPA 3,M77700 Mobile Integrated Remains Collection System	23	41	36	Continuing	Continuing
OPA 3, MA7806 Precision Airdrop	300	700	501	Continuing	Continuing

Comment:

C. Acquisition Strategy Accelerate Joint Precision Aerial Delivery System (JPADS) product improvements to transition to Production.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev							K39		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	In-House	PM Force Sustainment Sys (FSS), Natick	6254	956	1-4Q	2933	1-4Q			Cont.	Cont.	
Soldier Support Equipment	In-House	NSC, Natick	1310	1036	1-4Q	835	1-4Q			Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	5192	4822	1-4Q	770	1-4Q			Cont.	Cont.	
LCADS P31 Effort	In-House/Contracts	Various				300	1-4Q	400	1-4Q	Cont.	Cont.	
JPADS 2K and 10K product improvements	In-House/Contracts	Various				500	1-4Q	3321	1-4Q	Cont.	Cont.	
ALVADS/ACPRS Development	Contracts	Various				1300	3-4Q	4340	1-4Q	Cont.	Cont.	
RRDAS Development	In-House/Contracts	Various								Cont.	Cont.	
Next Generation Human Remains Transfer Case Development	In-House/Contracts	Various						760	1-4Q	Cont.	Cont.	
JMIDS Development	Contracts	Various						1097	1-4Q	Cont.	Cont.	
Improved Environmental Control Unit (IECU)	In-House	CECOM, Ft Belvoir	664							Cont.	Cont.	
Subtotal:			13420	6814		6638		9918		Cont.	Cont.	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Improved Environmental Control Unit (IECU)	In-house	CECOM, Ft Belvoir	500								500	
Subtotal:			500								500	

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev							K39		
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	856	457	1-4Q	371	1-4Q			Cont.	Cont.	
Soldier Support Equipment	MIPR	Yuma Proving Ground (YPG), AZ, AEC	7824	4082	1-4Q	1876	1-4Q			Cont.	Cont.	
ACPRS Developmental Testing (DT)	MIPR	YPG, AZ						559	4Q	Cont.	Cont.	
LCADS P3I	MIPR	DTC,AZ,OTC,NC				400	1-4Q	541	1-4Q		1823	
SHC 120K DT and Operational Testing (OT)	MIPR	ATC, MD						760	1-4Q	Cont.	Cont.	
Human Remains Transfer Case DT	MIPR	ATC, MD								Cont.	Cont.	
JMICS DT and OT	MIPR	ATC, MD								Cont.	Cont.	
IECU	MIPR	Various	643							Cont.	Cont.	
Subtotal:			9323	4539		2647		1860		Cont.	Cont.	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	In-House	PM Force Sustainment Sys (FSS), Natick	589	570	1-4Q	200	1-4Q	616	1-4Q	Cont.	Cont.	
Project Management Support	In-House	PM MEP Ft Belvoir	557							Cont.	Cont.	
SBIT/STTR						274					274	
Subtotal:			1146	570		474		616		Cont.	Cont.	
Project Total Cost:			24389	11923		9759		12394		Cont.	Cont.	

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT																														
4 - Advanced Component Development and Prototypes	0603804A - Logistics and Engineer Equipment - Adv Dev	K39																														
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) MS A for JPADS 30 K	▲ 1																															
(2) MS C for IECU 60K	▲ 2																															
Conduct DV on JPADS 2K																																
Conduct DV on JPADS 10k.																																
(3) Obtain Milestone B for SHC 120K																																
(4) Award SDD contract for SHC 120K																																
Conduct DT and OT for SHC 120K																																
(5) Obtain Milestone C for SHC 120K																																
(6) Obtain Milestone B on ALVADS-Light																																
(7) Milestone B on ACPRS																																
Execute LCADS P3I effort (LCLA/ICDS)																																
Execute ECDS P3I efforts																																
(8) Obtain Milestone B on Helicopter External/Internal Cargo Delivery																																

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603804A - Logistics and Engineer Equipment - Adv Dev						K39	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
MS A for JPADS 30 K	2Q								
MS C for IECU 60K	2Q								
Conduct DV on JPADS 2K	1Q - 4Q	1Q - 4Q	1Q - 2Q						
Conduct DV on JPADS 10k.	2Q - 4Q	1Q - 4Q							
Obtain Milestone B for SHC 120K	4Q								
Award SDD contract for SHC 120K	4Q								
Conduct DT and OT for SHC 120K		2Q - 4Q	1Q - 3Q						
Obtain Milestone C for SHC 120K			4Q						
Obtain Milestone B on ALVADS-Light			3Q						
Milestone B on ACPRS		3Q							
Execute LCADS P3I effort (LCLA/ICDS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Execute ECDS P3I efforts	1Q - 4Q	1Q - 4Q							
Obtain Milestone B on Helicopter External/Internal Cargo Delivery					2Q				
Conduct DT/OT on Helicopter External/Internal Cargo Delivery							1Q - 4Q		
Execute FP P3I efforts to incorporate Zero-Base Camp capabilities					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Conduct Milestone B on Mobile Integrated Shop Shelter System						1Q			
Conduct DT/OT on Mobile Integrated Shop Shelter System						4Q	1Q - 3Q		
Milestone A for ACPRS	2Q								
Conduct MS B on JMIDS Platform					1Q				
Conduct MS C on JMIDS Platform								3Q	
Conduct MS B on RRDAS				3Q					

Conduct DV on RRDAS				4Q	1Q - 4Q			
Conduct MS A for ALVADS (H)						2Q		
Conduct MS B for ALVADS (H)							3Q	
Conduct DV on ALVADS (H)								1Q - 4Q
Conduct Milestone B for Next Generation Human Remains Transfer Case			2Q					
Conduct Developmental Testing for Next Generation Human Remains Transfer Case				2Q - 3Q				
Conduct Milestone B for JMIDS JMICS.			1Q					
Conduct DT and OT on JMICS				1Q - 3Q				
Complete DT for JPADS 10K			2Q - 4Q					
Execute JPADS P3I efforts			1Q - 4Q	1Q - 4Q				
Complete DV for ALVADS (L)			3Q - 4Q	1Q - 3Q				
Complete DV for ACPRS			1Q - 3Q					
Conduct DT for ACPRS			4Q	1Q				
Execute LCADS P3I efforts Low-V/Hi-V)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
K41 WATER AND PETROLEUM DISTRIBUTION - AD	2375	437	3224	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project develops and demonstrates the potential of prototype equipment and technologies to satisfy petroleum storage, distribution, and quality surveillance system requirements. The 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; and material and systems to decrease the logistics foot print and employment time for the transfer of liquid logistics in the theatre. The Army fights with 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 theaters of operations. Future Force operations demand that combat systems be rapidly deployable to the theater, rapidly emplaced upon arrival, and rapidly relocated to support a fast moving non-linear battlefield.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08-FY10: Continues improvements for the Hippo, Lightweight Water Purifier (LWP) and Tactical Water Purification System (TWPS). In FY08 investigate potential leaching of organics and metals into water storage systems and their health effects, identify life cycle cost savings in consumables and higher reliable components to improve methods to measure service life of filtration membranes, determine upper performance limits of TWPS and LWP. In FY10 conduct a market investigation for devices to automatically dose and control chlorine levels in water tankers and evaluate potential candidates for performance and suitability for military environment. Evaluate improved RO elements and media for removal of arsenic from water.	1313		2000
FY08-FY10: Continues Fuel Systems improvements for Family of Fuel System Supply Points (FSSPs). Conduct market investigations and identify design standardization requirements for common pump for both fuel and water distribution systems, conduct market research for automatic tank gauging (ATG) systems and flow volume metering devices, conduct evaluation of methods to extend operational life of collapsible fuel storage tanks and investigate technical and military suitability of portable berms to contain fuel spills. In FY08, procure and test candidate common pumps for downselection and continue market research of ATG and metering devices. In FY09, evaluate performance and military usefulness of commercial ATG and metering systems and environmental testing. In FY10 complete evaluations and begin preparing new performance based descriptions for ATG, metering devices and portable berms.	1062	426	379
FY10: Initiate effort to develop a mobile Water Packaging System. Conduct market surveys, prepare program documentation and develop Request for Proposal.			495
FY10: Develop in-line water monitoring equipment and improved hand-held water monitors for use on the TWPS, LWP and ROWPUs.			350
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR).		11	
Total	2375	437	3224

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev			PROJECT K41	
<u>B. Other Program Funding Summary</u>		FY 2008	FY 2009	FY 2010	To Compl	Total Cost
RDTE, 0604804.L41, Logistics and Engineer Equipment - Engineering Development		5167	5839	2503	Continuing	Continuing
OPA 3, R05600, Water Purification Systems		51216	51013	10190	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water		102491	65964	142573	Continuing	Continuing

Comment: C. Acquisition Strategy: Develop engineering prototypes or select Non-Developmental Item based on market surveys and proposals from industry. Competitive; sole source contract.

C. Acquisition Strategy Develop engineering prototypes or select Non-Developmental Item based on market surveys and proposals from industry. Competitive; sole source contract.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

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 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	MIPR	NFESC, Port Hueneme, CA	301	200	1Q			250	1Q	Cont.	Cont.	Cont.
Water Purification Components Improvements	Purchase Orders	TBD	408	206	1-4Q			400	1Q	Cont.	Cont.	Cont.
Water Purification Components Improvements	MIPR	TARDEC, Warren, MI	458					500	1Q	Cont.	Cont.	Cont.
Water Purification Components Improvements	C-CPFF	MTC, Dayton, OH	150							Cont.	Cont.	Cont.
Water Quality Monitoring	MIPR	TARDEC, Warren, MI						100	1Q	Cont.	Cont.	Cont.
Bulk Water Treatment System	MIPR	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Bulk Water Treatment System	MIPR	NFESC, Port Hueneme, CA								Cont.	Cont.	Cont.
Packaged Water System	MIPR	TARDEC, Warren, MI						150	1Q	Cont.	Cont.	Cont.
Packaged Water System	MIPR	NFESC, Port Hueneme, CA						195	2Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	MIPR	TARDEC, Warren, MI	829							Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	Purchase Order	Micron Optical Incorporated, Portsmouth, VA	25							Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	MIPR	NAV AIR, Patuxent River, MD	84							Cont.	Cont.	Cont.
Petroleum Quality Analysis System Enhanced	MIPR	TARDEC, Warren, MI	155							Cont.	Cont.	Cont.
Petroleum Quality Analysis System Enhanced	MIPR	Rock Island Arsenal, Rock Island, IL	877							Cont.	Cont.	Cont.
Fuel Systems Components Improvements	In-House	TARDEC, Warren, MI	301	150	1Q	200	1Q	165	1Q	Cont.	Cont.	Cont.
Fuel Systems Components Improvements	TBD	TBD	150	674	2Q	147	2Q	214	1Q	Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev							PROJECT K41		
Bulk Fuel Distribution	MIPR	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Future Fuel Storage System	MIPR	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Subtotal:			3738	1230			347		1974	Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	In-House	TARDEC, Warren, MI	753	100	1Q			200	1Q	Cont.	Cont.	Cont.
Water Quality Monitoring	In-House	TARDEC, Warren, MI						150	1Q	Cont.	Cont.	Cont.
Bulk Water Treatment System	In-House	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Packaged Water System	In-House	TARDEC, Warren, MI						150	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI	110							Cont.	Cont.	Cont.
Fuel Systems Components Improvements	In-House	TARDEC, Warren, MI	50	50	1Q					Cont.	Cont.	Cont.
Bulk Fuel Distribution System	In-House	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Future Fuel Storage System	In-House	TARDEC, Warren, MI								Cont.	Cont.	Cont.
Subtotal:			913	150				500		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	In-House	TARDEC, Warren, MI	639	250	1Q			200	1Q	Cont.	Cont.	Cont.
Water Purification Components Improvements	MIPR	NFESC, Port Hueneme, CA	305	257	1Q			250	1Q	Cont.	Cont.	Cont.
Water Purification Components Improvements	MIPR	Aberdeen Proving Ground, Aberdeen, MD		368	2Q			200	1Q	Cont.	Cont.	Cont.
Water Quality Monitoring	In-House	TARDEC, Warren, MI						100	1Q	Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev							K41		
Water Quality Monitoring	MIPR	Aberdeen Proving Ground, Aberdeen, MD								Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI	562							Cont.	Cont.	Cont.
Fuel Systems Components Improvements	In-House	TARDEC, Warren, MI	100	120	1Q					Cont.	Cont.	Cont.
Fuel Systems Components Improvements	MIPR	Yuma Proving Ground, Yuma, AZ	209			90	2Q			Cont.	Cont.	Cont.
Unit Water Pod (Camel)	MIPR	Yuma Proving Ground, Yuma, AZ	2049							Cont.	Cont.	Cont.
Bulk Fuel Distribution System	TBD	TBD								Cont.	Cont.	Cont.
Future Fuel Storage System	TBD	TBD								Cont.	Cont.	Cont.
Subtotal:			3864	995		90		750		Cont.	Cont.	Cont.
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			8515	2375		437		3224		Cont.	Cont.	Cont.

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE																PROJECT															
4 - Advanced Component Development and Prototypes	0603804A - Logistics and Engineer Equipment - Adv Dev																K41															
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
P3I - for Hardware for the LWP/TWPS/HIPPO	Evaluate commercially available water purification to LWP/TWPS																															
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test	Develop PTK																															
P3I- for Family of Fuel System Supply Points (FSSPs)	Investigate/Integrate new technology																															

Schedule Detail (R4a Exhibit)

May 2009

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 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
P3I - for Hardware for the LWP/TWPS/HIPPO	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test	1Q - 4Q	1Q - 4Q						
P3I- for Family of Fuel System Supply Points (FSSPs)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev			PROJECT K42	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
K42 MATERIEL SUSTAINMENT SUPPORT AD	5974	5190	2951	Continuing	Continuing	

A. Mission Description and Budget Item Justification: This project supports Advanced Component Development and Prototypes of new and reformulated paints, paint removers, cleaners and other surface coating materials and processes for weapon systems production and maintenance operations. The project increases operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across the Army. Materials and processes demonstrated under this project are inherently compliant with all applicable National Emissions Standards for Hazardous Air Pollutants that regulate surface coating activities, thereby eliminating the need for Army installations to incur hundreds of millions of dollars in expenses to purchase, install and operate air pollution control devices. Together with project 0603779A, Environmental Quality Technology Dem/Val (E21), this project transitions advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025). The project tests and evaluates Sustainable Painting Operations for the Total Army (SPOTA), at facilities that produce and maintain Combat Support/Combat Service Support systems, Ground Combat Vehicles and other Army equipment. The project expedites technology transition from the laboratory to operational use by demonstrating the capabilities of new materials and processes to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals and other technical data. Test and evaluation activities are executed by Research, Development and Engineering Command (RDECOM) centers and laboratories in cooperation with the affected Life Cycle Management Commands, Program Executive Offices and Program Managers. Materials are being demonstrated at ten different Army facilities in order to minimize the disruption of materiel maintenance operations at any one facility.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Qualify, validate and approve reformulated Chemical Agent Resistant Coating (CARC) systems and other non-CARC paints and surface coatings	2665	3307	1430
Qualify, validate and approve hazardous air pollutant (HAP) free solvents, thinners and cleaners	1349	323	280
Qualify, validate and approve chemical paint strippers containing no methylene chloride or other HAPs	1699	670	676
Qualify, validate and approve reformulated sealants and adhesives for high-use applications	261	744	565
Small Business Innovation Research/Small Business Technology Transfer		146	
Total	5974	5190	2951

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
0603728A, Environmental Quality Technology Demonstrations (025)	3411	3610	3640		10661
0603779A, Environmental Quality Technology Dem/Val (E21)	1251	526			1777

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE				PROJECT
4 - Advanced Component Development and Prototypes	0603804A - Logistics and Engineer Equipment - Adv Dev				K42
0605857A, Environmental Quality Technology Mgmt Support (06I)	340	272	275	67	954

Comment:

C. Acquisition Strategy The project transitions demonstrated technology directly into the Army supply system by having National Stock Numbers assigned/reassigned and immediately made available for procurement by the Defense Logistics Agency and the General Services Administration. As acquisition managers approve the new materials and processes for use on their systems, technical writers are specifying them in the appropriate technical publications. The project is managed by the Director of the Environmental Acquisition and Logistics Sustainment Program at the Headquarters, U.S. Army Research Development and Engineering Command (RDECOM).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603804A - Logistics and Engineer Equipment - Adv Dev			PROJECT L04	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
L04 JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD	106434	21985	32135	Continuing	Continuing	

A. Mission Description and Budget Item Justification: Joint Light Tactical Vehicle (JLTV): FY08 and future funding supports the development and testing of the JLTV Family of Vehicles (FoV), which is being developed as a joint systems between the Army and Marine Corps. The JLTV goal is a FoVs with companion trailers capable of performing multiple mission roles that will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full Range of Military Operations (ROMO). JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency and other means; and maintaining effective competition throughout the lifecycle. The JLTV FoV includes ten (10) sub-configurations (and companion trailers) in three payload categories. Commonality of components, maintenance procedures, training, etc., between vehicles and trailers is expected to be inherent in FoV solutions within and across Payload Categories to minimize FoV total ownership cost. Unique service requirements have been minimized.

During FY 10, major budget activities will support completion of ballistic hull testing, vehicle performance testing, user evaluations, reliability testing and prototype live fire evaluations. The Defense Acquisition Executive's mandate is that the JLTV FoV undergo a robust Technology Development Phase, with multiple competitive prototypes in order to assure requirements achievability, verified by demonstration of those systems. Additional budget activities will support MS B preparation.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
JLTV Program Management	3980	4126	4590
JLTV Variant Prototype Contract Design, Development and Fabrication	99537	12824	14045
JLTV Developmental Test and Evaluation	2917	4419	13500
Small Business Innovative Research/Small Business Technology Transfer Programs		616	
Total	106434	21985	32135

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
Marine Corps Ground Combat/Support Systems, JLTV RDTE 0603635M	39969	43878	58851		455485

Comment:

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT

L04

C. Acquisition Strategy The JLTV Acquisition Strategy for the Technology Demonstration (TD) phase, FY08-11, is to competitively award multiple contracts. During this phase, the contractors will be required to design the JLTV Family of Vehicles (FoV) to the Critical Design Review level and fabricate and test selected prototypes and trailers for payload Categories A, B, and C. The fabricated prototypes will undergo developmental testing, as well as limited user assessments, in a relevant environment at Government test facilities. The goal is to ensure the family of prototypes is mature in terms of supporting technologies and full system integration for MS B approval and entry into Engineering & Manufacturing Development phase.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev							L04		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JLTV Technology Demonstration	C/Cshare	BAE Systems Santa Clara, CA		30998	4Q						30998	
JLTV Technology Deomonstration	C/Cshare	General Tactical Vehicles Sterling Heights, MI		35567	4Q						35567	
JLTV Technology Demonstration	C/CPFF	Lockheed Martin Owego, NY		26447	4Q						26447	
JLTV Systems Engineering Design & Development / GFE				1124	1-4Q	3885	1-4Q	4845	1-4Q		9854	
JLTV Program Management	In-house	TACOM, Warren, MI		3980	1-4Q	4126	1-4Q	4590	1-4Q		12696	
SBIR/STTR						616					616	
Subtotal:				98116		8627		9435			116178	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JLTV Variant Prototype Design	MIPR/PO	TACOM Warren, MI		1962	1-4Q	1900	1-4Q	2600	1-4Q		6462	
JLTV Variant Prototype Design	MIPR/PO	TARDEC Warren, MI		3010	1-4Q	4000	1-4Q	3600	1-4Q		10610	
JLTV Variant Prototype Design	MIPR/PO	Defense Technical Information Center, Ft. Belvoir, VA		1305	1-4Q	1539	1-4Q	1600	1-4Q		4444	
JLTV Variant Prototype Design	MIPR/PO	Other Government Agencies		1269	1-4Q	1500	1-4Q	1400	1-4Q		5569	
Subtotal:				7546		8939		9200			27085	
III. Test And Evaluation	Contract	Performing Activity &	Total	FY 2008	FY 2008	FY 2009	FY 2009	FY 2010	FY 2010	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE								PROJECT	
4 - Advanced Component Development and Prototypes			0603804A - Logistics and Engineer Equipment - Adv Dev								L04	
	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
JLTV Developmental Test and Evaluation	MIPR	APG, MD		474	2-4Q	3148	1-4Q	9500	1-4Q		13122	
JLTV Developmental Test and Evaluation Support Costs	Contract	Various				1271	1-4Q	1500	1-4Q		2771	
JLTV Developmental Test and Evaluation	MIPR	YPG, AZ		298	2-4Q			2500	1-4Q		2798	
Subtotal:				772		4419		13500			18691	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:				106434		21985		32135			161954	

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE																PROJECT																			
4 - Advanced Component Development and Prototypes	0603804A - Logistics and Engineer Equipment - Adv Dev																L04																			
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
(1) MS A (Technology Development)	▲ ₁ MS A																																			
(2) Contract Awards	TD Award ▲ ₂																																			
GAO Contractor Protest					■																															
Prototype Development Design / Fabrication					■																															
JLTV Developmental Test and Evaluation / Reports									■																											
(3) CDD Joint Req Oversight Com																					▲ ₃															
Source Selection Process																					■															
(4) MS B (Eng & Man Dvlpmnt)																					▲ ₄ MS B															
(5) Contract Award																					▲ ₅															
Design and Fabrication													■																							
Test and Validation																	■																			
(6) CPD Joint Req Oversight Com																									▲ ₆											
(7) MS C (Production & Deployment)																													▲ ₇ MS C							
Low Rate Initial Production (LRIP)																					■															
(8) Full-Rate Production Decision Review																																	▲ ₈			

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603804A - Logistics and Engineer Equipment - Adv Dev						L04	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
MS A (Technology Development)	1Q								
Contract Awards		1Q							
GAO Contractor Protest		1Q - 2Q							
Prototype Development Design / Fabrication		2Q - 4Q	1Q - 3Q						
JLTV Developmental Test and Evaluation / Reports		4Q	1Q - 4Q	1Q - 3Q					
CDD Joint Req Oversight Com				3Q					
Source Selection Process				3Q - 4Q					
MS B (Eng & Man Dvlpmnt)				4Q					
Contract Award				4Q					
Design and Fabrication				4Q	1Q - 4Q				
Test and Validation					2Q - 4Q	1Q - 3Q			
CPD Joint Req Oversight Com						3Q			
MS C (Production & Deployment)						4Q			
Low Rate Initial Production (LRIP)							1Q - 4Q	1Q - 4Q	
Full-Rate Production Decision Review									