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

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment Engineering

Dev

	COST (In Thousands)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to	Total Cost
			Estimate	Complete							
	Total Program Element (PE) Cost	22065	24333	30673	0	0	0	0	0	0	0
194	ENGINE DRIVEN GEN ED	7691	5077	5008	0	0	0	0	0	0	0
429	RIGIDWALL SHELTER ED	0	4063	3515	0	0	0	0	0	0	0
461	MARINE ORIEN LOG EQ ED	3763	1434	6234	0	0	0	0	0	0	0
H01	COMBAT ENGINEER EQ ED	2569	816	2653	0	0	0	0	0	0	0
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	0	637	1114	0	0	0	0	0	0	0
H14	MATERIALS HANDLING EQUIPMENT - ED	99	590	596	0	0	0	0	0	0	0
L39	ENVIRONMENTAL EQUIPMENT - ED	3216	4487	3003	0	0	0	0	0	0	0
L41	WATER AND PETROLEUM DISTRIBUTION - ED	4298	6280	7366	0	0	0	0	0	0	0
L42	CAMOUFLAGE SYSTEM ED	377	376	329	0	0	0	0	0	0	0
L43	ENGINEER SUPPORT EQUIPMENT - ED	52	573	855	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

<u>PLEASE NOTE:</u> This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

Included within this program element is the development of military tactical bridging, materiel handling equipment, construction equipment, engineer support equipment, environmental equipment, water purification equipment, petroleum distribution equipment, mobile electric power and water craft. This project supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

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

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment Engineering

Dev

B. Program Change Summary	FY 2000	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2001 PB)	22844	20457	17664	0
Appropriated Value	22996	24557	0	
Adjustments to Appropriated Value	0	0	0	
a. Congressional General Reductions	0	0	0	
b. SBIR / STTR	-596	0	0	
c. Omnibus or Other Above Threshold Reductions Inflation	-90	0	0	
d. Below Threshold Reprogramming	-183	0	0	
e. Rescissions	-62	-224	0	
Adjustments to Budget Years Since FY2001 PB	0	0	13009	
Current Budget Submit (FY 2002/2003 PB)	22065	24333	30673	0

Funding - FY 2002: Increase \$13,009K supports Rigidwall Shelters, Engine Driven Generators, Marine Oriented Logistics and combat Engineer Equipment development.

Funding - FY 2003: Increase \$9,555K supports Rigidwall Shelters, Engine Driven Generators, Combat Engineer Equipment, Tactical Bridging and Water and Petroleum Distribution development.

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ARMY RDT&E BUDGET IT	EM JU	STIFI	CATIO	N (R-2	A Exhi	bit)	Jı	ıne 2001		
BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	(PROJECT 194		
COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
194 ENGINE DRIVEN GEN ED	7691	5077	5008	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project supports the system development and demonstration of a series of diesel engine driven generator sets/auxiliary power units and provide continual modernization of fielded sets in order to meet federally mandated environmental statutes with reduced weight and size and reduced thermal signatures. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- 462 Completed Deployable Power Generation and Distribution System (DPGDS) test and evaluation.
- 4367 Initiated hardware system development and demonstration for 100 & 200kW Tactical Quiet Generator (TQG). (Qty 8)
- Designed and fabricated small set prototype 5-60kW Advanced Medium Sized Mobile Power Source (AMMPS). (Qty 6)

Total 7691

FY 2001 Planned Program

- 3544 Continue hardware system development & demonstration for 100 & 200kW TQG. (Qty 28).
- Complete fabrication and initiate evaluation and demonstration of 5-60kW AMMPS prototypes. (Qty 6).
- Small Business Innovation Research/ Small Business Technology Transfer Program

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

June 2001

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - ENG MANUFACTURING DEV

0604804A - Logistics and Engineer Equipment

194

Engineering Dev

FY 2002 Planned Program

- 3900 Continue hardware system development and demonstration for 100/200kW TQG.
- 558 Complete Performance Specification for AMMPS.
- 550 Complete testing of AMMPS.

Total 5008

B. Other Program Funding Summary	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	<u>Total Cost</u>
0603804A - Logistics and Engineer Equipment Adv Dev G11	964	719	1004	0	0	0	0	0	0	0
Other Procurement, Army BA Generators & Assoc. Equip (MA9800	77834	88047	59768	0	0	0	0	0	0	0

C. Acquisition Strategy: Develop and transition to competitive procurement all items in this project.

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Award competitive contract(s) for design, prototype fabrication & testing of 100/200kW TQG (Phase I)	2Q			0	0	0	0	0
Complete testing of DPGDS	4Q			0	0	0	0	0
Award contract for AMMPS proof of principle prototype	2Q			0	0	0	0	0
Milestone C of DPGDS	4Q			0	0	0	0	0
Award Phase II system development and demonstration for fabrication of PPQT 100/200kW TQG sets		3Q		0	0	0	0	0
Complete fabrication 5-60kW AMMPS proof of principle prototype		3Q		0	0	0	0	0
Initiate testing of AMMPS proof of principle prototype		3Q		0	0	0	0	0

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment Engineering Dev PROJECT 194							
D. Schedule Profile (continued)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	
Develop solicitation package for AMMPS			2Q	0	0	0	0	0	
Complete AMMPS prototype testing			4Q	0	0	0	0	0	
Transition 100/200kW TQG to Procurement (Milestone C)				0	0	0	0	0	
Award Phase I contracts for AMMPS: Develop military system				0	0	0	0	0	
Initiate Phase I testing of AMMPS				0	0	0	0	0	
Award Phase II contract for AMMPS family				0	0	0	0	0	
Transition ACE capabilities to Man Portable Power (MPP) program				0	0	0	0	0	
Complete testing of Phase II AMMPS				0	0	0	0	0	
Begin preparation of Performance Specification for Man Portable Power Program				0	0	0	0	0	
AMMPS transition to production and deployment				0	0	0	0	0	

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 5 - ENG MANUFACTURING DEV 0604804A - Logistics and Engineer Equipment 194 **Engineering Dev** FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To I. Product Development Contract Performing Activity & Total Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract a. 100/200kW C-CPFF Fermont & Gen Dyn 3800 3184 30 1300 10 0 Robotics Systems, Bridgeport, CT Oak Ridge National 0 0 b. AMMPS(5-60kW) Small 200 0 0 Purchase Laboratories (ORNL), Oak Ridge, TN c . AMMPS(5-60kW) C-CPFF CECOM, Ft Belvoir, 2871 810 10 0 0 0 VA 3994 6871 1300 0 Subtotal: II. Support Cost Contract Performing Activity & Total FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract a. AMMPS(5-60kW) CECOM, Ft Belvoir, 730 385 1Q 367 In-house 1Q 0 VA CECOM, Ft Belvoir, b. 100/200kW In-house 409 210 10 250 10 0 0 VA c. DPGDS CECOM, Ft Belvoir, 830 0 0 0 In-house 0 VA 595 617 0 0 1969 Subtotal:

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment 5 - ENG MANUFACTURING DEV 194 **Engineering Dev** Contract Performing Activity & FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Total III. Test and Evaluation Total Target Method & Location PYs Cost Cost Cost Cost Award Complete Value of Award Award Cost Date Contract Type Date Date Eglin AFB, FL a. DPGDS MIPR 362 0 0 0 0 b. 100/200kW **TBD** TBD 0 1Q 0 Continue 2200 c. AMMPS(5-60kW) **TBD** TBD 75 0 10 0 550 0 0 437 2750 Continue Subtotal: IV. Management Services Contract Performing Activity & Total FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Total Target Method & PYs Cost Value of Location Cost Award Cost Cost Award Complete Cost Award Type Date Date Date Contract CECOM, Ft Belvoir, a . DPGDS In-house 400 0 0 0 b. 100/200kW In-house CECOM, Ft Belvoir, 372 288 1Q 150 10 0 Continue VA c. AMMPS(5-60kW) In-house CECOM, Ft Belvoir, 457 200 10 191 10 0 0 VA 488 1229 341 Continue Subtotal:

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AR	MY RDT&E CC	OST ANA	LYSIS(R-3)	June	June 2001			
BUDGET ACTIVITY 5 - ENG MANUFACTURING	G DEV		PE NUMBER AN 0604804A - Engineering	Logistics and Enginee	•	PROJECT ment 194			
Project Total Cost:		10506	5077	5008	0	0 0 0	Continue		

ARMY RDT&E BUDGET IT	A Exhi	ibit)	Jı	ıne 2001						
BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	(PROJECT 429		
COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
429 RIGIDWALL SHELTER ED	0	4063	3515	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project supports the development of a series of Standardized Integrated Command Post System (SICPS) Platforms such as Rigid Wall Shelters (RWS) and Large SICPS Shelter (LSS), with added capabilities and enhanced survivability in support of Light Digitized Tactical Operational Centers (TOC) requirements.

FY 2000 Accomplishments

Program not funded.

FY 2001 Planned Program

- RWS Intelligent Power Management System (IPMS) administration and engineering support
- Contract with Custom Manufacture Engineering (CME)to develop, fabricate, and manufacture IPMS prototypes.
- 2870 Procure SICPS Platforms, integrate IPMS, and perform development and operational testing.
- Small Business Innovation Research/Small Business technology transfer (SBIR/STTR) Programs

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

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

PROJECT

0604804A - Logistics and Engineer Equipment

429

Engineering Dev

FY 2002 Planned Program

• 2000 Initiate development of Large Standardized Integrated Command Post System (SICPS) Shelter

• 1515 Initiate hardware development of improved shelter integration components for TOC shelters

Total 3515

B. Other Program Funding Summary: Not applicable for this item.

Not applicable for this item.

C. Acquisition Strategy: Develop and transition to competitive procurement all items in this project

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Develop, fabricate, and manufacture IPMS prototypes		2Q		0	0	0	0	0
Integrate and test IPMS		4Q		0	0	0	0	0
Initiate component procurement/fabrication and integration of			1Q	0	0	0	0	0
Large SICPS prototypes								
Initiate hardware development of improved integration			1Q	0	0	0	0	0
components for TOC shelters								
Complete integration of Large SICPS prototypes				0	0	0	0	0
Complete hardware development improved integration				0	0	0	0	0
components for TOC shelters								
Initiate development testing (DT)of Large SICPS shelter				0	0	0	0	0
Initiate testing of TOC shelter components				0	0	0	0	0
Complete DT of Large SICPS Shelter				0	0	0	0	0
Complete testing of TOC shelter components				0	0	0	0	0
Begin integration of TOC components into shelters				0	0	0	0	0
Complete integration of TOC components into shelters				0	0	0	0	0

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV			ER AND TIT 4A - Logi ering Dev	stics and	Enginee	r Equipn	ient	PROJ 429
D. Schedule Profile (continued)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Begin Operational Testing (OT) of Large SICPS Shelter				0	0	0	0	0
Complete OT of Large SICPS Shelter				0	0	0	0	0
Begin DT/OT of integrated TOC shelters				0	0	0	0	0
Complete DT/OT of integrated TOC shelters				0	0	0	0	0
Type Classify Large SICPS Shelter				0	0	0	0	0
Type Classify TOC shelter				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - ENG MANUFACTURING DEV 0604804A - Logistics and Engineer Equipment 429 **Engineering Dev** FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To I. Product Development Contract Performing Activity & Total Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract a. IPMS Development In House Contractor CME, St 0 500 0 0 Petersburg, FL b . Large SICPS In House SBCCOM, Natick, MA 0 0 1498 1-40 0 0 Continue c. TOC Components SBCCOM, Natick, MA 0 In House 0 Continue 1000 1-40 500 2498 0 Continue Subtotal: II. Support Cost Contract Performing Activity & Total FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Total Target PYs Cost Complete Method & Location Cost Award Cost Award Cost Award Cost Value of Type Date Date Date Contract a . IPMS admin and 693 In House C2D. Fort Monmouth. 0 0 0 engineering support NJ b. Large SICPS 0 In House SBCCOM In-house 250 1-4Q Continue c . TOC Components In House SBCCOM In-house 250 1-40 Continue 0 693 500 0 Continue Subtotal:

627

	ARM	IY RDT&E CO	ST AN	IALYS	IS(R-3)			June	e 2001		
BUDGET ACTIVITY 5 - ENG MANUFAC	TURING	DEV		060	JMBER ANI 4804A - I ineering	Logistics a	eer Equi	PROJECT 429				
II. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a . IPMS integration and test	In House	Contractor CME, St Petersburg, FL	0	2870	1-4Q	0		0	0	0	0	
Subtotal:			0	2870		0		0		0	0	1
IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targo Value o Contrao
					Date		Date		Date			Commu
a . Large SICPS Shelter	Type In House	SBCCOM, Natick, MA	0	0	Date	267	1-4Q	0	0	0	0	
a . Large SICPS Shelter b . TOC Components	Туре	SBCCOM, Natick, MA SBCCOM, Natick, MA	0	0	Date	267 250		0		0	0	Continu
	Type In House				Date		1-4Q	0	0		-	Continu
b . TOC Components	Type In House		0	0	Date	250	1-4Q	0	0	0	0	Continue

ARMY RDT&E BUDGET IT	EM JU	STIFI	CATIO	N (R-2	A Exhi	bit)	June 2001			
BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	(e number 0 604804A Engineeri	- Logistic		gineer Eq	quipment		PROJECT 461		
COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
461 MARINE ORIEN LOG EQ ED	3763	1434	6234	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project provides funds for the engineering and pre-production development of equipment in support of the Army's Logistics-Over-The-Shore (LOTS), In-theatre Port Control, and Intercoastal/Riverine Logistics missions. Projects supported include engineering development for the Navy led Joint Modular Lighterage System (JMLS), and the Army's Rapidly Installed Breakwater (RIB) Project; both of which are aimed at allowing defense forces to continue to offload critical equipment and supplies under challenging sea state conditions. Funds also support pre-production activity on the Logistics Support Vessel (LSV) Extended Service Program (ESP)/Upgrade and the Harbormaster Command and Control Center (HCCC). The HCCC program will provide for the safe and effective management of Army and Joint Port Operations during deployment of forces; both under LOTS conditions and operations in existing port facilities. Future efforts will complete development effort on the Landing Craft Utility (LCU) Recapitalization and the Theatre Support Vessel(TSV). This system supports the Legacy-to-objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- 2620 Continued development of Joint Modular Lighterage System (JMLS) (Sea State 3 Capable) with Navy.
- Completed performance specifications, purchase description and other pre-production documents for the LSV ESP/Upgrade.
- 743 Continued Harbormaster Command and Control Center(HCCC) development.

Total 3763

FY 2001 Planned Program

- Continue development of JMLS in preparation for the Military User Assessment(MUA).
- Complete final development, fabricate prototype, and begin testing for Harbormaster Command and Control Center (HCCC).
- Small Business Innovative Research/ Small Business Technology Transfer Program

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

June 2001

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - ENG MANUFACTURING DEV

0604804A - Logistics and Engineer Equipment

461

Engineering Dev

FY 2002 Planned Program

• 425 Fabricate and demonstrate Rapidly Installed Breakwater(RIB) delivery system.

• Identify hardware improvements for Landing Craft Utility(LCU) recapitalization.

• 5000 Complete JMLS development.

Total 6234

B. Other Program Funding Summary	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	<u>Total Cost</u>
RDTE, 0603804A, D526, Marine Oriented Logistics, Advanced De	3703	2280	2013	0	0	0	0	0	0	0
OPA 3, R97500, Causeway, Systems	6669	17069	0	0	0	0	0	0	0	0
OPA 3, M11200, Logistic Support Vessel (LSV)	22514	0	25437	0	0	0	0	0	0	0
OPA 3, M11203, Theatre Support Vessel (TSV)	0	0	0	0	0	0	0	0	0	0

<u>C. Acquisition Strategy:</u>Develop and transition to competitive procurement all items in this project.

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Joint Modular Lighterage System (JMLS) Award	1-2Q	1-2Q		0	0	0	0	0
Rapidly Installed Breakwater (RIB) Awards			1-2Q	0	0	0	0	0
Harbormaster Command & Control Center (HCCC) Contract	1-3Q	2-4Q		0	0	0	0	0
Award								
LCU Parameters and Performance Characteristics		2-4Q	2-4Q	0	0	0	0	0
Combat Logistics Vehicle Concept Development				0	0	0	0	0
Operations & Support Cost Reduction Study				0	0	0	0	0
EPP Utility Craft Assessment				0	0	0	0	0
New Large Tug				0	0	0	0	0

ARMY RDT&E BUDGET BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment Engineering Dev				
D. Schedule Profile (continued)	FY 2000	FY 2001 FY 2002	2 <u>FY 2003 FY 2004</u> F	FY 2005 FY 2006	FY 2007	

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

 ${\bf 0604804A - Logistics \ and \ Engineer \ Equipment}$

PROJECT **461**

Engineering Dev

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. LSV	MIPR	Navy (NSWC), Suffolk, VA	315	0		0		0	0	0	0	0
b. RIB	FC-FP	Modern Technologies Inc, Warren, MI	477	0		100	1-4Q	0	0	0	0	0
c . JMLS	MIPR	Navy (PM JMLS), Hueneme, CA	1181	362	1-4Q	3700	1-4Q	0	0	0	0	0
d . RIB	MIPR	Corps of Engineers (WES), Vicksburg, MI	756	0		190	1-4Q	0	0	0	0	0
e . LSV ESP/Upgrade	MIPR	Navy (NSWC), Suffolk, VA	251	0		0		0	0	0	0	0
f. HCCC	MIPR	IOC, Rock Island Arsenal	0	150	1-4Q	0		0	0	0	0	0
g. HCCC	FC-FP	Conley & Associates, St.Louis, MO	0	300	1-4Q	0		0	0	0	0	0
h. TSV	MIPR	NSWC, Suffolk, VA	0	0		0		0	0	0	0	0
i . LCU Recap	MIPR	NSWC, Suffolk, VA	0	0		706	1-4Q	0	0	0	0	0
Subtotal	:		2980	812		4696		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment 5 - ENG MANUFACTURING DEV 461 **Engineering Dev** FY 2001 FY 2002 FY 2003 II. Support Cost FY 2001 FY 2002 FY 2003 Cost To Total Contract Performing Activity & Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Date Contract Type Date Date TACOM CBU, Warren, 23 a. JMLS MIPR 100 1-40 198 1-40 0 TACOM CBU, Warren, 25 0 0 b. RIB MIPR 10 1-40 0 TACOM CBU, Warren, 7 0 c . LSV ESP/Upgrade 0 0 0 **MIPR** MI TACOM CBU, Warren, d. HCCC MIPR 0 15 1-4Q 0 0 0 MI TACOM CBU, Warren, e. TSV MIPR 0 0 0 0 0 MI f. LCU Recap TACOM CBU, Warren, 5 0 0 0 MIPR 1-4Q 55 115 0 213 0 Subtotal:

ARMY RDT&E COST ANALYSIS(R-3) BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV BUDGET ACTIVITY 0604804A - Logistics and Engineer Equipment Engineering Dev 1 - PROJECT 461 461

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Complete		Target Value of Contract
a . LSV	MIPR	TECOM , ATC, Aberdeen, MD	20	0		0		0	0	0	0	0
b. JMLS	MIPR	TECOM , ATC, Aberdeen, MD	40	50	1-4Q	800	1-4Q	0	0	0	0	0
c. RIB	MIPR	TECOM , ATC, Aberdeen, MD	60	0		25	1-4Q	0	0	0	0	0
d . LSV ESP/Upgrade	MIPR	TECOM , ATC, Aberdeen, MD	10	0		0		0	0	0	0	0
e. HCCC	MIPR	TECOM , ATC, Aberdeen, MD	0	50	1-4Q	0		0	0	0	0	0
f. TSV	MIPR	TECOM, ATC, Aberdeen, MD	0	0		0		0	0	0	0	0
g . LCU Recap	MIPR	TECOM, ATC, Aberdeen, MD	0	0		0		0	0	0	0	0
Subtotal:			130	100		825		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment Engineering Dev

PROJECT **461**

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Complete	Total Cost	Target Value of Contract
a . CMF	MIPR	PM Army Watercraft Systems, TACOM, Warren, MI	0	0		0		0	0	0	0	0
b. LSV	MIPR	PM Army Watercraft Systems , TACOM, Warren, MI	125	0		0		0	0	0	0	0
c . JMLS	MIPR	TARDEC, Warren, MI	287	195	1-4Q	300	1-4Q	0	0	0	0	0
d . RIB	MIPR	PM Force Projection R&D /TARDEC, Warren, MI	186	0		100	1-4Q	0	0	0	0	0
e . LSV ESP/Upgrade	MIPR	PM Army Watercraft Systems , TACOM, Warren, MI	0	0		0		0	0	0	0	0
f. HCCC	MIPR	PM Force Projection R&D/TARDEC, TACOM, Warren, MI	0	212	1-4Q	0		0	0	0	0	0
g . TSV	MIPR	PM Force Projection R&D/TARDEC, Warren, MI	0	0		0		0	0	0	0	0
h . LCU Recap	MIPR	PM Force Projection R&D/TARDEC, Warren, MI	0	0		100	1-4Q	0	0	0	0	0
Subtotal:			598	407		500		0		0	0	0

Al	RMY RDT&	E COST ANA	ALYSIS(R	(-3)		June 2	001		
UDGET ACTIVITY 5 - ENG MANUFACTURI	NG DEV		PE NUMBER 0604804A Engineeri	- Logistics and E	ngineer Eq		PROJECT 461		
Project Total Cost:		3763	1434	6234		0	0	0	
		3.03	2.00	0.25 .		~	~	<u> </u>	

ARMY RDT&E BUDGET	ITEM JU	JSTIFI	CATIO	N (R-2	A Exhi	bit)	Jı	ıne 2001		
BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV		(e number 0 604804A E <mark>ngineeri</mark>	- Logisti		gineer Eq	quipment		PROJECT H01	
COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
H01 COMBAT ENGINEER EQ ED	2569	816	2653	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project supports the Engineering and Manufacturing Development (EMD) of military Construction Equipment such as: Tracked Tractor; Asphalt Equipment; Scrapers and Graders. Many of these systems support the Army's Division Redesign Study (ADRS) to convert National Guard units to Combat Service Support (CSS) units. Lines of Communications (LOC) Bridging EMD efforts prior to FY01 were funded in this DH01 project line before being moved to project DH02 in this PE. Although many military requirements are available on commercial products, military unique requirements such as speed, cross country mobility, crew protection, paint and transportability (air, sea, rail) result in modifications to commercially available products. EMD is required to reduce the risk associated with this integration before entering into production. This project supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- Completed Heavy Dry Support Bridge (HDSB) prototype contracts. (Qty 2)
- 228 Completed PQT of HDSB.
- 441 Awarded Bridge Erection Boat (BEB) prototype contract. (Qty 4)
- 332 Prepared IRB Production Solicitation.
- 628 Initiated Bridge Crossing Simulator.
- Conducted market investigations, revised performance specifications, performed Non-Developmental Item (NDI) testing, for reprocurements of Construction Equipment (CE).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) June 2001 BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 5 - ENG MANUFACTURING DEV 0604804A - Logistics and Engineer Equipment H01 **Engineering Dev** FY 2001 Planned Program 53 Conduct market surveillance. Conduct market investigations and update specifications for reprocurements of CE. 134 Support development of and the revision of CE acquisition documents required prior to milestone "C" decisions. 605 Small Business Innovation Research/Small Business technology transfer (SBIR/STTR) Programs 24 Total 816 FY 2002 Planned Program Conduct market surveillance. 119 194 Conduct market investigations and update of specifications for reprocurements of CE. Support development of and the revision of CE acquisition documents required prior to milestone "C" decisions. 590 Perform NDI evaluations and testing. 500 LOG demo of IHMEE. 100 Prototype contract and hardware development. 1150 Total 2653

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) BUDGET ACTIVITY PE NUMBER AND TITLE June 2001

5 - ENG MANUFACTURING DEV

0604804A - Logistics and Engineer Equipment

PROJECT **H01**

Engineering Dev

B. Other Program Funding Summary	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
OPA3, M06100, Tractor, Full Tracked Low Sp	0	0	2018	0	0	0	0	0	0	0
OPA3, M07000, Crushing/Screen Plan	4101	89	4474	0	0	0	0	0	0	0
OPA3, R02800, Scraper, Earthmoving 14-18 Cu	0	0	0	0	0	0	0	0	0	0
OPA3, R03801, Grader, Mtzd, Hvy	0	0	0	0	0	0	0	0	0	0
OPA3, R05900 Tactical Rapid Ex System (TRES)	0	0	5031	0	0	0	0	0	0	0
OPA3, M08100, Plant, Asphalt Mixing	0	0	2013	0	0	0	0	0	0	0
OPA3, ML5350, Item Less than \$5M (Construction	4261	6575	12428	0	0	0	0	0	0	0
Equipment)										

C. Acquisition Strategy: HMEE - Competitive RDTE followed by competitive procurement.

Construction Equipment- All RDT&E followed by competitive procurement.

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
NDI Testing			1-2Q	0	0	0	0	0
Log Demo			3Q	0	0	0	0	0
Market Surveillance	1-4Q	1-4Q	1-4Q	0	0	0	0	0
Market Investigations	1-4Q	1-4Q	1-4Q	0	0	0	0	0
Acquisition documents	1-4Q	1-4Q	1-4Q	0	0	0	0	0
TRES EMD Contracts			3-4Q	0	0	0	0	0
TRES Testing				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 5 - ENG MANUFACTURING DEV 0604804A - Logistics and Engineer Equipment H01 **Engineering Dev** FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To I. Product Development Contract Performing Activity & Total Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract a . BEB EMD Contract FFP North American Marine 149 0 0 Jet, Benton AK b . PM/Matrix Support **MIPR** TACOM, Warren, MI 7424 653 1-40 590 1-40 0 0 0 TARDEC, Warren, MI c . TARDEC In-House 540 110 294 1-40 0 0 0 1-40 d. TRES EMD Contract FFP TBD 0 0 3-40 0 0 1150 763 0 0 8113 2034 Subtotal: II. Support Cost Contract Performing Activity & Total FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Total Target Method & PYs Cost Value of Location Award Cost Cost Award Complete Cost Cost Award Type Date Date Date Contract TARDEC, Warren, MI a . Studies for Future In House 0 53 1-40 119 1-40 Capabilities 0 53 119 0 0 Subtotal:

BUDGET ACTIVITY 5 - ENG MANUFAC		IY RDT&E CO dev	SI AI	PE NU 060	JMBER ANI	TITLE ogistics a	nd Engin	eer Equi	June 2001 Equipment			T
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value of Contrac
a . Bridge Crossing Simulation	MIPR	TECOM, Aberdeen, MD	728	0		0		0	0	0	0	(
b . Test and Prep	MIPR	APG, Aberdeen, MD	1121	0		500	1-2Q	0	0	0	0	(
Subtotal:			1849	0		500		0		0	0	(
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	•	Total Cost	Targe Value o Contrac
Subtotal:			0	0		0		0		0	0	(

	ARMY RDT&E BUDGET IT	EM JU	STIFI	CATIO	N (R-2	A Exhi	ibit)	Jı	ıne 2001		
•	ACTIVITY G MANUFACTURING DEV		(e number 0 604804A E <mark>ngineeri</mark>	- Logistic		gineer Eq	luipment		PROJECT H02	
	COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	0	637	1114	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project supports the engineering development and transition to procurement of Objective Force tactical bridge systems. These systems include Line of Communication (LOC) bridges and military tactical bridge site mobility equipment. These systems are needed to meet requirements such as the Anchorage System (AS) for the Ribbon Bridge and Improved Ribbon Bridge (IRB), Access/Egress Roadway System (AE) for bridge approaches, and assessment of the Rapidly Emplaced Bridging System (REBS).

FY 2000 Accomplishments

Project not funded in FY 2000.

FY 2001 Planned Program

- 100 Conduct Market investigation for Anchorage System (AS).
- Assess the merits of current boats using rebuilt boat engines versus more powerful commercially available boats. Boats for improved ribbon bridge installations.
- 19 SBIR/STTR

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

June 2001

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - ENG MANUFACTURING DEV

0604804A - Logistics and Engineer Equipment

H02

Engineering Dev

FY 2002 Planned Program

- 800 Procure Representative Samples for use in developing performance specifications for AS.
- Conduct Market investigation for Access Egress Roadway System (AE).

Total 1114

B. Other Program Funding Summary	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
OPA3, M27200 Float Bridge Propulsion	0	1924	1951	0	0	0	0	0	0	0
OPA3, G82402 Rapidly Emplaced Bridging Sys	0	4991	5031	0	0	0	0	0	0	0

C. Acquisition Strategy: Not applicable for this item.

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
AS Market Investigation complete		3Q		0	0	0	0	0
Conduct Boat Design Analysis		3-4Q		0	0	0	0	0
Procure AS Representatives Samples			2Q	0	0	0	0	0
AE Market Investigation complete			2Q	0	0	0	0	0
AS Testing				0	0	0	0	0
Procure AE Representatives Samples				0	0	0	0	0
LOC Market Investigation complete				0	0	0	0	0

	ARM	IY RDT&E CO)ST AN	ALYS	SIS(R-3)			June 2001				
BUDGET ACTIVITY 5 - ENG MANUFAC	CTURING	DEV		060	TUMBER AN 14804A - I gineering	Logistics a	and Engin	ieer Equi	pment	PROJEC H02			
. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value of Contrac	
a . AS Samples	C-CPFF	TBD	0	0		800	2Q	0	0	0	0	(
b . AE Samples	C-CPFF	TBD	0	0		0		0	0	0	0	(
c . PM/Matrix Support	MIPR	TACOM, Warren, MI	0	637	3Q	314	2Q	0	0	0	0	(
Subtotal:			0	637		1114		0		0	0	(
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Complete	Total Cost	Targe Value of Contrac	
			0	0		0		0		0	0	(

	ARM	IY RDT&E CO	OST AN		` .				June	e 2001		
BUDGET ACTIVITY 5 - ENG MANUFACT	ΓURING !	DEV		060	JMBER ANI 4804A - I sineering	Logistics a	eer Equi	PROJECT H02				
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a . AE	MIPR	APG, Aberdeen, MD	0	0		0		0	0	0	0	
Subtotal:			0	0		0		0		0	0	(
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contra
Subtotal:			0	0		0		0		0	0	
Project Total Cost:			0	637		1114		0		0	0	

	ARMY RDT&E BUDGET IT	STIFI	CATIO	N (R-2	A Exhi	June 2001					
	ACTIVITY S MANUFACTURING DEV	(PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment Engineering Dev								
	COST (In Thousands)		FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
L39	ENVIRONMENTAL EQUIPMENT - ED	3216	4487	3003	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: Project develops for transition to procurement large capacity heater and environmental control units (ECU) that do not use ozone depleting refrigerants. These systems support the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

Note: Water Purification System Development after FY00 is reflected in Project DL41.

FY 2000 Accomplishments

- Continued engineering and management support of the 1500 GPH PQT/EUT.
- Continued contractor support of PQT and completion of 1500 GPH Tactical Water Purification System (TWPS) SDD contract.
- 351 Continued engineering and management support of 1500 GPH TWPS SDD contract effort.
- 940 Completed 1500 TWPS SDD contract award increment
- 890 Completed PQT/EUT for 1500 GPH TWPS.
- Conducted market survey for the Large Capacity Field Heater (LCFH)
- 84 Initiated program documentation (MS B and SDD Contract Packages) for the LCFH.
- Completed program documentation (MS B and SDD Contract packages) for the Improved Environmental Control Unit (IECU) and conducted MS B program review.
- Developed and tested IECU prototype for verification of SDD Performance Specification. (Quantity 1)

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) June 2001 BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 5 - ENG MANUFACTURING DEV 0604804A - Logistics and Engineer Equipment L39 **Engineering Dev** FY 2001 Planned Program 1373 Develop designs for three horizontal IECU configurations. 720 Fabricate 36 (12 each 9k, 18k, & 36kBTUH) Engineering Development Models of three horizontal IECU configurations for PQT and User Evaluation. 650 Initiate PQT of IECU Engineering Development Models. Engineering and management support of IECU Program. 730 Complete MS B documentation for the LCFH and conduct MS B program review. 150 Develop design for Large Capacity Field Heater (LCFH) 100 300 Fabricate 10 Engineering Development Models of LCFH for PQT and IOT&E. Initiate PQT of LCFH Engineering Development Models. 115 Engineering and management support of for LCFH Program. 220 129 Small Business Innovation Research/Small Business Technology Transfer Program Total 4487 FY 2002 Planned Program Procure Logistics Support Documentation for Large Capacity Heater. 182 Conduct PQT of LCFH Engineering Development Models. 268 Engineering and management support for LCFH Program. 545 750 Engineering and management support for IECU Program. Complete PQT and User Evaluation of IECU Engineering Development Models. 718 Prepare documentation for and conduct MS C program review for IECU Program. 140 100 Develop design for LCFH. Fabricate 10 engineering development models of LCFH for PQT and IOT&E. 300

Total

3003

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) June 2001 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 0604804A - Logistics and Engineer Equipment **5 - ENG MANUFACTURING DEV** L39 **Engineering Dev B. Other Program Funding Summary** FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2007 To Compl **Total Cost** OPA3, MF9000, Environmental Control Units 5829 6290 5082 0 0 (ECU)

C. Acquisition Strategy: Development and transition to competitive procurement for all items under this project.

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Complete 1500 TWPS prototype fabrication.	2Q			0	0	0	0	0
Complete contractor testing on 1500 TWPS.	2Q			0	0	0	0	0
Complete PQT/EUT on 1500 TWPS	4Q			0	0	0	0	0
MS B IPR for IECU		1Q		0	0	0	0	0
Release SDD RFP for IECU		2Q		0	0	0	0	0
Award SDD contract for IECU		3Q		0	0	0	0	0
Complete Testing for IECU			4Q	0	0	0	0	0
MS C/TC for IECU				0	0	0	0	0
LCFH - MS B		3Q		0	0	0	0	0
LCFH - SDD Contract Award			1Q	0	0	0	0	0
LCFH - Complete SDD Models			3Q	0	0	0	0	0
LCFH - Complete PQT and IOT&E				0	0	0	0	0
LCFH - Conduct MS C				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3) **June 2001** PE NUMBER AND TITLE PROJECT **5 - ENG MANUFACTURING DEV** 0604804A - Logistics and Engineer Equipment L39

Engineering Dev

I. Product Development	Contract	Performing Activity &	Total	FY 2001	FY 2001	FY 2002	FY 2002	FY 2003	FY 2003	Cost To	Total	Target
1. I roduct Development	Method &	Location	PYs Cost	Cost	Award	Cost	Award	Cost	Award			Value of
	Type	Location	1 13 Cost	Cost	Date	Cost	Date	Cost	Date		Cost	Contract
a. 1500 GPH TWPS	In-house	TARDEC, Warren, MI	3048	0		0		0	0		0	0
b. 1500 GPH TWPS	C-CPFF	SFA, Inc., Frederick, MD	168	0		0		0	0	0	0	0
c . Large Capacity Field Heater SDD	C-CPFF	TBD	0	0		507	1Q	0	0	0	0	0
d . LCFH Engr	In-house	US Army CECOM, Ft. Belvoir, VA	96	359	1-4Q	415	1-4Q	0	0	0	0	0
e . Engr. IECU SDD	In-house	US Army CECOM, Ft. Belvoir, VA	266	474	1-4Q	700	1-4Q	0	0	0	0	0
f. IECU SDD	C-CPFF	TBD	0	2143	2Q	613	1Q	0	0	0	0	0
Subtotal	:		3578	2976		2235		0		0	0	0

BUDGET ACTIVITY

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - ENG MANUFACTURING DEV 0604804A - Logistics and Engineer Equipment L39 **Engineering Dev** FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To II. Support Cost Contract Performing Activity & Total Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract a . Engr & Mgt Support of MIPR NFESC. Port Huaneme. 351 0 0 0 1500 TWPS Contract CA b. 1500 TWPS SDD MIPR NFESC, Port Huaneme, 940 0 0 0 0 0 CA US Army CECOM, Ft. c . Engr & Mgt Support of **MIPR** 0 20 30 0 0 0 **IECU** Belvoir, VA 1291 20 0 0 0 Subtotal: III. Test and Evaluation Performing Activity & FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Contract Total Total **Target** Method & Value of Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Type Date Date Date Contract a. POT (1500 TWPS) MIPR TECOM (ATC), 910 0 0 0 Aberdeen, MD b . PQT (Large Capacity C-CPFF TBD 0 343 10 0 0 Field Heater) c . IOT&E (Large Capacity **MIPR** ATEC, Alexandria, VA 0 0 0 0 0 Field Heater) d. Engineering tests of C-CPFF Various 97 1115 30 105 1Q 0 0 IECU prototypes

	ARM	IY RDT&E CO	ST AN	NALYS	IS(R-3)			June	2001			
BUDGET ACTIVITY 5 - ENG MANUFAC	TURING	DEV		060	JMBER AND 4804A - I gineering	Logistics a	ınd Engin	eer Equi	uipment L39				
III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac	
e . User Evaluation of IECU	MIPR	ATEC, Alexandria, VA	0	0		50	1-4Q	0	0	0	0	(
Subtotal:			1007	1115		498		0		0	0	(
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac	
a . Large Capacity Field Heater management	In-house	US Army CECOM, Ft Belvoir, VA	43	140	1-4Q	130	1-4Q	0	0	0	0	(
b. IECU	In-house	US Army CECOM, Ft Belvoir, VA	38	236	1-4Q	140	1-4Q	0	0	0	0	(
			81	376		270		0		0	0	(
Subtotal:													
Subtotal:													

	ARMY RDT&E BUDGET IT	EM JU	STIFI	CATIO	N (R-2	A Exhi	Jı	ıne 2001			
	ACTIVITY G MANUFACTURING DEV	(e number 0604804A Engineeri	PROJECT L41							
	COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
L41	WATER AND PETROLEUM DISTRIBUTION - ED	4298	6280	7366	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force. This developmental program provides the capability to perform battlefield sustainment operations, including receiving and transferring petroleum from trucks, ships, and permanent and temporary storage facilities; moving petroleum between storage to and within corps and division areas; quality surveillance testing; and dispensing in support of tactical operations, including rapid refueling of airfields. These R&D efforts support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve its transformation vision by providing it with the means to be highly mobile and self sustaining in very hostile threaters of operations. These systems support the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- Awarded design and fabrication effort for Petroleum Quality Analysis System (PQAS).
- 2037 Awarded incrementally-funded contract for Rapidly Installed Fuel Transfer Systems (RIFTS).
- Program management and general support.

Total 4298

FY 2001 Planned Program

- 1880 Continue development and test/evaluation of PQAS EMD prototypes (qty 2).
- Establish system performance requirements and develop purchase description for Petroleum Quality Surveillance Lab (PQSL).
- Award second increment for RIFTS. Initiate test and evaluation.
- 100 Program management and general support.
- 1590 Continue 1500 Tactical Water Purification System (TWPS) EMD effort.
- 200 Conduct investigation of NBC contamination removal technology for water purification systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) June 2001 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 0604804A - Logistics and Engineer Equipment **5 - ENG MANUFACTURING DEV** L41 **Engineering Dev** FY 2001 Planned Program (Continued) Evaluate Pre-Planned Product Improvements (P3I) for water purification systems. 300 Small Business Innovative Research/Small Business Technology Transfer Programs 182 Total 6280 FY 2002 Planned Program 500 Evaluate commercial water treatment components for Pre-Planned Product Improvements (P3I) for water purification systems. Prepare test reports for systems evaluated under water purification P3I program. 225 Complete PQAS testing and conduct MS C IPR. 1100 300 Develop PQSL program management documents for Milestone decision and prepare RFP. Initiate EMD contract for RIFTs. 3409 300 Program management and support. Develop LHS Modular Fuel Farm prototype. 832 Complete 1500 TWPS EMD effort. 400 300 Prepare program documentation for 3K Water Purification Unit (WPU). Total 7366

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment 5 - ENG MANUFACTURING DEV L41 **Engineering Dev** B. Other Program Funding Summary FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 **Total Cost** FY 2000 FY 2007 To Compl RDTE, 0603804.DK41, POL Distribution Equipment 1070 2175 2859 0 0 Advanced Development OPA 3, MB6400, Quality Surveillance Equipment 7056 7694 1696 0 0 OPA 3, R05600, Water Purification Systems 9351 40354 39289 0 0

<u>C. Acquisition Strategy:</u>Development of and transition to competitive procurement for all items under this project.

EV 2000	EV 2001	EV 2002	EV 2003	EV 2004	EV 2005	EV 2006	EV 2007
11 2000	11 2001	11 2002	11 2003	11 2004	11 2003	11 2000	11 2007
	2Q		0	0	0	0	0
	1-4Q	1-4Q	0	0	0	0	0
1-4Q	1-4Q	1-4Q	0	0	0	0	0
		2Q	0	0	0	0	0
		3Q	0	0	0	0	0
	4Q		0	0	0	0	0
			0	0	0	0	0
		3-4Q	0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
	1-4Q	1-4Q	0	0	0	0	0
			0	0	0	0	0
		2Q 1-4Q 1-4Q 1-4Q 4Q	2Q 1-4Q 1-4Q 1-4Q 1-4Q 2Q 3Q 4Q 3-4Q	2Q 0 1-4Q 1-4Q 0 1-4Q 1-4Q 0 2Q 0 3Q 0 4Q 0 0 3-4Q 0 0 0 0 0	2Q 0 0 0 1-4Q 0 0 1-4Q 1-4Q 0 0 0 1 1-4Q 1-4Q 1-4Q 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2Q 0 0 0 0 0 1-4Q 1-4Q 0 0 0 0 1-4Q 1-4Q 1-4Q 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1-4Q 1-4Q 0 0 0 0 0 0 0 1 1-4Q 1-4Q 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV		PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment Engineering Dev								
D. Schedule Profile (continued)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007		
Test and Evaluate LMFF				0	0	0	0	0		
Award 3K WPU EMD Contract				0	0	0	0	0		
Develop Mil A/B IPR Package & EMD Contract for 3K WPU			1-4Q	0	0	0	0	0		
Develop specification and RFP and award contract for TFAS				0	0	0	0	0		
Develop LHS Modular Fuel Farm Prototypes (LMFF)			2-40	0	0	0	0	0		

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment

PROJECT **L41**

Engineering Dev

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PQAS	In-House	TARDEC, Warren, MI	155	390	2Q	215	2Q	0	0	0	0	0
b . PQAS	MIPR	Rock Island Arsenal, Rock Island, IL	1684	790	2Q	410	1Q	0	0	0	0	0
c. PQAS	FFP	TBD	0	187	3Q	75	1Q	0	0	0	0	0
d . PQSL	CFP	Various	0	215	1Q	0		0	0	0	0	0
e . PQSL	In-House	TARDEC, Warren, MI	0	102	1Q	50	1Q	0	0	0	0	0
f. RIFTS	In-House	TARDEC, Warren, MI	150	131	1Q	200	1Q	0	0	0	0	0
g . RIFTS	C-CPFF	Various	1887	1555	4Q	2509	2Q	0	0	0	0	0
h . 1500 TWPS	In-House	TARDEC, Warren, MI	0	335	2Q	0		0	0	0	0	0
i . 1500 TWPS hardware	C-CPFF	SFA, Inc, Frederick, MD	0	915	2Q	0		0	0	0	0	0
j . Lubricant Quality Monitor	In-House	TARDEC, Warren, MI	0	0		0		0	0	0	0	0
k . Petroleum Quality Analyzer	In-House	TARDEC, Warren, MI	0	0		0		0	0	0	0	0
1. Water Purification P31	In-House	TARDEC, Warren, MI	0	150	2Q	200	1Q	0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment 5 - ENG MANUFACTURING DEV L41 **Engineering Dev** I. Product Development Performing Activity & FY 2001 FY 2001 FY 2003 Contract Total FY 2002 FY 2002 FY 2003 Cost To Total Target (continued) Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract m. Water Purification P31 TBD Purchase 0 20 0 150 Orders n. 3K WPU TARDEC, Warren, MI 0 In-House 0 100 10 0 0 0 o. 3K WPU C-CPFF TBD 0 0 0 0 0 p . Improved Water Quality TARDEC, Warren, MI In-House 0 0 0 0 0 q. Improved Water Quality Purchase TBD 0 0 0 0 Orders r . LHM Modular Fuel Farm C-CPFF TBD 0 0 750 20 0 0 TARDEC, Warren, MI s. LMFF In-House 0 82 1Q 0 0 3876 4770 4741 0 0 Subtotal:

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment 5 - ENG MANUFACTURING DEV L41 **Engineering Dev** II. Support Cost FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 FY 2003 Cost To Contract Performing Activity & Total Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Contract Type Date Date Date 55 a. PQAS TACOM, Warren, MI In-House 0 190 20 20 0 TACOM, Warren, MI b. PQSL 0 0 In-House 50 20 0 0 c . Lubricant Quality TACOM, Warren, MI 0 0 0 In-House 0 0 Monitor TACOM, Warren, MI d . Petroleum Quality In-House 0 0 0 0 0 Analyzer TACOM, Warren, MI e . Water Purification P31 0 1Q 0 0 In-House 50 f. 3K WPU In-House TACOM, Warren, MI 0 200 1Q 0 0 0 190 355 0 0 Subtotal:

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

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

PROJECT L41

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete		Target Value of Contract
a . PQAS DT	MIPR	TECOM, Aberdeen, MD	175	323	2Q	0	Dute	0	0	0	0	0
b . PQAS	MIPR	APG, Aberdeen, MD	0	0		50	2Q	0	0	0	0	0
c . PQAS OT	MIPR	TEXCOM, Texas	0	0		195	1Q	0	0	0	0	0
d . RIFTS	MIPR	TECOM, Aberdeen, MD	0	0		700	2Q	0	0	0	0	0
e . 1500 GPH TWPS	MIPR	NFESC, Port Huaneme, CA	0	340	2Q	0		0	0	0	0	0
f. Lubricant Quality Monitor	In-House	TARDEC, Warren, MI	0	0		0		0	0	0	0	0
g . Petroleum Quality Analyzer	In-House	TARDEC, Warren, MI	0	0		0		0	0	0	0	0
h . Water Purification P31	In-House	TARDEC, Warren, MI	0	150	2Q	325	1Q	0	0	0	0	0
i. Water Purification P31	MIPR	Dugway PG, Dugway, MD	0	200	3Q	0		0	0	0	0	0
j. 1500 TWPS	In-House	TEXCOM, Texas	0	0		400	2Q	0	0	0	0	0
k . LMFF	MIPR	ATEC, Alexandria, VA	0	0		0		0	0	0	0	0
Subtotal:			175	1013		1670		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3) June 2001 BUDGET ACTIVITY PROJECT PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment 5 - ENG MANUFACTURING DEV L41 **Engineering Dev** FY 2003 Cost To IV. Management Services Contract Performing Activity & FY 2001 FY 2001 FY 2002 FY 2002 FY 2003 Total Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Contract Date Date Date Type TARDEC, Warren, MI a. PQAS In-House 0 0 100 10 0 TARDEC, Warren, MI 25 b. PQSL In-House 0 2Q 200 10 0 0 0 c . Lubricant Quality TARDEC, Warren, MI In-House 0 0 0 0 0 Monitor d . Petroleum Quality TARDEC, Warren, MI 0 0 0 0 In-House Analyzer e . Program Management TACOM, Warren, MI 247 282 1Q 1Q In-House 300 0 0 Support 307 247 600 0 0 Subtotal: Remarks: Not Applicable Project Total Cost: 4298 6280 7366

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ARMY RDT&E BUDGET IT	EM JU	STIFI	CATIO	N (R-2	A Exhi	Jı	ıne 2001			
BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	(e number . 0 604804A E <mark>ngineeri</mark>	- Logistic		luipment		PROJECT L43			
COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
L43 ENGINEER SUPPORT EQUIPMENT - ED	52	573	855	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: Project develops Engineer Support Equipment (ESE) such as small boats, diving equipment, well drilling modules, fire trucks, tool outfits, large power generator plants, electrical distribution systems, and floodlights which are used for field operations in support of the Objective Force.

FY 2000 Accomplishments

- 20 Developed performance specification for outboard motors.
- 19 Conducted market investigation for outboard motors.
- Conducted market investigation testing for outboard motors.

Total 52

FY 2001 Planned Program

- 93 Conduct market investigation, develop performance specifications and conduct preproduction award effort for diving equipment.
- Support the development of large generator sets and associated equipment.
- Conduct market investigation, develop performance specifications and conduct preproduction award effort for well drilling module.
- Small Business Innovation Research/Small Business technology transfer (SBIR/STTR) Programs

Total 573

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

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

PROJECT

L43

RING DEV 0604804A - Logistics and Engineer Equipment

Engineering Dev

FY 2002 Planned Program

- Conduct market investigation, develop performance specifications and conduct preproduction award effort for diving equipment.
- 755 Award EMD contract for well drilling module

Total 855

B. Other Program Funding Summary	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
OPA 3, MA8050, Items Less than \$5.0M (CSS-Equipment)	4328	1892	4001	0	0	0	0	0	0	0
OPA 3, MA8800, Items Less than \$5.0M (Generator Equipment)	0	0	652	0	0	0	0	0	0	0
OPA 3, M56400, Generator Set, DE, 750KW 60HZ	0	0	7732	0	0	0	0	0	0	0

<u>C. Acquisition Strategy:</u>EMD and transition to production.

D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Conduct market investigation for well drilling module		1Q		0	0	0	0	0
Award EMD contract for well drilling module			1Q	0	0	0	0	0
Conduct testing for well drilling module				0	0	0	0	0
Conduct market investigation and testing for diving equipment		1Q		0	0	0	0	0
Conduct market investigation and testing for outboard motors	4Q			0	0	0	0	0
Develop performance specifications for 100/200KW Electric Power System		2Q		0	0	0	0	0

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ARMY RDT&E COST ANALYSIS(R-3) BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment Engineering Dev PROJECT 143 L43 L Product Development Contract Performing Activity & Total EV 2001 EV 2002 EV 2002 EV 2003 EV 2003 Cost To Total Torget

I. Product Development	Contract	Performing Activity &	Total	FY 2001	FY 2001	FY 2002	FY 2002	FY 2003	FY 2003	Cost To	Total	Target
2. 110 440 0 2 0 100pm 0 1	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete		Value of Contract
a . Outboard motors product development	IN- HOUSE	TACOM, Warren, MI	52	0		0		0	0	0	0	0
b . Diving equipment product development	IN-HOUSE	TACOM, Warren, MI	0	93	1Q	100	1Q	0	0	0	0	0
c . Generator production development	IN-HOUSE	CECOM, Ft Belvoir, VA	0	336	2Q	0		0	0	0	0	0
d . Well drilling module product development	MIPR	TACOM, Warren, MI	0	144	1Q	0		0	0	0	0	0
e . Well drilling EMD contract	C-CPFF	TACOM, Warren, MI	0	0		755	1Q	0	0	0	0	0
			52	573		855		0		0	0	0
Subtotal:			32	3/3		033		U		U	U	U

	ARW	IY RDT&E CC	751 AN	ALI	(515(R-3)			June	e 2 001		
BUDGET ACTIVITY 5 - ENG MANUFAC	CTURING :	DEV		0	ENUMBER AN 604804A - Congineering		PROJECT L43					
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 20 Co		FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
Subtotal:			0		0	0		0		0	0	(
III. Test and Evaluation	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 20 Co	ost Award	FY 2002 Cost	FY 2002 Award	FY 2003 Cost	FY 2003 Award	Cost To Complete	Total Cost	Value o
III. Test and Evaluation a. Well drilling module testing		Performing Activity & Location TACOM, Warren, MI		-								Targ Value o Contra

BUDGET ACTIVITY 5 - ENG MANUFAC		Y RDT&E CO	PE NI 060	UMBER AN	D TITLE Logistics a	June 2001 PROJECT ipment L43						
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
Subtotal:			0	0		0		0		0	0	
Project Total Cost:		ı	52	573		855		Ol		0	0	