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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)									DATE February 1999	
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development						
<i>COST (In Thousands)</i>	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	21591	25820	22996	16074	15321	14517	31531	37639	Continuing	Continuing
DH01 Combat Engineer Equipment Engineering Development	7986	7525	2764	1475	2049	1032	19960	24923	Continuing	Continuing
DH02 Bridge Site Mobility	0	348	0	0	0	0	0	0	Continuing	Continuing
DH14 Logistics Support Equipment - Engineering Development	1062	93	102	99	226	247	98	98	Continuing	Continuing
DL39 General Support Equipment Engineering Development	1778	2494	2127	2028	4422	3979	4634	4063	Continuing	Continuing
DL41 Fuels Handling Equipment - Engineering Development	768	1078	5327	4904	3830	2472	1479	1478	Continuing	Continuing
DL42 Camouflage System - Engineering Development	0	776	391	382	330	346	491	1471	Continuing	Continuing
DL43 Combat Service Support Equipment Engineering Development	0	189	53	581	252	1217	546	1200	Continuing	Continuing
DL44 Distribution System, 105kW	0	0	0	0	772	0	0	0	0	772
D194 Engine Driven Generators Engineering Development	7071	8998	7949	5151	2228	2504	1535	1545	Continuing	Continuing
D279 Airdrop Equipment Engineering Development	1523	1347	0	0	0	0	0	0	0	2870
D429 Rigidwall Shelter Engineering Development	1403	902	0	0	0	0	0	0	0	2305
D461 Marine Oriented Logistics Equipment -Engineering Development	0	2070	4283	1454	1212	2720	2788	2861	Continuing	Continuing

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development																																																									
<p>A. <u>Mission Description and Budget Item Justification:</u> Included within this program element is the development of military tactical bridging, materiel handling equipment, water purification equipment, petroleum distribution equipment, mobile electric power and water craft.</p>																																																										
<p>B. <u>Program Change Summary</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;"></th> <th style="width:10%; text-align: center;"><u>FY 1998</u></th> <th style="width:10%; text-align: center;"><u>FY 1999</u></th> <th style="width:10%; text-align: center;"><u>FY 2000</u></th> <th style="width:10%; text-align: center;"><u>FY 2001</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 1999 PB)</td> <td align="right">27174</td> <td align="right">26002</td> <td align="right">23942</td> <td align="right">18534</td> </tr> <tr> <td>Appropriated Value</td> <td align="right">28039</td> <td align="right">26002</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>a. Congressional General Reductions</td> <td align="right">-865</td> <td align="right">-182</td> <td></td> <td></td> </tr> <tr> <td>b. SBIR / STTR</td> <td align="right">-671</td> <td></td> <td></td> <td></td> </tr> <tr> <td>c. Omnibus or Other Above Threshold Reductions</td> <td align="right">-239</td> <td></td> <td></td> <td></td> </tr> <tr> <td>d. Below Threshold Reprogramming</td> <td align="right">-4672</td> <td></td> <td></td> <td></td> </tr> <tr> <td>e. Rescissions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Budget Years Since <u>FY 1999 PB</u></td> <td></td> <td></td> <td align="right">-976</td> <td align="right">-2460</td> </tr> <tr> <td>Current Budget Submit (FY 2000/2001 PB)</td> <td align="right">21592</td> <td align="right">25820</td> <td align="right">22996</td> <td align="right">16074</td> </tr> </tbody> </table>					<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	Previous President's Budget (FY 1999 PB)	27174	26002	23942	18534	Appropriated Value	28039	26002			Adjustments to Appropriated Value					a. Congressional General Reductions	-865	-182			b. SBIR / STTR	-671				c. Omnibus or Other Above Threshold Reductions	-239				d. Below Threshold Reprogramming	-4672				e. Rescissions					Adjustments to Budget Years Since <u>FY 1999 PB</u>			-976	-2460	Current Budget Submit (FY 2000/2001 PB)	21592	25820	22996	16074
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<p>Change Summary Explanation: Funding - In FY 1998 funds were reprogrammed to higher priority Army programs (-4672). FY 2001 decrease due to a transfer of projects D279 and D429 to PE 0604713A (-2460).</p>																																																										

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT DH01		
COST (In Thousands)		FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DH01 Combat Engineer Equipment Engineering Development		7986	7525	2764	1475	2049	1032	19960	24923	Continuing	Continuing
<p>A. <u>Mission Description and Budget Item Justification</u>: This project supports the development of military tactical bridging for wet and dry gap bridging requirements such as the Common Bridge Transporter (CBT), Improved Ribbon Bridge (IRB) Bays, Heavy Dry Support Bridge (HDSB), and Line of Communication Bridge (LOCB). All bridging work supports the increased capabilities of the Multi-Role Bridge Company (MRBC). This project also provides for market investigations of engineer construction equipment. This project also supports EMD for the M9 Armored Combat Earthmover (ACE) successor vehicle program and the LOCB successor to the Bailey Bridge.</p> <p>FY 1998 Accomplishments:</p> <ul style="list-style-type: none"> • 5992 Fabricated HDSB EMD Launcher Prototype • Prepared for contractor testing for the HDSB <p>641</p> <ul style="list-style-type: none"> • 755 Initiated testing of HDSB Prototype • 237 Initiated IRB Market Investigation • 361 Initiated market investigations for Construction Equipment <p>Total 7986</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 1951 Prepare and Fabricate HDSB EMD System Support Package including Technical Publications & Training • 1227 Complete contractor testing of HDSB EMD Prototype • 2866 Conduct Production Qualification Test (PQT) of HDSB • 250 Prepare HDSB Production Solicitation • 300 Prepare IRB Production Solicitation • 200 Initiate IRB Flotation Modeling and Simulation • 532 Conduct market investigation for Construction Equipment • 199 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs <p>Total 7525</p>											
Project DH01				Page 3 of 31 Pages				Exhibit R-2A (PE 0604804A)			

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT DH01
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FY 2000 Planned Program:

- 750 Completion of HDSB Prototype Contracts
 - 750 Complete PQT of HDSB
 - 414 Fabricate Bridge Erection Boat (BEB) Prototypes
 - 250 Complete IRB Flotation Modeling and Simulation
 - 600 Conduct market investigation for Construction Equipment
- Total 2764

FY 2001 Planned Program:

- 440 Conduct PQT on BEB
 - 200 Prepare BEB Production Solicitation
 - 835 Conduct market investigation for Construction Equipment
- Total 1475

B. <u>Other Program Funding Summary</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
OPA3, G82400, Heavy Dry Support Bridge			13980	20319	20788	20944	61500	47457	Cont	Cont
OPA3, M26800, Bridge, Float-Ribbon, Transporter	4007	8801	7809	8900	16044	21033	35911	37240	Cont	Cont
OPA3, M26600, Bridge, Float-Ribbon, Interior Bays			2988	3528	7822	6729	8003	6978	Cont	Cont
OPA3, M26700, Bridge, Float-Ribbon, Ramp Bays			1280	2006	2235	2871	3020	3076	Cont	Cont
OPA3, M27200, Float Bridge Propulsion					1957	4456	7309	7162	Cont	Cont
OPA3, M06600, Crane Shovel Crawler			3865	3150	3201	3280	2339	686	Cont	Cont
OPA3, M03900, Loader, Scoop Type							4136		Cont	Cont

C. Acquisition Strategy: HDSB - Competitive RDTE followed by competitive procurement. IRB – Limited RDTE followed by competitive procurement. BEB – Limited RDTE followed by competitive procurement

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							DATE February 1999
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development			PROJECT DH01

D. Schedule Profile	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004	FY 2005
Fabricate HDSB Prototype Bridge	1Q*	1Q*								
Fabricate HDSB Prototype Launcher		1Q*	1Q*							
Conduct HDSB PPQT			3Q	1Q						
HDSB Production Contract Award/MS IIIA				2Q						
HDSB PVT/IOT&E Complete/MS Full Rate					3Q	2Q				
HDSB FUE						4Q				
Conduct IRB Flotation Model and Simulation			3Q	1Q						
IRB Production Contract Award/MS IIIA				2Q						
IRB PVT Complete/ MS III Full Rate					2Q					
IRB FUE						3Q				
BEB Prototype Contract Award/MSII				4Q						
BEB Production Contract Award/MS IIIA						4Q				
BEB PVT Complete/ MS III Full Rate							4Q			
BEB FUE								4Q		

*Indicates completed effort

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development						PROJECT DH01		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. HDSB EMD Contract	C-CPFF	Williams Fairey Engineering LTD, UK	9053	1050	1Q99	250	1Q00				10353	
b. HDSB EMD Contract	C-CPFF	Kockums AB, Sweden	9715	1296	1Q99	180	1Q00				11191	
c. PM/Matrix Support	MIPR	TACOM	4867	1583	2Q99	760	2Q00	640	2Q01	Cont	7850	
d. BEB EMD Contract	C-CPFF	TBS				300	1Q00				300	
e. TARDEC Support to Construction Equipment	MIPR	TACOM	520	482	2Q99	600	2Q00	835	2Q01	Cont	2437	
Subtotal Product Development:			24155	4411		2090		1475			32131	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Focus Sustainment	C-CPFF	TBS		125	2Q99						125	
b. Management Information System Development	C-CPFF	SAIC, Sterling Heights, MI	349	75	1Q99	74	1Q00				498	
Subtotal Support Costs:			349	200		74					623	
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Misc. Test & Prep	MIPR	APG, Aberdeen, MD	629								629	
b. PPQT, HDSB	MIPR	APG, Aberdeen, MD		2260	1Q99	300	1Q00				2560	
c. Load Simulator	MIRR	TECOM, Aberdeen, MD		654	2Q99	300	2Q00				954	
d. Extended Towbar Test	MIPR	YPG, Yuma, AZ	60								60	
e. Modeling	MIPR	WES, Vicksburg, MS	408								408	
Subtotal Test and Evaluation:			1097	2914		600					4611	
Project Total Cost:			25601	7525		2764		1475			37365	

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development				PROJECT DH14		
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DH14 Logistics Support Equipment - Engineering Development	1062	93	102	99	226	247	98	98	Continuing	Continuing

A. Mission Description and Justification: This project supports development of Material Handling Equipment (MHE) that support Combat Service Support units with MHE for world wide rapid movement of supplies including container handling equipment, forklifts, and other cargo handling related items.

FY 1998 Accomplishments:

- 179 Conducted Market investigations for Rough Terrain Container Crane (RTCC) and for Expandable Lightweight Spreader Bar (ELSB).
- 410 Provided engineering support for development of performance specifications and program documentation for Rough Terrain Container Handler (RTCH).
- 100 Provided funding to Aberdeen Test Center for development of Rough Terrain Container Handler detailed test plan and preparation for RTCH prototype test.
- 373 Conducted Source Selection Board for RTCH.

Total 1062

FY 1999 Planned Program:

- 30 Develop performance specifications for Rough Terrain Container Crane FY00 buy.
- 20 Conduct pre-award contract efforts for FY00 buy Rough Terrain Container Crane and Spreader Bars.
- 20 Continue engineering support, testing and MSIII support for the Rough Terrain Container Handler (RTCH).
- 21 Conduct market investigations for General Material Handling Equipment.
- 2 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs

Total 93

FY 2000 Planned Program:

- 40 Development of performance specifications for Electric Forklift.
- 22 Conduct market investigations for Container Handling Equipment (CHE).
- 40 Prepared updated ATLAS purchase description for FY01 buy.

Total 102

Project DH14 Page 7 of 31 Pages Exhibit R-2A (PE 0604804A)

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT DH14
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FY 2001 Planned Program:

- 30 Perform engineering integration of new technologies which will increase the performance capabilities of existing MHE to meet unique military requirements
 - 30 Preparation of program documentation for NDI MHE procurement.
 - 39 Updating performance specifications for use in upcoming NDI MHE procurements.
- Total 99

B. Other Program Funding Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
RDTE, 0603804.DG14, Logistics Support Equipment, Advanced Development	92	98	105	103	106	103	98	98	Cont	Cont
OPA3, M41200, Forklift, DE, PT, RT, 50K lbs.		20532	0	34008	43494	55705	16183	15975	Cont	Cont
OPA3, M41800, All Terrain Lifting Army System	3265	15188	23569	27858	20997	31466	31887	30338	Cont	Cont
OPA3, X00900, Rough Terrain Container Crane		8592	10930	8383	0	0			Cont	Cont
OPA3, ML5365, Items Less Than \$5.0M (MHE)	1644	1667	1763	1740	1863	1857	1949	1963	Cont	Cont

C. Acquisition Strategy: RDT&E Log Support Engineering Equipment – Competitive formal source selection for prototype equipment. Rough Terrain Container Handler (RTCH) – Competitive procurement using NDI integration of commercial components. Rough Terrain Container Crane (RTCC) – Sole source procurement to original manufacturer. Items less than \$5M – Competitive procurement for various MHE.

D. Schedule Profile	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Market Investigation	1Q-3Q*	1Q-3Q						
Performance Specifications	2Q-4Q*	2Q-4Q						
Testing of development systems		3Q-4Q	1Q			3Q	3Q	
Pre-award contract efforts		2Q						

*Milestone completed

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT DL39	
<i>COST (In Thousands)</i>	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL39 General Support Equipment Engineering Development	1778	2494	2127	2028	4422	3979	4634	4063	Continuing	Continuing

A. Mission Description and Justification: Develop and transition to procurement water purification equipment, maintenance equipment and environmental control units (ECU) that do not use ozone depleting refrigerants.

FY 1998 Accomplishments:

- 150 Conducted evaluation of alternative reverse osmosis membrane configurations.
 - 555 Released 1500 Gallons Per Hour (GPH) Tactical Water Purification System (TWPS) Engineering Manufacturing and Development (EMD) Request for Proposal (RFP), managed solicitation amendments and contractor protest.
 - 715 Initiated 1500 GPH TWPS Source Selection Evaluation Board (SSEB).
 - 179 Fabricated large diesel prototype heater (250K BTU/H).
 - 100 Developed Large Heater prototypes.
 - 79 Completed testing of R-134a refrigerant for 18K BTU/H Environmental Control Unit (ECU).
- Total 1778

FY 1999 Planned Program:

- 252 Engineering and management support of 1500 GPH TWPS EMD contract effort.
 - 100 Initiate 1500 GPH TWPS production contract solicitation and MS III IPR package.
 - 200 Complete 1500 GPH TWPS SSEB.
 - 1292 Award EMD contract for design and fabrication 1500 GPH TWPS EMD prototypes.
 - 55 Prepare and initiate Production Qualification Testing (PQT)/Engineering User Testing (EUT) for 1500 GPH TWPS.
 - 200 Develop purchase description for 18K BTU/H ECU.
 - 220 Develop purchase description for large diesel heaters (250K + BTU/H).
 - 112 Complete testing of large heater prototypes.
 - 63 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs
- Total 2494

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT DL39
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- FY 2000 Planned Program:**
- 300 Engineering and management support of the 1500 GPH PQT/EUT.
 - 100 Contractor support of PQT and completion of 1500 GPH TWPS EMD contract.
 - 200 Engineering and management support of 1500 GPH TWPS EMD contract effort.
 - 879 Complete PQT/EUT for 1500 GPH TWPS.
 - 100 Complete 1500 GPH TWPS production contract solicitation and MS III IPR.
 - 200 Develop Purchase Description for 18,000 BTUH ECU
 - 348 Complete testing of 18K ECU prototypes
- Total 2127
- FY 2001 Planned Program:**
- 865 Award contract for system integration of Pre-Planned Product Improvement (P³I) water purification components into 3000 GPH ROWPU and 1500 TWPS.
 - 600 Engineering support for evaluation of system integration of P³I water purification components into 3000 GPH ROWPU and 1500 GPH TWPS.
 - 200 Complete testing of 9,000 BTU/H ECUs.
 - 150 Develop Purchase Description for 9K BTU/H ECUs.
 - 213 Test CO2 automotive ECU.
- Total 2028

B. <u>Other Program Funding Summary</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
RDTE, 0603804.DK39, General Support Equipment Advanced Development	1782	3255	1922	2040	2344	2347	3006	3004	Cont	Cont
OPA 3, ML5335, Items Less Than \$2.0M (Water Equipment)	2628	1255	1773	1631	880	643	4920	7161	Cont	Cont
OPA 3, R05100, Water Purification Systems			10607	36133	35713	40550	12696	6695	Cont	Cont
OPA3, MF9301/M19600, ARMY SPACE HEATER 120K BTU/H (ASH)	855	1051	912	935	932	5867	3898	5886	Cont	Cont
OPA3, MF9302, LARGE CAPACITY FIELD HEATER 400K BTU/H			1312	1657		2000			Cont	Cont
OPA3, MF9303/MF9300, AIR CONDITIONERS			3756	3801	1350	6893	10523	22681	Cont	Cont

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT DL39

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

D. Schedule Profile	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY2005</u>
Completed purchase description and EMD contract solicitation package for the 1500 TWPS.	3Q*								
Released EMD RFP for the 1500 TWPS.		1Q*							
Award EMD contract for 1500 TWPS.			2Q						
Conduct CDR for the 1500 TWPS			3Q						
Complete 1500 TWPS prototype fabrication.			4Q						
Complete contractor testing on 1500 TWPS.			4Q						
Complete PQT/EUT on 1500 TWPS				2Q					
Conduct MS III on 1500 TWPS				3Q					
Initiate 1500 TWPS P ³ I effort in support of Force XXI and AAN Purification Systems					1Q-4Q				
Initiate Force XXI and AAN Quality Systems						1Q-4Q	1Q-4Q		
Future Water Recovery Systems						1Q	1Q		
Force XXI and AAN Storage & Distribution Systems								1Q	1Q
Completed engineering tests of R-134a ECU			2Q						
Completed engineering tests for Large Heater				3Q					
Completed Performance Description for Large Heater				4Q					
Completed Engineering tests of 18,000 BTU/H ECU					3Q				
Completed Performance Description for 18,000 BTU/H ECU					4Q				
Completed engineering tests of 9,000 BTU/H ECU						2Q			
Completed Performance Description of 9K ECU						4Q			

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BUDGET ACTIVITY
5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE
**0604804A Logistics & Engineer Equipment -
Engineering Development**

Completed Engineering tests of automotive CO2 ECU						3Q			
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* Milestone Completed.

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development						PROJECT DL39		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. 1500 GPH TWPS	MIPR	TARDEC/CECOM	2721	554	1Q					Cont	3275	
b. 1500 GPH TWPS	C-CPFF	Contractor TBD		1313	2Q	500	1Q			Cont	1813	
c. 1500 GPH TWPS P ³ I	C-CPFF	Contractor TBD										
d. Complete Large Heater Purchase Description (PD)	In-house	US ARMY CECOM, Ft. Belvoir, VA		180				865	2Q		1045	
e. Complete 18K BTU/H ECU PD	In-house	US ARMY CECOM, Ft. Belvoir, VA				170					170	
f. Complete 9K BTU/H ECU PD	In-house	US ARMY CECOM, Ft. Belvoir, VA						120			120	
Subtotal Product Development:			2721	2047		670		985			6423	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. 1500 GPH TWPS	MIPR	TARDEC	2134			192		600		Cont	2926	
b. Large Heater PD	Time & Material	US ARMY CECOM, Ft. Belvoir, VA		20							20	20
c. 18K BTU/H ECU PD	Time & Material	US ARMY CECOM, Ft. Belvoir, VA				20					20	20
d. 9K BTU/H ECU PD	Time and Material	US ARMY CECOM, Ft. Belvoir, VA						20	2Q		20	20
Subtotal Support Costs:			2134	20		212		620			2986	
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PQT (1500 TWPS)	MIPR	TECOM	20	55		687				Cont	762	
b. User Test (1500 TWPS)	MIPR	TEXCOM				200				Cont	200	
c. Engineering tests of heater	In-house	US ARMY CECOM, Ft. Belvoir, VA		225							225	

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT DL39		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
d. ECU component tests	In-house	US ARMY CECOM, Ft. Belvoir, VA		107							107	
e. Engineering tests of 18K ECU prototypes	In-house	US ARMY CECOM, Ft. Belvoir, VA				300					300	
f. Engineering tests of 9K ECU prototypes	In-house	US ARMY CECOM, Ft. Belvoir, VA						190			190	
g. Engineering tests of CO2 ECU	In-house	US ARMY CECOM, Ft. Belvoir, VA						203			203	
Subtotal Test and Evaluation:			20	387		1187		393			1987	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PD/testing management	In-house	US ARMY CECOM, Ft. Belvoir, VA		40							40	
b. PD/testing management	In-house	US ARMY CECOM, Ft. Belvoir, VA				58					58	
c. PD/testing management	In-house	US ARMY CECOM, Ft. Belvoir, VA						30			30	
Subtotal Management Services:				40		58		30			128	
Project Total Cost:			4875	2494		2127		2028			11524	

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development				PROJECT DL41			
COST (In Thousands)		FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL41 Fuels Handling Equipment - Engineering Development		768	1078	5327	4904	3830	2472	1479	1478	Continuing	Continuing
<p>A. Mission Description and 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.</p> <p>FY 1998 Accomplishments:</p> <ul style="list-style-type: none"> • 228 Developed Petroleum Quality Analysis System (PQAS) Specification. • 32 Procured Government Furnished Equipment (GFE) for PQAS Engineering Manufacturing and Development (EMD) phase. • 150 Prepared solicitation package for PQAS EMD phase. • 138 Evaluated filter-coalescer elements performance with JP8. • 84 Awarded task order for a performance specification for the Remote Refueling & Rearming Deployable Distribution System (R3D2S) 400HZ EMD pump. • 136 Awarded contract for prototypes of the Palletized Load System (PLS) modular fuel farm. <p>Total 768</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 942 Award and administer development and test/evaluation of two PQAS prototypes. • 109 Demonstrate modular fuel farm concept. • 27 Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR). <p>Total 1078</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 1384 Continue development and test/evaluation of PQAS prototypes. • 2100 Award and administer Petroleum Quality Surveillance PQSL EMD contract to develop EMD prototypes. • 1331 Award incrementally-funded contract for automated/digitized Petroleum and Water System (PAWS) prototypes. • 512 Initiate investigation into improved collapsible drums and coated fabric tanks. 											
Project DL41				Page 14 of 31 Pages				Exhibit R-2A (PE 0604804A)			

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development				PROJECT DL41		
Total 5327										
FY 2001 Planned Program:										
<ul style="list-style-type: none"> • 2833 Continue development and test/evaluation of Petroleum Quality Surveillance System (PQSL) EMD prototypes. • 825 Fabricate, test, and evaluate improved collapsible drums and coated fabric tanks. • 1246 Integrate state-of-the-art components into PAWs for the digitized division and corps. 										
Total 4904										
B. Other Program Funding Summary										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Compl	Total Cost
RDTE, 0603804.DK41, POL Distribution Equipment Advanced Development	813	824	869	858	904	904	983	981	Cont	Cont
OPA 3, ML5330, Items Less Than \$2.0M (POL)	6865	4613	3083	4053	4898	8568	4980	4136	Cont	Cont
C. Acquisition Strategy: Development of and transition to competitive procurement for all items under this project.										
D. Schedule Profile										
	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
Awarded ITFDS contract for small lightweight pumps.	1Q*									
Designed and Fabricated ITFDS component prototypes and initiated testing.	2Q*									
Procured long lead-time items for PQAS EMD prototypes.	2Q*									
Develop PQAS specification.		2Q*								
Prepared contract package for PQAS.		3Q*								
Administer source selection process for PQAS.			1Q-3Q							
Award and test PQAS prototypes.			3Q-4Q							
Demonstrate concept for modular fuel farm.			3Q							
Award and administer contract for the prototype automated/digitized PAWS.				2Q						
Award PQSL contract.				3Q						
Project DL41										
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Exhibit R-2A (PE 0604804A)										

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							DATE February 1999			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development				PROJECT DL41		
D. Schedule Profile	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	
Fabricate, test, and evaluate improved collapsible drums and coated fabric tanks.					1Q-4Q					
Integrate digitized PAWS into division and corps.					2Q-4Q					
Develop POL Quality Analyzer.						1Q				
Award POL Quality Analyzer.						3Q				
Test POL Quality Analyzer.							1Q			
Develop Force XXI and AAN Tactical Petroleum Distribution System.								1Q-4Q		
Award and test Tactical Petroleum Distribution System.									1Q-4Q	
* Milestone Completed.										

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ARMY RDT&E COST ANALYSIS (R-3)

DATE **February 1999**

BUDGET ACTIVITY
5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE
**0604804A Logistics & Engineer Equipment -
Engineering Development**

PROJECT
DL41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PQAS	In-House	TARDEC	1569	302	Jan 99	390			Jan 01	Cont	2261	
b. PQAS	C-CPFF	Contractor TBD	2178	620	Jun 99	784	May 00		May 01	Cont	3582	
c. PQSL	In-House	TARDEC						330			330	
d. PQSL	C-CPFF	Contractor TBD				1780	May 00	1733	May 01		3513	
e. PLS Modular Fuel Farm	In-House	TARDEC		54		200			Jan 01		254	
f. PLS Modular Fuel Farm	In-House	TARDEC				1031	April 00	600	Jan 01		1631	
g. Collapsible Containers	C-CPFF	Contractor TBD						425			425	
h. COTS Components	In-House	TARDEC						800			800	
Subtotal Product Development:			3747	976		4185		3888			12796	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PQAS	In-House	TARDEC	270	20		60				Cont	350	
b. PQSL	In-House	TARDEC				320		200			520	
c. Collapsible Containers	MIPR	ARL/Navy/Misc	358			512	Mar 00	400	Mar 01	Cont	1270	
d. PLS Modular Fuel Farm	In House	TARDEC				100		146			246	
Subtotal Support Costs:			628	20		992		746			2386	

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PQAS	MIPR	TECOM	187		May 99	150	May 00			Cont	337	
b. PQSL	MIPR	TECOM						170	May 00		170	
c. PLS Modular Fuel Farm	MIPR	TECOM		82				100	April 00		182	
Subtotal Test and Evaluation:			187	82		150		270			689	

Project Total Cost:			4562	1078		5327		4904			15871	
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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT DL42	
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL42 Camouflage System - Engineering Development	0	776	391	382	330	346	491	1471	Continuing	Continuing
<p>A. <u>Mission Description and Justification:</u> Project DL42 provides for development and transition to procurement low cost, low observable systems for suppression of visual, near-infrared, thermal, radar, and acoustic signatures of highly mobile and semi-mobile weapon assets.</p> <p>FY 1998 Accomplishments: Project not funded in FY 1998.</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 190 Prepare draft Engineering Change Proposal (ECP) for desert Ultra-Lightweight Camouflage Net System (ULCANS). • 190 Finalize Production Qualification Test/Operational Test (PQT/OT) plan • 376 Perform desert PQT/OT testing • 20 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs <p>Total 776</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 191 Complete desert ULCANS PQT/OT testing • 100 Finalize test report • 100 Prepare final desert ECP. <p>Total 391</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 282 Prepare draft ECP for snow ULCANS • 100 Prepare snow ULCANS PQT/OT test plan <p>Total 382</p>										
B. <u>Other Program Funding Summary</u>										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	<u>Total Cost</u>
RDTE, 0602712.AH35, Camouflage Technology	749	2028	2109	2422	2479	2540	2704	2836	Cont	Cont
<p>Project DL42 Page 18 of 31 Pages Exhibit R-2A (PE 0604804A)</p>										

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT DL42
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C. **Acquisition Strategy:** Develop camouflage systems for the Services and transition items to competitive procurement.

D. Schedule Profile	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004	FY 2005
Complete desert ULCANS P3I MDR PQT/OT Test, and test report				4Q						
Prepare draft snow ECP for ULCANS and snow PQT/OT test plan					4Q					

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT DL43	
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL43 Combat Service Support Equipment Engineering Development	0	189	53	581	252	1217	546	1200	Continuing	Continuing
<p>A. <u>Mission Description and Justification:</u> Project develops Combat Service Support Equipment (CSSE) such as small boats, diving equipment, well drilling machines, firetrucks, tool outfits, electrical distribution systems, and floodlights which are used for field operations.</p> <p>FY 1998 Accomplishments: Project not funded in FY 1998</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 50 Develop performance specifications for multiple Combat Service Support Equipment (CSSE) (diving , well drilling and survey equipment). • 80 Conduct market investigation for multiple CSSE items (diving , well drilling and survey equipment). • 54 Conduct market investigation testing for multiple CSSE items (diving , well drilling and survey equipment) • 5 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs <p>Total 189</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 20 Develop performance specifications for multiple Combat Service Support Equipment (CSSE) (outboard motors). • 20 Conduct market investigation for multiple CSSE items (outboard motors). • 13 Conduct market investigation testing for multiple CSSE items (outboard motors). <p>Total 53</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 170 Develop performance specifications for multiple Combat Service Support Equipment (CSSE) (500KW electric power system, power distribution and controls system, diving equipment, etc.). • 150 Conduct market investigation of commercial components for multiple CSSE items. (500KW electric power system, power distribution and controls system, diving equipment, etc.). • 261 Conduct evaluation of commercial components for multiple CSSE items. (500KW electric power system, power distribution and controls system, diving equipment, etc.). 										
Project DL43			Page 20 of 31 Pages				Exhibit R-2A (PE 0604804A)			

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development				PROJECT DL43			
Total		581									
B. Other Program Funding Summary		<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Compl	Total Cost
OPA 1, D15802, Truck, Firefighting, Multipurpose		0	1708	2473	2574	2758	2885	6232	6462	Cont	Cont
OPA 3, M72100, Floodlight Set, Electric, Trailer Mounted		0	1938	2370	2363	4136	4279	9272	10239	Cont	Cont
OPA 3, ML5325/MA8050, Items Less than \$5.0M (CSS Equipment)		4242	8798	2553	2261	9401	10286	21814	33836	Cont	Cont
C. Acquisition Strategy: EMD and transition to production.											
D. Schedule Profile		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>		
Conduct market investigation testing for diving, well drilling and survey equipment		4Q									
Conduct market investigation testing for outboard motors			4Q								
Develop performance specifications for 500KW Electric Power System				2Q							
Develop performance specifications for Power Distribution Control System				2Q							
Conduct market investigation testing for Power Distribution Control System				4Q							
Conduct market investigation testing for 500KW Electric Power System				4Q							

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT D194	
COST <i>(In Thousands)</i>	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D194 Engine Driven Generators Engineering Development	7071	8998	7949	5151	2228	2504	1535	1545	Continuing	Continuing

A. Mission Description and Budget Item Justification: Develop and transition to procurement 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 with reduced thermal signatures.

FY 1998 Accomplishments:

- 2400 Continued hardware development for 3 kW Tactical Quiet Generator (TQG).
 - 1668 Initiated test and evaluation for the 3kW TQG.
 - 759 Developed initial logistics data for the 3kW TQG.
 - 1869 Initiated hardware development for Deployable Power Generator Distribution System (DPGDS).
 - 375 Initiated 100 & 200kW Utility Set Program.
- Total 7071

FY 1999 Planned Program:

- 1217 Complete development, testing and transition 3kW generator set to procurement (Qty – 8).
 - 2810 Complete hardware and initiate test/evaluation of DPGDS (Qty – 2).
 - 4085 Initiate hardware development for 100 & 200kW TQG sets (Qty – 4).
 - 658 Initiate evaluation of 5-60kW Advanced Medium Sized Mobile Power Sources (AMMPS) generator designs.
 - 228 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs
- Total 8998

FY 2000 Planned Program:

- 780 Complete DPGDS test and evaluation.
 - 2645 Continue hardware development and testing for 100 & 200kW TQG.
 - 4524 Design and fabricate 5-60kW AMMPS.
- Total 7949

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT D194
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FY 2001 Planned Program:

- 3029 Complete hardware testing for 100 & 200kW TQG (Qty – 12).
 - 2122 Complete fabrication and initiate evaluation and test of 5-60kW AMMPS (Qty – 25).
- Total 5151

B. Other Program Funding Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Compl	Total Cost
RDT&E:PE0603804A/Advanced Electrical Energy Concepts Advanced Development (DG11)	202	1366	995	730	610	1048	649	650	Cont	Cont
Other Procurement, Army 3 Generators & Assoc Equip (MA9800)	9644	68863	79125	90854	52048	79950	58464	54801	Cont	Cont

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

D. Schedule Profile	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Initiate hardware development for DPGDS			1Q*							
Award final phase of development for 3kW TQG with option for procurement contract			2Q*							
Complete procurement package and issue RFP for 100/200kW				2Q						
Design prototype fabrication & testing of DPGDS				1Q*						
Award competitive contract(s) for design, prototype fabrication & testing of 100/200kW TQG/Phase I)				3Q						
Award Phase II EMD for DPGDS				2Q						
Complete testing & transition 3kW generator set to Procurement (Milestone III)				4Q						
Transition 3kW TQG to procurement					1Q					
Complete testing of DPGDS					2Q					
Award contract for AMMPS					2Q					
Milestone III of DPGDS					3Q					

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT D194		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999 Cost</u>	<u>FY 1999 Award Date</u>	<u>FY 2000 Cost</u>	<u>FY 2000 Award Date</u>	<u>FY 2001 Cost</u>	<u>FY 2001 Award Date</u>	Cost To Complete	Total Cost	Target Value of Contract
a. DPGDS EMD	C-CPFF (2 nd increment)	Radian – Baltimore, MD	1800	2729	Mar99						4529	
b. 100/200kW	C-CPFF	TBD		3560	Apr99	2025	May00			1000	6585	
c. AMMPS(5-60kW)	Small Purchase	TBD		200	Mar99						200	
d. AMMPS(5-60kW)	C-CPFF	TBD				4174	Jan00	1200	Jan01	6040	11414	
Subtotal Product Development:			1800	6489		6199		1200		7040	22728	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999 Cost</u>	<u>FY 1999 Award Date</u>	<u>FY 2000 Cost</u>	<u>FY 2000 Award Date</u>	<u>FY 2001 Cost</u>	<u>FY 2001 Award Date</u>	Cost To Complete	Total Cost	Target Value of Contract
a. 3kW		CECOM-In-house		375	Oct98						375	
b. AMMPS(5-60kW)		CECOM-In-house		408	Oct98	250	Oct99	200	Oct00	2100	2958	
c. 100/200kW		CECOM-In-house		375	Oct98	200	Oct99	150	Oct00	200	925	
d. DPGDS		CECOM-In-house		60	Oct98	100	Oct99				160	
Subtotal Support Costs:				1218		550		350		2300	4418	
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999 Cost</u>	<u>FY 1999 Award Date</u>	<u>FY 2000 Cost</u>	<u>FY 2000 Award Date</u>	<u>FY 2001 Cost</u>	<u>FY 2001 Award Date</u>	Cost To Complete	Total Cost	Target Value of Contract
a. DPGDS		Eglin AFB, FL		199	Nov98	630	Nov99				829	
b. 100/200kW		TBD				270	Nov99	2729	Mar01	1300	4299	
c. 3kW		APG, MD	1500	742	Feb99						2242	
d. AMMPS(5-60kW)		TBD						522	Mar01	3000	3522	
Subtotal Test and Evaluation:			1500	941		900		3251		4300	10892	

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ARMY RDT&E COST ANALYSIS (R-3)

DATE **February 1999**

BUDGET ACTIVITY
5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE
**0604804A Logistics & Engineer Equipment -
Engineering Development**

PROJECT
D194

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. DPGDS		CECOM-In-house	300	50	Oct98	50	Oct99				400	
b. 100/200kW		CECOM-In-house	100	150	Oct98	150	Oct99	150	Oct00		550	
c. 3kW		CECOM-In-house	200	100	Oct98						300	
d. AMMPS(5-60kW)		CECOM-In-house	200	50	Oct98	100	Oct99	200	Oct00	600	1150	
Subtotal Management Services:			800	350		300		350		600	2400	
Project Total Cost:			4100	8998		7949		5151		14240	40438	

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT D461	
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D461 Marine Oriented Logistics Equipment -Engineering Development	0	2070	4283	1454	1212	2720	2788	2861	Continuing	Continuing
<p>A. Mission Description and Justification: This project provides for the engineering development of Army Watercraft systems. Efforts will center on the completion of Containerized Maintenance Facility (CMF) development (this item replaces current Floating Machine Shops). Components for the CMF have been identified as a result of prior initiatives. However, Container/Shelter Configuration and Packaging Configurations still require additional development. Strategy is to complete remaining developmental activity, immediately commence acquisition, assembly and packaging in the same fiscal year. This will allow early fielding and consequent retirement of the costly Floating machine Shop. The FY 99 program also provides for minor development work on the Logistics Support Vessel (LSV) prior to the FY 00 procurement. The project supports engineering development for the Joint Lighterage and Causeway (JLC) effort with the Navy, 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. Efforts complete the RIB development and center on the Port Communications and Control Center (PCCC). The PCCC program will provide for the safe and effective management of Army and Joint Port Operations during deployment of forces; both under Logistics Over The Shore (LOTS) conditions and operations in existing port facilities.</p> <p>FY 1998 Accomplishments: Project not funded in FY 1998</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 1717 Complete full scale development of the Containerized Maintenance Facility (CMF). • 300 Complete development of Logistics Support Vessel (LSV). • 53 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs <p>Total 2070</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 1781 Complete development of Joint Lighterage and Causeway Program (Sea State 3 Capable) with Navy. • 2502 Complete final development and testing for Rapidly Installed Breakwater (RIB) Project. <p>Total 4283</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 615 Complete programmatic documentation for production effort for RIB Project. • 839 Complete final development and testing for Port Communications and Control Center (PCCC). 										
Project D461			Page 27 of 31 Pages				Exhibit R-2A (PE 0604804A)			

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		DATE February 1999
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development	PROJECT D461

Total 1454

B. Other Program Funding Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>
RDTE, 0603804A, D526, Marine Oriented Logistics, Advanced Development	0	10910	2424	2316	2020	1806	3863	3954	Cont	Cont
OPA 3, M32400, Floating Crane, 100-250 Ton	13555	14959	0	0	0	0	0	0	Cont	Cont
OPA 3, M44500, Pusher Tug, Small	6506	8545	0	0	0	0	0	0	Cont	Cont
OPA 3, R09600, Causeway, Powered System	0	0	8070	0	8818	9425	5412	5459	Cont	Cont
OPA 3, R09800, RO/RO Discharge Platform	0	17037	8670	123861	0	0	12303	12386	Cont	Cont
OPA 3, R09900, Causeway, Floating	0	0	0	4895	0	0	0	0	Cont	Cont
OPA 3, M11200, Logistic Support Vessel (LSV)	0	0	18924	0	18426	18044	0	0	Cont	Cont
OPA 3, M11201, Logistic Support Vessel (ESP)	0	0	0	6097	7283	13091	0	0	Cont	Cont
OPA 3, M32500, Rapidly Installed Breakwater	0	0	0	0	4687	4662	0	0	Cont	Cont
OPA 3, M11300, Containerized Maintenance Facility	0	5286	0	0	0	0	0	0	Cont	Cont
OPA 3, M34200, Landing Craft Utility 2000							19488	19622	Cont	Cont

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

D. Schedule Profile	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Containerized Maintenance Facility Award			2Q							
Logistics Support Vessel (LSV) Award			2Q							
Joint Lighterage and Causeway Program Award				2Q						
Rapidly Installed Breakwater (RIB) Awards				2Q	2Q					
Port Communications & Control Center (PCCC) Contract Award					2Q					

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT D461		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. CMF	MIPR	Industrial Operations Command, Rock Island Arsenal		1200	Feb					Cont	1200	
b. PCCC	MIPR	Industrial Operations Command, Rock Island Arsenal						284	Dec		284	
c. CMF	MIPR	TACOM ARDEC, Rock Island Arsenal		315	Feb					Cont	315	
d. PCCC	FC-FP	Conley & Associates, St. Louis, MO						401	Feb	Cont	401	
e. CMF	FC-FP	Modern Technologies Inc, Warren, MI		200	Mar					Cont	200	
f. RIB	FC-FP	Modern Technologies Inc, Warren, MI				477	Jan	311	Feb		788	
g. LSV	MIPR	Navy (NSWC), Suffolk, VA		205	Feb					Cont	205	
h. JLC	MIPR	Navy (PM JMLS), Hueneme, CA				1542	Dec			Cont	1542	
i. RIB	MIPR	Corps of Engineers (WES), Vicksburg, MI				1754	Dec	213	Dec	Cont	1967	
Subtotal Product Development:				1920		3773		1209			6902	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. CMF	MIPR	TACOM IMMC, Warren, MI		5	Jan					Cont	5	

DATE
February 1999

BUDGET ACTIVITY
5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE
**0604804A Logistics & Engineer Equipment -
Engineering Development**

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
b. LSV	MIPR	TACOM IMMC, Warren, MI		10	Jan						10	
c. JLC	MIPR	TACOM IMMC, Warren, MI				23	Dec				23	
d. RIB	MIPR	TACOM IMMC, Warren, MI				25	Dec	7	Dec		32	
e. PCCC	MIPR	TACOM IMMC, Warren, MI						23	Dec		23	
Subtotal Support Costs:				15		48		30			93	

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. CMF	MIPR	TECOM , APG		10	Apr					Cont	10	
b. LSV	MIPR	TECOM , APG		10	Apr						10	
c. JLC	MIPR	TECOM , APG				40	Apr				40	
d. RIB	MIPR	TECOM , APG				60	Apr	29	Apr		89	
e. PCCC	MIPR	TECOM , APG						42	Apr		42	
Subtotal Test and Evaluation:				20		100		71			191	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. CMF	MIPR	Transportation Systems Management Office, TACOM, Warren, MI		40	Jan					Cont	40	

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604804A Logistics & Engineer Equipment - Engineering Development					PROJECT D461		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
b. LSV	MIPR	Transportation Systems Management Office, TACOM, Warren, MI		75	Jan						75	
c. JLC	MIPR	Transportation Systems Management Office, TACOM, Warren, MI				176	Oct				176	
d. RIB	MIPR	Transportation Systems Management Office, TACOM, Warren, MI				186	Oct	52	Oct		238	
e. PCCC	MIPR	Transportation Systems Management Office, TACOM, Warren, MI						92	Oct		92	
Subtotal Management Services:				115		362		144			621	
Project Total Cost:				2070		4283		1454			7807	

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