

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV		PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development								
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
Total Program Element (PE) Cost	24136	93717	89153	0	0	0	0	0	0	0
016 MINE SYSTEMS ED	14834	0	4521	0	0	0	0	0	0	0
415 MINE NEUTRAL/DETECTION	9302	32941	37095	0	0	0	0	0	0	0
434 ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)	0	37194	21152	0	0	0	0	0	0	0
443 APL-A (MIXED SYSTEMS)	0	23582	26385	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

PLEASE NOTE: 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.

This program element provides for System Development and Demonstration of mine and countermine systems. Project D016, Mine Systems Engineering Development, provides for the increased tactical effectiveness and responsiveness of landmines by supporting the development of Intelligent Combat Outpost (Raptor), and upgrades for the Volcano Dispenser. D434 provides for Non-Self-Destructing Anti-Personnel Landmine Alternatives (NSD-A), and D443 for Mixed Mine System Alternatives. Project D415, Mine Neutralization/Detection Engineering Development, is the engineering and manufacturing development for the Airborne Standoff Minefield Detection System (ASTAMIDS), Ground Standoff Mine Detection System (GSTAMIDS), Handheld Standoff Mine Detection System (HSTAMIDS), Explosive Standoff Minefield Breacher(ESMB), and Obstacle Marking System (OMS). These systems support the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

*FY01 includes \$6.4 reprogrammed for higher Army priorities.

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

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering Development

<u>B. Program Change Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2001 PB)	29893	69584	60600	0
Appropriated Value	30120	94584	0	
Adjustments to Appropriated Value	0	0	0	
a. Congressional General Reductions	0	0	0	
b. SBIR / STTR	-805	0	0	
c. Omnibus or Other Above Threshold Reductions	-123	0	0	
d. Below Threshold Reprogramming	-5150	0	0	
e. Rescissions	-104	-867	0	
Adjustments to Budget Years Since FY2001 PB	0	0	28553	
Current Budget Submit (FY 2002/2003 PB)	23938	93717	89153	0

Funding - In FY2000 \$2.250M reprogrammed from PE64808/D415 to PE63619/D606 to initiate PDRR for GSTAMIDS block 1. Remainder re-aligned to other higher priority requirements. In FY01 Congress provided an additional \$25M for NSD-A under project D434. In FY2002 for D016 increases include \$2.3M for Volcano upgrades; \$14.6M for NSD-A (D434); and \$11.6M for ESMB (D415). In FY 2003 \$3M for NSD-A (D434); \$4.2M for Volcano upgrades (D016) and \$20M for ESMB (D415).

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV				PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development				PROJECT 016		
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
016 MINE SYSTEMS ED	14834	0	4521	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project provides for Systems Development and Demonstration of new smart munitions and intelligent/autonomous coordination of their use for increased effectiveness. Includes Intelligent Combat Outpost (Raptor), initiation of Non Self Destruct Alternatives Program (NSD-A), the upgrade to the Volcano Dispenser Control Unit and the Volcano modularization in support of the Interim Brigade Combat Team (IBCT). These Systems support the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- 7179 NSD-A tactical design efforts
- 3070 Provided engineering support for NSD-A design producibility/manufacturing development
- 997 NSD-A Risk Reduction analysis
- 1500 NSD-A, PAT II Live Field Experiments
- 1763 NSD-A, Joint Venture Proposal Preparation
- 325 Design Volcano trailer mounting device

Total 14834

FY 2001 Planned Program

Project not funded in FY 2001.

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

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering Development

PROJECT
016

FY 2002 Planned Program

- 4121 Initiate design effort for Volcano upgrades.
 - 400 Establish testing plans and criteria for Volcano upgrade efforts.
- Total 4521

<u>B. Other Program Funding Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
RDTE, BA4, PE 0603619A, Proj D005	2975	12644	11426	0	0	0	0	0	0	0
M12100., Intelligent Combat Outpost	0	0	0	0	0	0	0	0	0	0
M12202, Raptor Training Device	0	0	0	0	0	0	0	0	0	0
G39100, Volcano Dispenser	0	0	0	0	0	0	0	0	0	0

C. Acquisition Strategy: For Raptor, the decision to go sole source or competitive will be based on evaluation of the Component Advanced Development contractor results. For NSD-A, 12 solicitation respondents were requested to submit proposals for their alternative concept. Cost Plus Incentive Fee (CPIF) contracts for two of the best concepts were awarded for the Early User Experiment (EUE) phase. At the conclusion of the EUE one contractor or a team will be selected to continue into the System Development & Deployment, and Production phases. The acquisition strategy for the Volcano upgrades program will be determined prior to initiation in FY02.

<u>D. Schedule Profile</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Complete NSD-A PAT	2Q			0	0	0	0	0
NSD-A MS I/II	2Q			0	0	0	0	0
NSD-A MS C				0	0	0	0	0
RAPTOR MS A		2Q		0	0	0	0	0
RAPTOR MS B				0	0	0	0	0
RAPTOR IO&T				0	0	0	0	0
RAPTOR MS C				0	0	0	0	0
Volcano Modular Upgrade MS B			4Q	0	0	0	0	0

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 016
---	---	-----------------------

<u>D. Schedule Profile (continued)</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Volcano Modular Upgrade MS C				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
016

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 . NSD-A Test Hardware	C-CPIF	Textron Systems Corp, MA	3844	0		0		0	0	0	0	0
b . NSD-A Test Hardware	C-CPIF	Alliant Tech Systems, MN	4965	0		0		0	0	0	0	0
c . NSD-A EMD	C-CPIF	Alliant Tech Systems, MN	500	0		0		0	0	0	0	0
d . NSD-A EMD	C-CPIF	Textron Systems Corp, MA	575	0		0		0	0	0	0	0
e . NSD-A EMD	C-CPIF	Textron Sys Corp, MA & Alliant Tech Syst, MN (jointly)	12950	0		0		0	0	0	0	0
f . NSD-A Design/mixed System replacement	C-CPIF	Various	2000	0		0		0	0	0	0	0
g . RAPTOR- SDD Contract	C-CPIF	TBD	0	0		0		0	0	0	0	0
h . Volcano-SDD Contract	C-CPIF	TBD	0	0		3021	1Q	0	0	0	0	0
Subtotal:			24834	0		3021		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
016

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	Cost To Complete	Total Cost	Target Value of Contract
a . Eng. Support NSD-A	MIPR	ARDEC, Picatinny Arsenal, NJ	4010	0		0		0	0	0	0	0
b . Eng. Support NSD-A	MIPR	Various	1564	0		0		0	0	0	0	0
c . Engr. Support RAPTOR	MIPR	ARDEC, Picatinny Arsenal, NJ	0	0		0		0	0	0	0	0
d . Engr. Support RAPTOR	MIPR	Various	0	0		0		0	0	0	0	0
e . Engr. Support Volcano	MIPR	Various	0	0		1250	1Q	0	0	0	0	0
Subtotal:			5574	0		1250		0		0	0	0

Remarks: None

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 016
--	--	------------------------------

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	Target Value of Contract
a . PAT Support NSD-A	MIPR	Various	1056	0		0		0	0	0	0	0
b . Process Prove-out test RADAM	MIPR	TECOM, Aberdeen, MD	1450	0		0		0	0	0	0	0
c . RAPTOR test support	MIPR	ATEC, Alexandria, VA	0	0		0		0	0	0	0	0
d . Volcano- test upgrades	MIPR	ATEC, Alexandria, VA	0	0		0		0	0	0	0	0
Subtotal:			2506	0		0		0		0	0	0

Remarks: None

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	Target Value of Contract
a . NSD-A Program Management	In-House	PM-MCD, Picatinny Arsenal, NJ	646	0		0		0	0	0	0	0
b . RAPTOR Program Management	In-House	PM MCD, Picatinny Arsenal, NJ	0	0		0		0	0	0	0	0
c . Volcano Program Management	In-House	PM MCD, Picatinny Arsenal, NJ	0	0		250	1Q	0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 016
---	---	-----------------------

IV. Management Services (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	Target Value of Contract
Subtotal:			646	0		250		0		0	0	0

Remarks: None

Project Total Cost:			33560	0		4521		0		0	0	0
---------------------	--	--	-------	---	--	------	--	---	--	---	---	---

--	--	--	--	--	--	--	--	--	--	--	--	--

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV				PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development				PROJECT 415		
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
415 MINE NEUTRAL/DETECTION	9302	32941	37095	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project provides System Development and Demonstration (SDD) for the Airborne Standoff Minefield Detection System (ASTAMIDS), Handheld Stand-off Mine Detection System (HSTAMIDS), Ground Standoff Mine Detection System (GSTAMIDS), Explosive Standoff Minefield Breacher (ESMB), and the Obstacle Marking System (OMS). These systems support the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- 3797 Completed GSTAMIDS block 0 detailed design
- 3655 Conducted GSTAMIDS block 0 system integration
- 1100 Initiated Fabrication of two (2) GSTAMIDS Block 0 Prototypes
- 344 Developed MS B Plans and Documentation for CMCS
- 208 Developed Solicitation Plans and Documents for CMCS

Total 9104

FY 2001 Planned Program

- 5278 Complete Fabrication of two GSTAMIDS block 0 prototypes
- 5400 Conduct GSTAMIDS Block 0 contractor/government testing
- 3594 Initiate HSTAMIDS SDD Hardware and Software design
- 3262 Fabricate HSTAMIDS hardware to conduct design verification test
- 400 Conduct solicitation/source selection for CMCS
- 9110 Acquire NDI/COTS Components of CMCS

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

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

**0604808A - Landmine Warfare/Barrier Engineering
Development**

PROJECT

415

FY 2001 Planned Program (Continued)

- 4000 Award Mongoose (ESMB) System Design and Development Contract
- 918 Initiate Development of unique CMCS components
- 979 Small Business Innovative Research/Small Business Technology Transfer Programs.

Total 32941

FY 2002 Planned Program

- 585 Prepare for GSTAMIDS Block 0 for Milestone C (Full Rate Production)
- 5146 Conduct GSTAMIDS Block 0 Operational Testing
- 14600 Complete ESMB BCT preliminary design
- 4200 Procure long lead materials for ESMB prototypes
- 1200 Develop ESMB Manufacturing Processes
- 1600 Initiate Obstacle Marking System design efforts and test planning activities
- 5082 Complete HSTAMIDS SDD design
- 3282 Initiate fabrication of 22 HSTAMIDS test articles for DT/OT
- 1000 Develop HSTAMIDS Indigenous Metal Detector
- 400 Develop Milestone A/B Plans and Documentation for OMS

Total 37095

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

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering Development

PROJECT
415

<u>B. Other Program Funding Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
PE 0603619A, Project D606, Countermine/Barrier Advanced Dev	8909	9950	10225	0	0	0	0	0	0	0
R68200, HSTAMIDS	0	0	0	0	0	0	0	0	0	0
R68101, GSTAMIDS	0	0	13272	0	0	0	0	0	0	0
R68102, GSTAMIDS	0	0	0	0	0	0	0	0	0	0

C. Acquisition Strategy: ESMB competitively selected Concept & Technology Development (CTD) contractor will be awarded a sole source System Development & Demonstration (SDD) contract upon completion of CTD phase and MDA approval. ASTAMIDS will award a competitively selected CTD contract followed by a sole source SDD contract. GSTAMIDS program is a spiral development and acquisition program designed to field vehicle mounted mine detection and neutralization capabilities in successive block upgrades (Blocks 0,1, and 2). GSTAMIDS Block I integrates a number of advanced countermine capabilities into one system. The Block I system development contract is expected to be competitively solicited. The GSTAMIDS Block 0, SDD contractor was competitively selected. If successful, the SDD contractor will be awarded the initial production contract (sole source) with multiple option year buys. HSTAMIDS, two competing contractors at start of CTD phase. In FY99 one contractor was selected to continue extended CTD phase through SDD. If successful, SDD contractor will be awarded production contract with multiple options. OMS will use a modified non-developmental (NDI) strategy tailoring commercially available military marking systems to Army requirements.

<u>D. Schedule Profile</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
GSTAMIDS Block 0 MS C			4Q	0	0	0	0	0
GSTAMIDS Block 1 MS B			4Q	0	0	0	0	0
GSTAMIDS Block I MS C				0	0	0	0	0
HSTAMIDS MS B		1Q		0	0	0	0	0
HSTAMIDS MS C				0	0	0	0	0
ESMB MS B		3Q		0	0	0	0	0
OMS MS B			2Q	0	0	0	0	0
OMS MS C				0	0	0	0	0
ESMB(BCT) MS C				0	0	0	0	0
ESMB (Legacy) MS C				0	0	0	0	0

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

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

**0604808A - Landmine Warfare/Barrier Engineering
Development**

PROJECT

415

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
415

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 . GSTAMIDS Block 1	C-CPIF	TBD	0	0		0		0	0	0	0	0
b . GSTAMIDS Block 0	C-CPFF	EG&G Systems Inc., Albuquerque, NM	8296	3700	1Q	1989	1Q	0	0	0	0	0
c . HSTAMIDS	C-CPIF	CY Terra Corporation, Orlando, FL	0	3275	2Q	4300	1Q	0	0	0	0	Continue
d . CMCS EMD			0	6500		0		0	0	0	0	Continue
e . OMS	SS-CPIF	TBD	0	0		1150	2Q	0	0	0	0	Continue
f . ESMB	SS	BAE Systems	0	2871	4Q	16266	1Q	0	0	0	0	0
Subtotal:			8296	16346		23705		0		0	0	Continue

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
415

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	Cost To Complete	Total Cost	Target Value of Contract
a . Eng. support GSTAMIDS Blk 0	MIPR	NVESD/ CECOM, Ft Belvoir, VA	4845	1900	1Q	1565	1Q	0	0	0	0	0
b . Eng support GSTAMIDS Blk 0	MIPR	Various	3541	1079	1Q	118	1Q	0	0	0	0	0
c . GSTAMIDS Block 0	Various	Various	984	0		0		0	0	0	0	0
d . GSTAMIDS Blk I	MIPR	Various	0	0		0		0	0	0	0	0
e . GSTAMIDS Support Blk I	MIPR	NVESD/CECOM, Ft Belvoir, VA	0	0		0		0	0	0	0	0
f . Eng. support GSTAMIDS Blk 0	Various	Various	3957	1000	1Q	0		0	0	0	0	0
g . Eng Support CMCS	Various	Various	0	1316	1Q	0		0	0	0	0	0
h . Eng Support CMCS	MIPR	NVESD/CECOM, Ft Belvoir, VA	0	732	1Q	0		0	0	0	0	0
i . Eng Support HSTAMIDS	MIPR	NVESD/CECOM, Ft Belvoir, VA	0	1150	1Q	1896	1Q	0	0	0	0	0
j . Eng Support HSTAMIDS	Various	Various	0	2089	2Q	1636	1Q	0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 415
--	--	------------------------------

II. Support Cost (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	Target Value of Contract
k . Eng Support OMS	MIPR	NVESD/CECOM, Ft Belvoir, VA	0	0		350	1Q	0	0	0	0	0
l . ESMB	MIPR	NVESD/CECOM, Ft Belvoir, VA	0	310	2Q	2493	1Q	0	0	0	0	0
Subtotal:			13327	9576		8058		0		0	0	0

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	Target Value of Contract
a . Test support GSTAMIDS	MIPR	ATEC, Alexandria, VA	1313	1693	3Q	1681	2Q	0	0	0	0	0
b . Test support HSTAMIDS	MIPR	ATEC, Alexandria, VA	0	342	2Q	1338	1Q	0	0	0	0	0
c . Test Support CMCS	MIPR	ATEC, Alexandria, VA	0	400	1Q	0		0	0	0	0	0
d . Test Support OMS	MIPR	ATEC, Alexandria, VA	0	0		200	2Q	0	0	0	0	0
e . Test Support ESMB	MIPR	ATEC, Alexandria, VA	0	144	2Q	500	2Q	0	0	0	0	0
Subtotal:			1313	2579		3719		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
415

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	Target Value of Contract
a . Program management	In-House	PM-MCD, Picatinny Arsenal, NJ	972	1030	1-4Q	1105	1-4Q	0	0	0	0	0
b . Program management Contractor support	Various	Various	1028	3410	1-4Q	508	1-4Q	0	0	0	0	0
Subtotal:			2000	4440		1613		0		0	0	0
Project Total Cost:			24936	32941		37095		0		0	0	Continue

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV			PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering					PROJECT 434		
			Development							
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
434 ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)	0	37194	21152	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This program provides for development of alternative systems for Non Self-Destruct (NSD) Anti-Personnel Landmines (APLs), particularly in Korea. The overall goal is to pursue an aggressive program to field alternative system(s) by 2006. This may allow the U.S. to sign the Ottawa Convention. This System supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

Project not funded

FY 2001 Planned Program

- 22973 Design, fabricate, and subsystem verification tests of Remote Control Units(RCU) (14), Repeater (14), munitions (13 Munition Control Units (MCUs)) 15 Extended Range Tripline Sensors (RTS), 50 Inert Mini-Grenade Launchers (MGLs), 6 High Explosive (HE) MGLs, 10 Inert M16s, 6 HE M16s
 - 3908 Provide general engineering support (including Other Government Agencies (OGAs)) for NSD-A design producibility/manufacturing development of NSD-A subsystems through Preliminary Design Review and subsystem verification test
 - 9207 Communication, reliability and lethality trade studies risk reduction efforts
 - 1106 Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR)
- Total 37194

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 434
---	---	-----------------------

FY 2002 Planned Program

- 15855 Provide Hardware and software for contractor system verification tests, Functional Qualification Test (FQT), and Production Qualification Test (PQT) (326 MCUs, 676 ERTS, 45 repeaters, 45 RCUs, 1900 inert MGLs, 725 HE MGLs, 404 inert M16s, 144 HE M16s)
- 5297 Provide general engineering support (including OGAs) for Non Self-Destruct-Alternatives (NSD-A) design producibility/manufacturing and integration of NSD-A system through Critical Design Review and Production Qualification Testing.

Total 21152

<u>B. Other Program Funding Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
PE 64808/D016	14834	0	4521	0	0	0	0	0	0	0
PAA SSN E91700	0	0	0	0	0	0	0	0	0	0

C. Acquisition Strategy: On 2 Jun 00, Dr. Gansler (USD(AT&L)) approved the NSD-A plan to have Alliant Tech Systems and Textron Systems Corporation to form a joint venture for the System Development & Demonstration (SDD) and Production & Deployment (P&D) efforts of this program.

<u>D. Schedule Profile</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
NSD-A MS-C				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 434
--	--	------------------------------

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 . NSD-A SDD	C-CPIF	Alliant Tech Systems, MN, and Textron Systems Corp., MA. (Jointly)	0	29930	3Q	15855	3Q	0	0	0	0	Continue
Subtotal:			0	29930		15855		0		0	0	Continue

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	Cost To Complete	Total Cost	Target Value of Contract
a . Eng support NSD-A	MIPR	ARDEC, Picatinny Arsenal, NJ	0	2000	1-4Q	2650	1-4Q	0	0	0	0	0
b . Eng support NSD-A	MIPR	Various	0	1908	1-4Q	2397	1-4Q	0	0	0	0	0
Subtotal:			0	3908		5047		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
434

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	Target Value of Contract
a . DT/OT	MIPRs	TEXCOM, TX,/APG, MD/Ft. Benning, GA	0	2000	1-4Q	0		0	0	0	0	0
Subtotal:			0	2000		0		0		0	0	0

Remarks: Not Applicable

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	Target Value of Contract
a . Program Mgmt NSD-A	In-House	PM-MCD, Picatinny Arsenal, NJ	0	1356	1-4Q	250	1-4Q	0	0	0	0	0
Subtotal:			0	1356		250		0		0	0	0

Project Total Cost:			0	37194		21152		0		0	0	Continue
---------------------	--	--	---	-------	--	-------	--	---	--	---	---	----------

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV				PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development				PROJECT 443		
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
443 APL-A (MIXED SYSTEMS)	0	23582	26385	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project provides alternatives to anti-personnel submunitions used in mixed anti-tank (AT) landmine systems and possibly the entire mixed landmine system. The alternative systems will include surveillance systems, command and control systems, and overwatch fires which will be evaluated and developed in parallel to provide similar capabilities that are now provided by Anti-Personnel Landmines (APLs) and APL submunitions in mixed AT systems. Distributed simulation will be used to evaluate new concepts and modify tactics and procedures. Prototype components and system architectures will be constructed and evaluated in system field tests. The overall goal is to pursue an aggressive program to field alternative system(s) by 2006. This may allow the U.S. to sign the Ottawa Convention. These Systems support the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

Project not funded

FY 2001 Planned Program

- 6461 Complete award of multiple Broad Agency Announcements (BAA) and prototype efforts for system concepts and components to support alternatives studies
- 2290 Initiate BAA for component technologies to fill technological gaps.
- 2000 Initiate BAA to develop second generation (2006-2020) APL alternative solutions
- 2500 Conduct distributed modeling of tactics and procedures
- 2000 Modify new generation of expendable day/night imaging sensors, communications devices, low cost point detectors, and new deterrent devices for force protection and landmine alternative roles.
- 1500 Conduct technology assessment of sensors, communications and armament systems
- 1000 Initiate development of integrated and interactive network mapping system

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

June 2001

BUDGET ACTIVITY

5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE

**0604808A - Landmine Warfare/Barrier Engineering
Development**

PROJECT

443

FY 2001 Planned Program (Continued)

- 1537 Initiate development of a friend or foe algorithm for foot soldiers
- 592 Test and evaluate advanced technology brassboard for landmine alternatives concept development.
- 3000 Initiate prototype development and risk reduction for mixed mine alternatives solutions.
- 702 Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR)

Total 23582

FY 2002 Planned Program

- 8431 Continue prototype development and risk reduction for mixed system alternatives
- 2500 Continue BAA for component technology to fill technological gaps
- 2000 Continue BAA to develop second generation (2006-2020) APL alternative solutions
- 2500 Conduct distributed modeling of tactics and procedures
- 2000 Continue with development of day/night imaging sensors, communications devices, low cost point detectors and new deterrent devices for force protection and landmine alternative roles.
- 561 Conduct technology assessment of sensors, communications and armament systems
- 1290 Continue with development of integrated and interactive network mapping system
- 1537 Continue with development of a friend or foe algorithm for foot soldiers
- 2500 Conduct distributed modeling of tactics and procedures
- 2000 Continue investigation of mobility of an adaptable network of expendable sensors and new deterrent to meet landmine alternatives requirements and Future Combat Systems (FCS) force protection roles
- 1066 Test mobility concepts for landmine alternatives

Total 26385

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

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 443
---	---	-----------------------

<u>B. Other Program Funding Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
PAA SSN: E91701	0	0	0	0	0	0	0	0	0	0

C. Acquisition Strategy: Continue concept exploration studies and proof of principle demonstrations for both system (5 contracts) and components (8 contracts). At the completion of the demonstrations, downselect the top contract(s) with the most cost effective and responsive design for prototype development and risk reduction. This will lead to System Development & Demonstration (SDD).

<u>D. Schedule Profile</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Mixed system CAD-DR			1Q	0	0	0	0	0
Mixed system MS B				0	0	0	0	0
Mixed system MS C				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
443

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. APL-A System Concept Exploration	C-CPIF	Various	0	6084	1-4Q	0		0	0	0	0	0
b. APL-A Component Technology Development	C-CPIF	Various	0	1100	1-4Q	2500	1-4Q	0	0	0	0	0
c. APL-A Prime Development Contract	C-CPIF	TBD	0	3000	1-4Q	8487	1-4Q	0	0	0	0	Continue
d. APL-A Component Technology Dev. II	C-CPIF	TBD	0	2300	1-4Q	2500	1-4Q	0	0	0	0	0
e. APL-A 2nd Generation Alternative Solutions	C-CPIF	TBD	0	2000	1-4Q	2000	1-4Q	0	0	0	0	Continue
f. APL-A Mapping & IFF Function Development	C-CPIF	TBD	0	2548	1-4Q	3031	1-4Q	0	0	0	0	Continue
g. APL-A SDD Prime Contract	C-CPIF	TBD	0	0		0		0	0	0	0	Continue
Subtotal:			0	17032		18518		0		0	0	Continue

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY
5 - ENG MANUFACTURING DEV

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier Engineering
Development

PROJECT
443

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	Cost To Complete	Total Cost	Target Value of Contract
a . Eng. Support	MIPR	ARDEC, Picatinny Arsenal, NJ	0	1000	1-4Q	1500	1-4Q	0	0	0	0	Continue
b . Eng. Support	MIPR	Night Vision Labs, Ft. Belvoir, VA	0	1500	1-4Q	2000	1-4Q	0	0	0	0	Continue
c . Concepts & Component Analysis & Evaluation	MIPR	Various	0	3750	1-4Q	4067	1-4Q	0	0	0	0	Continue
Subtotal:			0	6250		7567		0		0	0	Continue

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	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

Remarks: Not Applicable

ARMY RDT&E COST ANALYSIS(R-3)

June 2001

BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV	PE NUMBER AND TITLE 0604808A - Landmine Warfare/Barrier Engineering Development	PROJECT 443
--	--	------------------------------

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	Target Value of Contract
a . Program Mgmt.	In-House	PM-MCD, Picatinny Arsenal, NJ	0	300	1-4Q	300	1-4Q	0	0	0	0	Continue
Subtotal:			0	300		300		0		0	0	Continue

Project Total Cost:			0	23582		26385		0		0	0	Continue
---------------------	--	--	---	-------	--	-------	--	---	--	---	---	----------