Department of Defense
Fiscal Year (FY) 2014 President's Budget Submission

April 2013

Army

Justification Book

Research, Development, Test & Evaluation, Army

RDT&E - Volume III, Budget Activity 6

Department of the Army

FY 2014 RDT&E Program

President's Budget 2014

Exhibit R-1

Summary

20-Feb-2013

Summary Recap of Budget Activities	Thousands of Dollars				
	FY2012	FY2013	FY2014	FY2014 OCO	FY2014 Total
Basic research	408,842	444,071	436,725	0	436,725
Applied Research	929,984	874,730	885,924	0	885,924
Advanced technology development	1,067,459	890,722	882,106	0	882,106
Advanced Component Development and Prototypes	513,368	629,981	636,392	26,625	663,017
System Development and Demonstration	3,135,367	3,286,629	2,857,026	0	2,857,026
Management support	1,341,545	1,153,980	1,159,610	0	1,159,610
Operational system development	1,303,974	1,664,534	1,126,602	0	1,126,602
Total RDT&E, Army	8,700,539	8,944,647	7,984,385	26,625	8,011,010

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Line No	Program Element Number	Act	Item	Thousands of Dollars FY2012	FY2013	FY2014	FY2014 OCO	FY2014 Total
			Basic research					
1	0601101A	01	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	20,395	20,860	21,803		21,803
2	0601102A	01	DEFENSE RESEARCH SCIENCES	207,983	219,180	221,901		221,901
3	0601103A	01	UNIVERSITY RESEARCH INITIATIVES	78,380	80,986	79,359		79,359
4	0601104A	01	UNIVERSITY AND INDUSTRY RESEARCH CENTERS	102,084	123,045	113,662		113,662
			Total: Basic research	408,842	444,071	436,725	0	436,725
			Applied Research					
5	0602105A	02	MATERIALS TECHNOLOGY	37,707	29,041	26,585		26,585
6	0602120A	02	SENSORS AND ELECTRONIC SURVIVABILITY	42,189	45,260	43,170		43,170
7	0602122A	02	TRACTOR HIP	14,207	22,439	36,293		36,293
8	0602211A	02	AVIATION TECHNOLOGY	43,430	51,607	55,615		55,615
9	0602270A	02	ELECTRONIC WARFARE TECHNOLOGY	15,667	15,068	17,585		17,585
10	0602303A	02	MISSILE TECHNOLOGY	65,591	49,383	51,528		51,528
11	0602307A	02	ADVANCED WEAPONS TECHNOLOGY	19,392	25,999	26,162		26,162
12	0602308A	02	ADVANCED CONCEPTS AND SIMULATION	20,356	23,507	24,063		24,063
13	0602601A	02	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY	62,339	69,062	64,589		64,589
14	0602618A	02	BALLISTICS TECHNOLOGY	60,507	60,823	68,300		68,300
15	0602622A	02	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY	4,753	4,465	4,490		4,490
16	0602623A	02	JOINT SERVICE SMALL ARMS PROGRAM	8,010	7,169	7,818		7,818
17	0602624A	02	WEAPONS AND MUNITIONS TECHNOLOGY	53,883	35,218	37,798		37,798
18	0602705A	02	ELECTRONICS AND ELECTRONIC DEVICES	74,518	60,300	59,021		59,021
19	0602709A	02	NIGHT VISION TECHNOLOGY	54,002	53,244	43,426		43,426
20	0602712A	02	COUNTERMINE SYSTEMS	32,226	18,850	20,574		20,574
21	0602716A	02	HUMAN FACTORS ENGINEERING TECHNOLOGY	21,540	19,872	21,339		21,339
22	0602720A	02	ENVIRONMENTAL QUALITY TECHNOLOGY	20,389	20,095	20,316		20,316
23	0602782A	02	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY	25,703	28,852	34,209		34,209
24	0602783A	02	COMPUTER AND SOFTWARE TECHNOLOGY	8,433	9,830	10,439		10,439
25	0602784A	02	MILITARY ENGINEERING TECHNOLOGY	75,465	70,693	70,064		70,064

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26	0602785A	02	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY	18,623	17,781	17,654		17,654
27	0602786A	02	WARFIGHTER TECHNOLOGY	46,864	28,281	31,546		31,546
28	0602787A	02	MEDICAL TECHNOLOGY	104,190	107,891	93,340		93,340
	Total:		Applied Research	929,984	874,730	885,924	0	885,924
			Advanced technology development					
29	0603001A	03	WARFIGHTER ADVANCED TECHNOLOGY	55,679	39,359	56,056		56,056
30	0603002A	03	MEDICAL ADVANCED TECHNOLOGY	101,655	69,580	62,032		62,032
31	0603003A	03	AVIATION ADVANCED TECHNOLOGY	60,333	64,215	81,080		81,080
32	0603004A	03	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY	75,607	67,613	63,919		63,919
33	0603005A	03	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY	142,833	104,359	97,043		97,043
34	0603006A	03	SPACE APPLICATION ADVANCED TECHNOLOGY	4,158	4,157	5,866		5,866
35	0603007A	03	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY	10,063	9,856	7,800		7,800
36	0603008A	03	ELECTRONIC WARFARE ADVANCED TECHNOLOGY	67,673	50,661	40,416		40,416
37	0603009A	03	TRACTOR HIKE	8,142	9,126	9,166		9,166
38	0603015A	03	NEXT GENERATION TRAINING & SIMULATION SYSTEMS	14,970	17,257	13,627		13,627
39	0603020A	03	TRACTOR ROSE	12,577	9,925	10,667		10,667
40	0603105A	03	MILITARY HIV RESEARCH	22,552	6,984			
41	0603125A	03	COMBATING TERRORISM - TECHNOLOGY DEVELOPMENT	21,939	9,716	15,054		15,054
42	0603130A	03	TRACTOR NAIL	4,271	3,487	3,194		3,194
43	0603131A	03	TRACTOR EGGS	2,257	2,323	2,367		2,367
44	0603270A	03	ELECTRONIC WARFARE TECHNOLOGY	23,046	21,683	25,348		25,348
45	0603313A	03	MISSILE AND ROCKET ADVANCED TECHNOLOGY	87,749	71,111	64,009		64,009
46	0603322A	03	TRACTOR CAGE	10,299	10,902	11,083		11,083
47	0603461A	03	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM	176,533	180,582	180,662		180,662
48	0603606A	03	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY	30,687	27,204	22,806		22,806
49	0603607A	03	JOINT SERVICE SMALL ARMS PROGRAM	7,473	6,095	5,030		5,030
50	0603710A	03	NIGHT VISION ADVANCED TECHNOLOGY	41,283	37,217	36,407		36,407
51	0603728A	03	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS	15,247	13,626	11,745		11,745
52	0603734A	03	MILITARY ENGINEERING ADVANCED TECHNOLOGY	40,496	28,458	23,717		23,717

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53	0603772A	03	ADVANCED TACTICAL COMPUTER SCIENCE AND SENSOR TECHNOLOGY	29,937	25,226	33,012		33,012
	Total:		Advanced technology development	1,067,459	890,722	882,106	0	882,106
			Advanced Component Development and Prototypes					
54	0603305A	04	ARMY MISSLE DEFENSE SYSTEMS INTEGRATION	23,463	14,505	15,301		15,301
55	0603308A	04	ARMY SPACE SYSTEMS INTEGRATION	9,557	9,876	13,592		13,592
56	0603619A	04	LANDMINE WARFARE AND BARRIER - ADV DEV	16,399	5,054	10,625		10,625
57	0603627A	04	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-ADV DEV	4,357	2,725			
58	0603639A	04	TANK AND MEDIUM CALIBER AMMUNITION	40,201	30,560	30,612		30,612
59	0603653A	04	ADVANCED TANK ARMAMENT SYSTEM (ATAS)	62,343	14,347	49,989		49,989
60	0603747A	04	SOLDIER SUPPORT AND SURVIVABILITY	13,720	29,933	6,703	26,625	33,328
61	0603766A	04	TACTICAL ELECTRONIC SURVEILLANCE SYSTEM - ADV DEV	5,757	8,660	6,894		6,894
62	0603774A	04	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT		10,715	9,066		9,066
63	0603779A	04	ENVIRONMENTAL QUALITY TECHNOLOGY - DEM/VAL	4,788	4,631	2,633		2,633
64	0603782A	04	WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL	177,122	278,018	272,384		272,384
65	0603790A	04	NATO RESEARCH AND DEVELOPMENT	4,612	4,961	3,874		3,874
66	0603801A	04	AVIATION - ADV DEV	6,879	8,602	5,018		5,018
67	0603804A	04	LOGISTICS AND ENGINEER EQUIPMENT - ADV DEV	12,107	14,605	11,556		11,556
68	0603805A	04	COMBAT SERVICE SUPPORT CONTROL SYSTEM EVALUATION AND ANALYSIS	5,090	5,054			
69	0603807A	04	MEDICAL SYSTEMS - ADV DEV	34,809	24,384	15,603		15,603
70	0603827A	04	SOLDIER SYSTEMS - ADVANCED DEVELOPMENT	23,516	32,050	14,159		14,159
71	0603850A	04	INTEGRATED BROADCAST SERVICE	1,494	96	79		79
72	0604115A	04	TECHNOLOGY MATURATION INITIATIVES	11,839	24,868	55,605		55,605
73	0604131A	04	TRACTOR JUTE		59			
74	0604319A	04	INDIRECT FIRE PROTECTION CAPABILITY INCREMENT 2-INTERCEPT (IFPC2)		76,039	79,232		79,232
75	0604785A	04	INTEGRATED BASE DEFENSE (BUDGET ACTIVITY 4)	3,926	4,043	4,476		4,476
76	0305205A	04	ENDURANCE UAVS	51,389	26,196	28,991		28,991
	Total:		Advanced Component Development and Prototypes	513,368	629,981	636,392	26,625	663,017

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			System Development and Demonstration					
77	0604201A	05	AIRCRAFT AVIONICS	115,890	78,538	76,588		76,588
78	0604220A	05	ARMED, DEPLOYABLE HELOS	80,323	90,494	73,309		73,309
79	0604270A	05	ELECTRONIC WARFARE DEVELOPMENT	33,164	181,347	154,621		154,621
80	0604280A	05	JOINT TACTICAL RADIO			31,826		31,826
81	0604290A	05	MID-TIER NETWORKING VEHICULAR RADION (MNVR)	47,000	12,636	23,341		23,341
82	0604321A	05	ALL SOURCE ANALYSIS SYSTEM	7,400	5,694	4,839		4,839
83	0604328A	05	TRACTOR CAGE	23,535	32,095	23,841		23,841
84	0604601A	05	INFANTRY SUPPORT WEAPONS	81,081	96,478	79,855		79,855
85	0604604A	05	MEDIUM TACTICAL VEHICLES	3,835	3,006	2,140		2,140
86	0604611A	05	JAVELIN	9,655	5,040	5,002		5,002
87	0604622A	05	FAMILY OF HEAVY TACTICAL VEHICLES	5,239	3,077	21,321		21,321
88	0604633A	05	AIR TRAFFIC CONTROL	22,218	9,769	514		514
89	0604641A	05	TACTICAL UNMANNED GROUND VEHICLE (TUGV)		13,141			
90	0604642A	05	LIGHT TACTICAL WHEELED VEHICLES	68,442				
91	0604661A	05	FCS SYSTEMS OF SYSTEMS ENGR & PROGRAM MGMT	257,513				
92	0604663A	05	FCS UNMANNED GROUND VEHICLES	34,845				
93	0604710A	05	NIGHT VISION SYSTEMS - ENG DEV	55,412	32,621	43,405		43,405
94	0604713A	05	COMBAT FEEDING, CLOTHING, AND EQUIPMENT	2,008	2,132	1,939		1,939
95	0604715A	05	NON-SYSTEM TRAINING DEVICES - ENG DEV	29,206	44,787	18,980		18,980
96	0604716A	05	TERRAIN INFORMATION - ENG DEV	1,593	1,008			
97	0604741A	05	AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE - ENG DEV	57,050	73,333	18,294		18,294
98	0604742A	05	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	27,530	28,937	17,013		17,013
99	0604746A	05	AUTOMATIC TEST EQUIPMENT DEVELOPMENT	13,932	10,815	6,701		6,701
100	0604760A	05	DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS) - ENG DEV	15,357	13,926	14,575		14,575
101	0604780A	05	COMBINED ARMS TACTICAL TRAINER (CATT) CORE	21,541	17,797	27,634		27,634
102	0604798A	05	BRIGADE ANALYSIS, INTEGRATION AND EVALUATION		214,270	193,748		193,748
103	0604802A	05	WEAPONS AND MUNITIONS - ENG DEV	13,384	14,581	15,721		15,721
104	0604804A	05	LOGISTICS AND ENGINEER EQUIPMENT - ENG DEV	173,902	43,706	41,703		41,703
105	0604805A	05	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS - ENG DEV	79,188	20,776	7,379		7,379

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106	0604807A	05	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT - ENG DEV	26,316	43,395	39,468		39,468
107	0604808A	05	LANDMINE WARFARE/BARRIER - ENG DEV	73,955	104,983	92,285		92,285
108	0604814A	05	ARTILLERY MUNITIONS - EMD	45,821	4,346	8,209		8,209
109	0604818A	05	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE	91,490	77,223	22,958		22,958
110	0604820A	05	RADAR DEVELOPMENT	3,093	3,486	1,549		1,549
111	0604822A	05	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)	787	9,963	17,342		17,342
112	0604823A	05	FIREFINDER	12,032	20,517	47,221		47,221
113	0604827A	05	SOLDIER SYSTEMS - WARRIOR DEM/VAL	41,680	51,851	48,477		48,477
114	0604854A	05	ARTILLERY SYSTEMS - EMD	116,293	167,797	80,613		80,613
115	0604869A	05	PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	377,610	400,861			
116	0604870A	05	NUCLEAR ARMS CONTROL MONITORING SENSOR NETWORK	7,160	7,922			
117	0605013A	05	INFORMATION TECHNOLOGY DEVELOPMENT	35,714	51,463	68,814		68,814
118	0605018A	05	INTEGRATED PERSONNEL AND PAY SYSTEM-ARMY (IPPS-A)	66,612	158,646	137,290		137,290
119	0605028A	05	ARMORED MULTI-PURPOSE VEHICLE (AMPV)			116,298		116,298
120	0605030A	05	JOINT TACTICAL NETWORK CENTER (JTNC)			68,148		68,148
121	0605380A	05	AMF JOINT TACTICAL RADIO SYSTEM (JTRS)			33,219		33,219
122	0605450A	05	JOINT AIR-TO-GROUND MISSILE (JAGM)	123,100	10,000	15,127		15,127
123	0605455A	05	SLAMRAAM	1,186				
124	0605456A	05	PAC-3/MSE MISSILE	86,139	69,029	68,843		68,843
125	0605457A	05	ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)	262,032	277,374	364,649		364,649
126	0605625A	05	MANNED GROUND VEHICLE	434,977	639,874	592,201		592,201
127	0605626A	05	AERIAL COMMON SENSOR	31,415	47,426	10,382		10,382
128	0605766A	05	NATIONAL CAPABILITIES INTEGRATION (MIP)			21,143		21,143
129	0605812A	05	JOINT LIGHT TACTICAL VEHICLE (JLTV) ENGINEERING AND MANUFACTURING D		72,295	84,230		84,230
130	0303032A	05	TROJAN - RH12	3,914	4,232	3,465		3,465
131	0304270A	05	ELECTRONIC WARFARE DEVELOPMENT	13,798	13,942	10,806		10,806
	Total:		System Development and Demonstration	3,135,367	3,286,629	2,857,026	0	2,857,026
			Management support					
132	0604256A	06	THREAT SIMULATOR DEVELOPMENT	25,838	18,090	16,934		16,934

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133	0604258A	06	TARGET SYSTEMS DEVELOPMENT	10,973	14,034	13,488		13,488
134	0604759A	06	MAJOR T&E INVESTMENT	47,972	37,394	46,672		46,672
135	0605103A	06	RAND ARROYO CENTER	19,730	21,026	11,919		11,919
136	0605301A	06	ARMY KWAJALEIN ATOLL	141,365	176,816	193,658		193,658
137	0605326A	06	CONCEPTS EXPERIMENTATION PROGRAM	27,923	27,902	37,158		37,158
138	0605502A	06	SMALL BUSINESS INNOVATIVE RESEARCH	208,324				
139	0605601A	06	ARMY TEST RANGES AND FACILITIES	366,327	369,900	340,659		340,659
140	0605602A	06	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS	68,968	69,183	66,061		66,061
141	0605604A	06	SURVIVABILITY/LETHALITY ANALYSIS	42,088	44,753	43,280		43,280
142	0605605A	06	DOD HIGH ENERGY LASER TEST FACILITY	18				
143	0605606A	06	AIRCRAFT CERTIFICATION	5,555	5,762	6,025		6,025
144	0605702A	06	METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES	7,062	7,402	7,349		7,349
145	0605706A	06	MATERIEL SYSTEMS ANALYSIS	19,498	19,954	19,809		19,809
146	0605709A	06	EXPLOITATION OF FOREIGN ITEMS	5,435	5,535	5,941		5,941
147	0605712A	06	SUPPORT OF OPERATIONAL TESTING	68,311	67,789	55,504		55,504
148	0605716A	06	ARMY EVALUATION CENTER	62,845	62,765	65,274		65,274
149	0605718A	06	ARMY MODELING & SIM X-CMD COLLABORATION & INTEG	3,312	1,545	1,283		1,283
150	0605801A	06	PROGRAMWIDE ACTIVITIES	82,015	83,422	82,035		82,035
151	0605803A	06	TECHNICAL INFORMATION ACTIVITIES	52,085	50,820	33,853		33,853
152	0605805A	06	MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY	53,530	46,763	53,340		53,340
153	0605857A	06	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT	4,801	4,601	5,193		5,193
154	0605898A	06	MANAGEMENT HQ - R&D	17,480	18,524	54,175		54,175
155	0909999A	06	FINANCING FOR CANCELLED ACCOUNT ADJUSTMENTS	90				
	Total:		Management support	1,341,545	1,153,980	1,159,610	0	1,159,610
			Operational system development					
156	0603778A	07	MLRS PRODUCT IMPROVEMENT PROGRAM	64,609	143,005	110,576		110,576
157	0607141A	07	LOGISTICS AUTOMATION			3,717		3,717
158	0607665A	07	BIOMETRICS ENTERPRISE	44,155				
159	0607865A	07	PATRIOT PRODUCT IMPROVEMENT		109,978	70,053		70,053

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160	0102419A	07	AEROSTAT JOINT PROJECT OFFICE	317,382	190,422	98,450		98,450
161	0203726A	07	ADV FIELD ARTILLERY TACTICAL DATA SYSTEM	28,649	32,556	30,940		30,940
162	0203735A	07	COMBAT VEHICLE IMPROVEMENT PROGRAMS	35,046	253,959	177,532		177,532
163	0203740A	07	MANEUVER CONTROL SYSTEM	39,282	68,325	36,495		36,495
164	0203744A	07	AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAMS	144,904	280,247	257,187		257,187
165	0203752A	07	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	800	898	315		315
166	0203758A	07	DIGITIZATION	7,771	35,180	6,186		6,186
167	0203801A	07	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM	52,811	20,733	1,578		1,578
168	0203802A	07	OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS			62,100		62,100
169	0203808A	07	TRACTOR CARD	42,487	63,243	18,778		18,778
170	0208053A	07	JOINT TACTICAL GROUND SYSTEM	27,586	31,738	7,108		7,108
171	0208058A	07	JOINT HIGH SPEED VESSEL (JHSV)		35			
172	0301359A	07	SPECIAL ARMY PROGRAM					
173	0303028A	07	SECURITY AND INTELLIGENCE ACTIVITIES	2,763	7,591	7,600		7,600
174	0303140A	07	INFORMATION SYSTEMS SECURITY PROGRAM	15,282	15,961	9,357		9,357
175	0303141A	07	GLOBAL COMBAT SUPPORT SYSTEM	155,813	120,927	41,225		41,225
176	0303142A	07	SATCOM GROUND ENVIRONMENT (SPACE)	11,765	15,756	18,197		18,197
177	0303150A	07	WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM	22,658	14,443	14,215		14,215
178	0305204A	07	TACTICAL UNMANNED AERIAL VEHICLES	26,508	31,303	33,533		33,533
179	0305208A	07	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	31,401	40,876	27,622		27,622
180	0305219A	07	MQ-1 SKY WARRIOR A UAV	121,846	74,618	10,901		10,901
181	0305232A	07	RQ-11 UAV	1,935	4,039	2,321		2,321
182	0305233A	07	RQ-7 UAV	31,896	31,158	12,031		12,031
183	0305235A	07	MQ-18 UAV	4,000	2,387			
184	0307665A	07	BIOMETRICS ENABLED INTELLIGENCE	15,018	15,248	12,449		12,449
185	0708045A	07	END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES	57,607	59,908	56,136		56,136
		Total:	Operational system development	1,303,974	1,664,534	1,126,602	0	1,126,602
Total:	RDT&E, Army			8,700,539	8,944,647	7,984,385	26,625	8,011,010

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Budget Activity 06: RDT&E Management Support
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Budget Activity 06: RDT&E Management Support
Appropriation 2040: Research, Development, Test & Evaluation, Army

Program Element Table of Contents (Alphabetically by Program Element Title)

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0604256A: *THREAT SIMULATOR DEVELOPMENT*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	25.838	18.090	16.934	-	16.934	19.180	22.863	22.932	20.697	Continuing	Continuing
976: *ARMY THREAT SIM (ATS)*	-	25.838	18.090	16.934	-	16.934	19.180	22.863	22.932	20.697	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program supports the design, development, acquisition, integration and fielding of realistic mobile threat simulators and realistic threat simulation products utilized in Army training and developmental and operational tests. While this project originally funded simulators representing Soviet equipment, the changing world order has expanded the scope of this program to address other world threats. Army Threat Simulator and Threat Simulation products are utilized to populate test battlefields for U.S. Army Test and Evaluation Command (ATEC), to conduct developmental and operational tests, and to support Program Executive Office (PEO) required user testing in System Integration Laboratories and hardware/simulation in-the-loop facilities. Army threat simulator and threat simulation products developed or fielded under this program support Army-wide, non-system specific threat product requirements. Each capability is pursued in concert and coordination with existing Army and tri-service capabilities to eliminate duplication of products and services, while providing the proper mix of resources needed to support Army testing and training. These battlefield simulators represent systems (e.g. missile systems, command, control and communications systems, electronic warfare systems, etc.) that are used to portray a realistic threat environment during testing of U.S. weapon systems. Simulator development is responsive to Office of the Secretary of Defense and General Accounting Office guidance for the Army to conduct operational testing in a realistic threat environment. Actual threat equipment is acquired when appropriate (in lieu of development) and total package fielding is still required (i.e., instrumentation, operations and maintenance, manuals, new equipment training, etc.). Threat simulator development is accomplished under the auspices of the Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS) and the Director, Operational Test and Evaluation, Threat Simulator Investment Working Group.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	26.117	18.090	16.934	-	16.934
Current President's Budget	25.838	18.090	16.934	-	16.934
Total Adjustments	-0.279	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.279	-			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604256A: *THREAT SIMULATOR DEVELOPMENT*	PROJECT 976: *ARMY THREAT SIM (ATS)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
976: *ARMY THREAT SIM (ATS)*	-	25.838	18.090	16.934	-	16.934	19.180	22.863	22.932	20.697	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program supports the design, development, acquisition, integration, and fielding of realistic mobile threat simulators and realistic threat simulation products used in Army training, developmental tests, and operational tests. While this project originally funded simulators representing Soviet equipment, the operational environment has expanded the scope of this program to address other world threats. Army Threat Simulator and Threat Simulation products are used to populate test battlefields for U.S. Army Test and Evaluation Command (ATEC), to conduct developmental and operational tests, and to support Program Executive Office (PEO) required user testing in System Integration Laboratories and hardware/simulation in-the-loop facilities. Army threat simulator and threat simulation products developed or fielded under this program support Army-wide, non-system specific threat product requirements. Each capability is pursued in concert and coordination with existing Army and tri-service capabilities to eliminate duplication of products and services, while providing the proper mix of resources needed to support Army testing and training. These battlefield simulators represent systems (e.g. missile systems, command, control and communications systems, electronic warfare systems, etc.) that are used to portray a realistic threat environment during testing of U.S. weapon systems. Simulator development is responsive to Office of the Secretary of Defense and Government Accountability Office guidance for the Army to conduct operational testing in a realistic threat environment. Actual threat equipment is acquired when appropriate (in lieu of development) and total package fielding is still required (i.e., instrumentation, operations and maintenance, manuals, new equipment training, etc.). Threat simulator development is accomplished under the auspices of the Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS) and the Director, Operational Test and Evaluation, Threat Simulator Investment Working Group.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Network Exploitation Test Tool (NETT).	3.287	3.461	3.580
Articles:	0	0	
Description: Continues Engineering Manufacturing and Development (EMD) for the NETT as a comprehensive Computer Network Operations (CNO) tool.			
FY 2012 Accomplishments: Continued EMD for the Network Exploitation Test Tool (NETT). Network Exploitation Test Tool is a comprehensive Computer Network Operations (CNO) tool, designed for T&E, to portray evolving hostile and malicious Threat effects within the cyber domain. The program provided an integrated suite of open-source/open-method exploitation tools which were integrated with robust reporting and instrumentation capabilities. NETT was used by Threat CNO teams to replicate the tactics of state and non-state Threat and was supported by a robust CNO development environment. Current hacking tools and capabilities were			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
being introduced daily to the hacking community. The NETT program researched these new capabilities and used an in-depth process to clean, fix, and integrate required Threat tools, tactics, and techniques that were needed during T&E. Funding in FY12 allowed for the continued integration of these threats and tools, including an Application Programming Interface (API). Updated Information Assurance and Threat validation certifications required for T&E were also supported. ***FY 2013 Plans:*** NETT is a comprehensive Computer Network Operations (CNO) tool, designed for T&E, to portray evolving hostile and malicious Threat effects within the cyber domain. The program provides an integrated suite of open-source/open-method exploitation tools which are integrated with robust reporting and instrumentation capabilities. NETT is used by Threat CNO teams to replicate the tactics of state and non-state Threat and is supported by a robust CNO development environment. Current hacking tools and capabilities are introduced daily to hacking community. The NETT program researches these new capabilities and utilizes an in-depth process to clean, fix, and integrate required Threat tools, tactics, and techniques that are needed during T&E. FY13 funding supports the continuation of exploit development, continues support to the NETT Users Group, and will maintain pace with advanced exploit research and tool integration required to support the growing demand for the Threat CNO Team and mission. ***FY 2014 Plans:*** Will continue EMD for the Network Exploitation Test Tool (NETTS). NETT is a comprehensive Computer Network Operations (CNO) tool, designed for T&E, to portray evolving hostile and malicious Threat effects within the cyber domain. The program will provide an integrated suite of open-source/open-method exploitation tools which will be integrated with robust reporting and instrumentation capabilities. NETT will be used by Threat CNO teams to replicate the tactics of state and non-state Threat and will be supported by a robust CNO development environment. The Cyber domain will be the most rapidly changing domain in which our systems operate. The NETT program will research these new capabilities and will use an in-depth process to clean, fix, and integrate required Threat tools, tactics, and techniques that will be needed during T&E. Focus areas will include continued Threat integration, instrumentation, distributed collaboration, and remote agent development.			
Title: Congressional Add - Threat Simulator Development Unfunded Joint Forces Command (JFCOM) Mission Transfer. ***Articles:*** ***Description:*** Completes the engineering and manufacturing Development (EMD) for Joint Forces Command (JFCOM) Mission Transfer. ***FY 2012 Accomplishments:*** Completed the Engineering and Manufacturing Development (EMD) required to facilitate the seamless Joint Forces Command (JFCOM) Mission Transfer.	9.043 0	0.000	0.000
Title: TSMO Threat Operations	2.904	2.704	2.868

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	
Description: Threat Systems Management Office's (TSMO) Threat Operations program manages, maintains, and sustains a mission ready suite of of threat systems within the Army's Threat inventory. ***FY 2012 Accomplishments:*** The Threat Operations program satisfied the requirement to provide operational support and mission ready sustainment of threat systems that included maintenance, spares, special tools, threat TTP training, recurring DIACAP updates, entry and drawdown of threat assets, storage and sustainment facilities associated with fielded Threat systems and infrastructure. The Threat Operations program had successfully supported two major (Network Integration Evaluation - NIE) and multiple excursion Army test events for numerous Systems Under Test (SUT)/Programs of Record (POR) including Joint Tactical Radio System (JTRS) Handheld, Manpack, and Small Form Fit (HMS), Rifleman Radio, Warfighter Information Network-Tactical (WIN-T) with outstanding recognition for support. ***FY 2013 Plans:*** Government Program Management for the TSMO Operations funds the operation, maintenance, management, and sustainment capability for Threat systems used to portray a realistic threat environment during Army testing and training within the Army's Threat inventory. Includes acquisition life cycle management support (operation, maintenance, spares, new equipment training, special tools and instrumentation, safety, environmental, security, information assurance, etc) of new threat systems fielded into the Army's Threat inventory. Funding supports the scheduled entry and drawdown of equipment within the Threat inventory. ***FY 2014 Plans:*** Continuing the Threat Operations program will fund the operation, maintenance, management, and sustainment capability for Threat systems used to portray a realistic threat environment during Army testing and training within the Army's Threat inventory in order to support multiple Army test events including (Network Integration Evaluation - NIE) and anticipated excursion test events for numerous Systems Under Test (SUT)/Programs of Record (POR) not currently identified but anticipated (TBD). FY14 funding will provide for acquisition life cycle management support and operation, maintenance, spares, new equipment training, special tools and instrumentation, additional DIACAP updates, etc, of new threat systems fielded into the Army's Threat inventory.			
Title: Threat Intelligence and Electronic Warfare Environment (TIEW ENV).	3.973	3.967	3.813
Articles:	0	0	
Description: Continues EMD for the Threat Intelligence and Electronic Warfare Environment (TIEW ENV) to simulate Electronic Warfare capabilities. ***FY 2012 Accomplishments:***			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continued EMD for the TIEW ENV: TIEW ENV provided the constructive Threat representation environment for Army T&E and provided the primary capability to interact between live, virtual, and constructive Threat Information Operations (IO) environments. The TIEW ENV integrated Threat IO (Electronic Attack, Electronic Support, Computer Network Operations) models into the One Semi-Automated Force (OneSAF) baseline. The models' representative effects were also integrated through use with Communications Effects Servers. Integration of OneSAF with the Integrated Threat Force (ITF) enabled the Live and Constructive T&E environments to interface. To date the program had completed numerous models to include Communications Jamming (simulates frequencies, ranges, spot, barrage, and other behaviors); Global Positioning Satellite (GPS) Jamming (can jam GPS frequencies in variety of ways by adjusting the parameters and can emulate real GPS jammers); GPS Repeater Jammer (offset GPS signals so as to provide false location reports. Had several adjustable behavioral parameters); Spoofer Jammer (offsets GPS signals so as to provide false location reports with several adjustable behavioral parameters); and Signal Intelligence/ Direction Finding (SIGINT/DF) (detector models that work with each other to triangulate and then report on emissions of various frequencies and was parameter adjustable). The program continued to develop the Computer Network Operations (CNO) cyber model which build CNO entities (hacker entities, systems, networks, etc.) that can be attacked, defended, and exploited (Disruption, Delay, Denial of Service, Destruction, and Injection) as well as allowed live attacks to interact with the constructive environment for large enterprise asset emulation cyber attacks, all within OneSAF. The program also began the development of the Threat Cellular Network Model (TCNM) which was building the threat cellular and landline interfaces needed to emulate the communications systems often found in theater as used by enemy combatants. The TIEW ENV program also integrated the capability to communicate, via the ITF, with live assets including the CICADA jammer, Threat Signal Injection Jammers (TSIJ), Wideband Configurable Controlled Jammer (WCCJ) and the Networked Electronic Support Threat Sensors (NESTS). ***FY 2013 Plans:*** Continues EMD for the TIEW ENV: The TIEW ENV supports the establishment of a wrap-around threat environment required to evaluate, demonstrate, and employ the EW capabilities of Enemy Forces in simulated real-world test/training events. The TIEW ENV provides the capability to import vignettes, establishes virtual entities, conects live assets, and interacts between the live, virtual, and constructive environments. The TIEW ENV fully integrates with ITF to enable Opposing Forces (OPFOR) command of threat EW assets across Live, Virtual, and Constructive (LVC) domains. FY13 satisfies Army requirements by funding development, platform integration and sustaiment of this capability. Program fields incremental capabilities in support of upcoming spin out events. ***FY 2014 Plans:*** Will continues EMD for the TIEW ENV: The TIEW ENV will support the establishment of a wrap-around threat environment required to evaluate, demonstrate, and employ the Electronic Warfare (EW) capabilities of Enemy Forces in simulated real-world test/training events. The TIEW ENV will provide the capability to import vignettes, will establish virtual entities, connect live assets, and interact between the live, virtual, and constructive environments. The TIEW ENV will fully integrate with the ITF to enable Opposing Forces (OPFOR) command of threat EW assets across Live, Virtual, and Constructive (LVC) domains. FY14			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
will satisfy Army requirements by funding development, platform integration and sustainment of this capability. Program will field incremental capabilities in support of upcoming spin out events. Additional capabilities will include the initial development of Threat Directed Energy Weapons (TDEW) model (which will include threat Radio Frequency (RF) weapon simulators and instrumentation that will employ next generation RF weapon capabilities against US Army systems that rely on survivable and robust sensors for C4ISR, continuous situational awareness, alert warning information and targeting) and continued integration with the ITF for robust LVC domain capability. The TIEW ENV will also begin the integration, via the ITF, with the live Directed Energy Weapon assets and the Threat Unmanned Device. Integration with the Network Exploitation Test Tool (NETT) will also begin in the latter part of FY14.			
Title: Integrated Threat Force (ITF), formerly named Threat Battle Command Center (TBCC)	3.847	4.510	3.916
Articles:	0	0	
Description: Continues the EMD phase for the ITF program to continue hardware/software development and threat systems integration in support to the build-out of the threat force architecture.			
FY 2012 Accomplishments: The ITF Program completed Engineering and Manufacturing Development (EMD) phase for Increment 2 of the ITF program. The activities completed during this effort included enhancement to the ITF's threat battle command applications to provide increased capability in the areas of Command and Control (C2), Situational Awareness (SA) Visualization, Collaboration and Communications. The ITF also enhanced its Command, Control and Communications (C3) interfaces with the Increment 1 threat systems (TSIJ, NETT, NESTS, and TIEW ENV) while also performing the integration of the Mobile Commercial Network Infrastructure Test Range (MCNITR), Threat Unmanned Devices (TUD), Wideband Configurable Controllable Jammer (WCCJ), and CICADA. The completion of the EMD phase for Increment 2 provided an integrated, scalable Threat command and control for all Army Threat representations to provide the T&E solution to satisfy the SoS requirement of a Free Thinking Threat force.			
FY 2013 Plans: Continues EMD for the ITF which provides an integrated, scalable Threat command and control for all Army Threat representations. This program leverages prior Central Test & Evaluation Investment Program (CEIP) investments to create a highly adaptable and unique threat force capability to meet T&E requirements for the evaluation of network-centric platform and SoS capabilities by closely simulating expected real-world threat environments. FY13 funding is used for the continued hardware/ software development/build-out supporting the threat force architecture, visualization, Command and Control (C2), and fusion needs required to successfullly meet salability and reconfigurability needs for current T&E requirements.			
FY 2014 Plans: Will complete the EMD phase for Increment 3 of the ITF program to enhance the ITF's threat battle command applications, enhance the C3 interfaces with the Increment 1 and 2 threat systems as well as complete the integration of the CCD&O assets.			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY14 will also deliver the final instrumentation capability for the ITF as well as complete the integration of the C2 functionality into the TBCC. FY14 will also provide for the procurement of the initial spares to support the Increment 3 hardware and software baselines. FY14 funding will be used to fulfill the Key Performance Parameters (KPPs) for Increment 3 while ensuring that the ITF program will continue to meet the C3 and data fusion needs required to successfully meet scalability and reconfigurability needs for current T&E requirements.			
Title: Threat Signal Injection Jammer (TSIJ), a suite of threat electronic Attack (EA) assets in suppport of operational test events and training exercises. ***Articles:*** ***Description:*** Continues the Engineering Manufacturing Development (EMD) for the TSIJ program to provide the Army with Electronic Attack in an open air environment along with alternatives to open-air Electronic Attack (EA) in a test and training support role. ***FY 2012 Accomplishments:*** Completed EMD for the TSIJ to provide the Army an alternative to open-air Electronic Attack (EA) in a test environment by using direct input of threat jamming waveforms into a receiver unit and remote control on/off employment. Developed design for 2-channel man-pack Remote Jamming Unit (RJU) installed in a soldier's "bullit-proof" vest (Improved Outer Tactical Vest - IOTV) and employing its own power source) all without added weight to the vest and 10 watt environmentally sealed Control Signal Transmitter (CST) for unmanned operations in remote locations.	0.406 0	0.000	0.000
Title: Threat Computer Network Operations Teams (TCNOT) ***Articles:*** ***Description:*** The TCNOT supports Army Test and Evaluation events by maintaining a team of highly qualified, trained, and certified Computer Network Operations (CNO) professionals who execute cyber operations against systems under test. ***FY 2012 Accomplishments:*** Continued EMD for the Threat CNO Team program. Threat CNO Team program established and maintained a team of highly trained and certified CNO professionals qualified for the employment of Threat CNO in support of Army T&E. The Threat CNO Team mission was to accurately replicate the hacker intent of state and non-state Threats through identification of system vulnerabilities that could be exploited by Threat forces, replicating loss of service, or exploiting network enabled systems to gain critical information or create a desired effect. During FY12, the TCNOT program was designated a "Threat CNO Team" under AR380-53, recognized as a USSTRATCOM/NSA certified "Red Team," and executed cyber test and evaluation against systems	2.378 0	3.448 0	2.757

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
including but not limited to: Defense Common Ground Station – Army (DCGS-A), Warfighter Information Network Tactical (WIN-T), Apache Block III, GRAY EAGLE, and Global Combat Supply System (GCSS). ***FY 2013 Plans:*** Continues EMD for the Threat CNO Team program. The Threat CNO Team program establishes and maintains a team of highly trained and certified CNO professionals qualified for the employment of Threat CNO in support of Army T&E. The Threat CNO Team mission is to accurately replicate the capabilities and hacker intent of state and non-state Threats through identification of Army system vulnerabilities that could be exploited by Threat forces, replicating loss of service, or exploiting network enabled systems to gain critical information or create a desired effect. The funding supports unique training, credentials, and authorizations involving organizations such as Army 1st IO Command, NSA, HQDA-G2, and industry. The FY13 funds requirements to include continued research of the intelligence-based TCNO Techniques, Tactics and Procedures (TTP) and threat portrayal capabilities up to the Nation State level; development of the necessary, highly specialized TCNO Training program; development, research, and analysis of continually emerging foreign threat capabilities; and data collection capability. The program establishes analytical services needed to identify and correlate data of historical and real time malicious activity within the Army Land Warrior Network (LWN) and external to the DoD. This program also establishes services and near real-time processing of information needed to develop threat targeting packages that accurately profile the cyber enemy, types of systems they attack, frequency of attacks, their intent, doctrine, training, techniques, tools and operational tactics. The program results in creation of teams of Threat CNO professional, working in concert with the Intelligence Community, capable of accurately protraying validated real world CNO threat to meet operational test requirements. ***FY 2014 Plans:*** Will continue EMD for the Threat CNO Team program. The Threat CNO Team program will establish and maintain a team of highly trained and certified CNO professionals qualified for the employment of Threat CNO in support of Army T&E. The Threat CNO Team mission will be to accurately replicate the capabilities and hacker intent of state and non-state Threats through identification of Army system vulnerabilities that could be exploited by Threat forces, replicating loss of service, or exploiting network enabled systems to gain critical information or create a desired effect. The funding will support unique training, credentials, and authorizations involving organizations such as Army 1st IO Command, NSA, HQDA-G2, and industry. The FY14 will fund requirements to include continued research of the intelligence-based TCNO Techniques, Tactics and Procedures (TTP) and threat portrayal capabilities up to the Nation State level; development of the necessary, highly specialized TCNO Training program; development, research, and analysis of continually emerging foreign threat capabilities; and data collection capability. Systems Tested include: Kiowa Warrior, Mid-Tier Network Vehicle Radio, DCGS-A, AN/TPQ-53, Joint Tactical Radio System (JTRS), EMARSS.			
Accomplishments/Planned Programs Subtotals	25.838	18.090	16.934

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C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

THREAT SIMULATOR Test Programs Supported: Aircraft (MH-47E) Follow On Operational Test II, MH-60K Aircraft, Aircraft (MH-60K) Follow On Operational Test II, RAH-66 Comanche EUTE, RAH-66 Comanche FDTE I, Suite of Integrated Radio Countermeasures (SIRFCM), Suite of Integrated Radio Countermeasures (SIIRCM), Unmanned Aerial Vehicle (UAV) - Payload, Force XXI Battle Command Brigade and Below, Army Airborne Command and Control, Army TACMS Block II/BAT, Bradley Fighting Vehicle-A3, Crusader FDTE, Extended Range MLRS, FAAD Block III, GPS in Joint Battle Space Environment, Guardrail/Common Sensor System II, Handheld Standoff Mine Field Detection System, IEW Tactical Proficiency Trainer, Joint Close Air Support HT&E, Joint Suppression of Enemy Air Defense (JSEAD), Land Warrior, Long Range Advanced Scout Surveillance System, Navigational Warfare Global Positioning System, OH-58D Kiowa Warrior, Patriot Advanced Capabilities PAC-3 Config-3, UH-60Q, Theater High Altitude Area Defense System.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0604258A: *TARGET SYSTEMS DEVELOPMENT*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	10.973	14.034	13.488	-	13.488	12.055	11.898	16.359	10.041	Continuing	Continuing
238: *Aerial Targets*	-	7.424	10.052	10.031	-	10.031	8.678	8.488	8.628	5.999	Continuing	Continuing
459: *Ground Targets*	-	3.549	3.982	3.457	-	3.457	3.377	3.410	7.731	4.042	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program funds aerial and ground target hardware and software development, maintenance, and upgrades. The overall objective is to ensure validation of weapon system accuracy and reliability by developing aerial and ground targets essential for test and evaluation (T&E). These targets are economical and expendable, remotely controlled or stationary, and often destroyed in use. The Army is the Tri-Service lead under Reliance for providing rotary wing, mobile ground, towed, and designated targets for T&E. The Army executes development of some Service-peculiar target requirements in support of quality assurance, lot acceptance, and training and continues development of Service-peculiar and on-going target materiel upgrades to maintain continuity with current weapons technology and trends in modern and evolving Army weapons.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	11.229	14.034	13.488	-	13.488
Current President's Budget	10.973	14.034	13.488	-	13.488
Total Adjustments	-0.256	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.256	-			

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APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604258A: *TARGET SYSTEMS DEVELOPMENT*	PROJECT 238: *Aerial Targets*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
238: *Aerial Targets*	-	7.424	10.052	10.031	-	10.031	8.678	8.488	8.628	5.999	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Aerial Targets support Army Transformation by providing for development, acquisition, operation, storage, update, and maintenance of realistic surrogate or acquired threat high-performance, multi-spectral aerial targets and development of virtual target computer models of aerial targets. Modern weapons require test, evaluation, and training using threat representative aerial targets to assess their effectiveness on the battlefield. This program encompasses a family of rotary and fixed-wing targets; full-scale, miniature, and subscale targets; virtual targets; ancillary devices; and their control systems. These products are required to adequately stress weapon systems undergoing test and evaluation (T&E). In order to stress systems during T&E, aerial targets must have flight characteristics, signatures, and other performance factors that emulate the modern threat. This program includes long-range planning to determine future target needs and development of coordinated requirement documents; the management of target research, development, test and evaluation process; execution of the validation process to ensure that surrogate targets adequately represent the threat; development and acquisition of surrogate and acquired targets; and continuing maintenance, storage, and development/ enhancement/update via engineering services of the developed and acquired threat targets to ensure availability for the T&E customer. The Army is the Reliance lead for rotary wing targets and towed target developments and the Tri-Service lead for procurement and enhancement of the MQM-107 fixed wing target.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Rotary Wing Targets.	0.484	0.468	0.000
Articles:	0	0	
Description: Continues sustainment phase contract activities for the Rotary Wing Targets, including updates for obsolescence, maintenance, and safety to support Test & Evaluation (T&E) programs.			
FY 2012 Accomplishments: Continued EMD for the Rotary Wing Targets program to provide flight operations of Department of Defense's (DoD) current fleet of helicopters. Rotary Wing Targets also provided updates for obsolescence, maintenance, and safety to support T&E programs such as Navy Standard Missile (SM-6), Navy LHA air defense upgrades, and Army and Navy Aircraft Survivability development projects.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604258A: *TARGET SYSTEMS DEVELOPMENT*	PROJECT 238: *Aerial Targets*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continues EMD for the Rotary Wing Targets program to provide flight operations of DoD's current fleet of helicopters. Rotary Wing Targets also provides updates for obsolescence, maintenance, and safety to support T&E programs such as Navy Standard Missile (SM-6), Navy LHA air defense upgrades, and Army and Navy Aircraft Survivability development projects.			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the High Speed Aerial Target. ***Articles:*** ***Description:*** Continue EMD phase contract activities for the High Speed Aerial Target (HSAT, MQM-107) equipment. ***FY 2012 Accomplishments:*** Continued EMD for the aging High Speed Aerial Target (HSAT, MQM-107) that provided a realistic aerial target capable of simulating the performance of enemy aircraft to aid in the reseach, development, test, and evaluation of weapons systems and to aid in training operational units employing producton missile systems. Funds overcame obsolescence for spare and repair parts, and maintained equipment and documentation for safe operations supporting T&E programs such as Patriot, Stinger, Joint Land Attack Cruise Missile Defense Elevated Netted Sensors (JLENS), MEADS, and classified programs for Army and Tri-Service customers. ***FY 2013 Plans:*** Continues EMD for the aging High Speed Aerial Target (HSAT, MQM-107) that provides a realistic aerial target capable of simulating the performance of enemy aircraft to aid in the reseach, development, test, and evaluation of weapons systems and to aid in training operational units employing producton missile systems. Funds are required to overcome obsolescence for spare and repair parts, and to maintain equipment and documentation for safe operations supporting T&E programs such as Patriot, Stinger, and classified programs for Army and Tri-Service customers. ***FY 2014 Plans:*** Will continue EMD for the aging High Speed Aerial Target (HSAT, MQM-107) that will provide a realistic aerial target capable of simulating the performance of enemy aircraft to aid in the reseach, development, test, and evaluation of weapons systems and to aid in training operational units employing producton missile systems. Funds will be required to overcome obsolescence for spare and repair parts, and to maintain equipment and documentation for safe operations supporting T&E programs such as Patriot, Stinger, JLENS, MEADS, and classified programs for Army and Tri-Service customers.	1.263 0	1.357 0	1.386
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Target Tracking Control Systems (TTCS) and aerial target control components. ***Articles:*** ***Description:*** Continue EMD phase contract activities for the TTCS and aerial target control components. ***FY 2012 Accomplishments:***	0.597 0	0.620 0	0.649

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continued EMD for the TTCS and aerial target control components. Provided design modifications to solve obsolescence problems and updated software to correct anomalies. Provided software performance enhancement modifications to support T&E missions, improved test sets and developed upgraded operator displays. Updated documentation of the system and operations and maintenance manuals. Supported operational repair and maintenance with engineering analysis of target control system performance. Provided support to programs such as Patriot, MEADS, and others. ***FY 2013 Plans:*** Continues EMD for the TTCS and aerial target control components. Provides for design modifications to solve obsolescence problems and updates software to correct anomalies. Provides for software performance enhancement modifications to support T&E missions, improves test sets and developes upgraded operator displays. Updates documentation of the system and operations and maintenance manuals. Supports operational repair and maintenance with engineering analysis of target control system performance. Provides support to programs such as Patriot, MEADS, and others. ***FY 2014 Plans:*** Will continue EMD for the TTCS and aerial target control components. Will provide for design modifications to solve obsolescence problems and updates software to correct anomalies. Will provide for software performance enhancement modifications to support T&E missions, improve test sets and develop upgraded operator displays. Will update documentation of the system and operations and maintenance manuals. Will support operational repair and maintenance with engineering analysis of target control system performance. This will provide support to programs such as Patriot, MEADS, and others.			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Towed Targets/Ancillary devices.	0.723	0.783	1.119
Articles:	0	0	
Description: Continue EMD phase contract activities for the Towed Targets/Ancillary devices. ***FY 2012 Accomplishments:*** Continued EMD for the Towed Targets/Ancillary devices. Continued development, enhancement, maintenance, and storage for all RDT&E aerial targets, towed targets, and ancillary devices. Continued development and testing of Low Cost Towed target systems (Cruise Missile Tow Target, Reduced Radar Tow Target, and the Special Low Altitude Tow Target) emulating current threats at a very low cost to Patriot, JLENS and classified customers. Signature modification and performance enhancement efforts for these targets is ongoing. Investigated/tested other cost-saving towed systems (Glide-Tow, Height-Keeping-Tow, and Tow Test Bed) for Air Defense Weapons System customers. ***FY 2013 Plans:*** Continues EMD for the Towed Targets/Ancillary devices. Continues development, enhancement, maintenance, and storage for all RDT&E aerial targets, towed targets, and ancillary devices. Continues development and testing of Low Cost Towed target systems (Cruise Missile Tow Target, Reduced Radar Tow Target, and the Special Low Altitude Tow Target) emulating current			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604258A: *TARGET SYSTEMS DEVELOPMENT*	PROJECT 238: *Aerial Targets*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
threats at a very low cost to Patriot, JLENS and classified customers. Signature modification and performance enhancement efforts for these targets is ongoing. Investigates/tests other cost-saving towed systems (Glide-Tow, Height-Keeping-Tow, and Tow Test Bed) for Air Defense Weapons System customers. ***FY 2014 Plans:*** Will continue EMD for the Towed Targets/Ancillary devices. Will continue development, enhancement, maintenance, and storage for all RDT&E aerial targets, towed targets, and ancillary devices. Will continue development and testing of Low Cost Towed target systems (Cruise Missile Tow Target, Reduced Radar Tow Target, and the Special Low Altitude Tow Target) emulating current threats at a very low cost to Patriot, JLENS and classified customers. Signature modification and performance enhancement efforts for these targets is ongoing. Will investigate/test other cost-saving towed systems (Glide-Tow, Height-Keeping-Tow, and Tow Test Bed) for Air Defense Weapons System customers.			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Integrated Avionics Package (IAP). ***Articles:*** ***Description:*** Continue EMD phase contract activities for the IAP. ***FY 2012 Accomplishments:*** Continued EMD for the IAP. Designed component changes to correct for obsolescence. Updated software to correct issues and to modify the software to support specific test and evaluation mission requirements. IAP provided the avionics for aerial targets to support multiple mission requirements for programs such as Patriot and MEADS. ***FY 2013 Plans:*** Continues EMD for the IAP which provides the avionics for aerial targets to support multiple mission requirements for programs such as Patriot, and MEADS. Designs component changes to correct for obsolescence. Updates software to correct issues and to modify the software to support specific test and evaluation mission requirements. ***FY 2014 Plans:*** Will continue EMD for the IAP which provides the avionics for aerial targets to support multiple mission requirements for programs such as Patriot, and MEADS. Will design component changes to correct for obsolescence. Will update software to correct issues and to modify the software to support specific test and evaluation mission requirements.	0.317 0	0.258 0	0.271
Title: Engineering and Manufacturing Development (EMD) phase contract activity for Aerial Virtual Targets. ***Articles:*** ***Description:*** Continue EMD phase contract activities for Aerial Virtual Targets. ***FY 2012 Accomplishments:***	0.911 0	1.031 0	1.098

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continued EMD for Aerial Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques; focused on simulation target models of airplanes, helicopters, missiles, unmanned aerial vehicles, and aerial targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations; supported verification and validation of models, and provided archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models are employed to facilitate simulations for developmental testing (DT) and operational testing (OT) test planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models were being used by multiple DoD agencies and multiple weapon systems such as Close Combat Weapon System (CCWS) and Lower Tier Program offices.			
FY 2013 Plans: Continues EMD for Aerial Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques; focusse on simulation target models of airplanes, helicopters, missiles, unmanned aerial vehicles, and aerial targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations; supports verification and validation of models, and provides archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models are employed to facilitate simulations for developmental testing (DT) and operational testing (OT) test planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models are being used by multiple DoD agencies and multiple weapon systems such as Close Combat Weapon System (CCWS) and Lower Tier Program offices.			
FY 2014 Plans: Will continue EMD for Aerial Virtual Targets for evolving Army and DoD simulation standards and evolving implementation techniques; will focus on simulation target models of airplanes, helicopters, missiles, unmanned aerial vehicles, and aerial targets in commonly used formats to support visualization, infrared analysis, and radar analysis simulations; will support verification and validation of models, and provides archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models are employed to facilitate simulations for developmental testing (DT) and operational testing (OT) test planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models will be used by multiple DoD agencies and multiple weapon systems such as Close Combat Weapon System (CCWS) and Lower Tier Program offices.			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Army Ground Aerial Target Control System (AGATCS).	2.567	4.962	4.928
Articles:	0	0	
Description: EMD phase contract activities for the Army Ground Aerial Target Control System (AGATCS). which will support a modern current technology target control system for control of both aerial and ground targets.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Continued EMD for the AGATCS which provided a modern current technology target control system for control of both aerial and ground targets. The system incorporated software for control of existing targets and provisions for control of future target systems. Replaced the existing aerial target control TTCS and several different ground target control systems that became obsolete and non-supportable with a Department of Defense Information Assurance Certification and Accreditation Process (DIACAP) compliant control system. Provided control system components within the aerial and ground targets to be controlled by the AGATCS. Provided support to programs such as Patriot, MEADS, E-IBCT, Apache, and others. ***FY 2013 Plans:*** Continues EMD for the AGATCS which provides a modern current technology target control system for control of both aerial and ground targets. The system incorporates software for control of existing targets and provisions for control of future target systems. Replaces the existing aerial target control TTCS and several different ground target control systems that becomes obsolete and non-supportable with a DIACAP compliant control system. Provides control system components within the aerial and ground targets to be controlled by the AGATCS. Provides support to programs such as Patriot, MEADS, E-IBCT, Apache, and others. ***FY 2014 Plans:*** Will continue EMD for the AGATCS which will provide a modern current technology target control system for control of both aerial and ground targets. The system will incorporate software for control of existing targets and will have provisions for control of future target systems. Will replace the existing aerial target control TTCS and several different ground target control systems that have become or will soon become obsolete and non-supportable with a DIACAP compliant control system. Will provide control system components within the aerial and ground targets to be controlled by the AGATCS. This will provide support to programs such as Patriot, MEADS, E-IBCT, Apache, and others.			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Unmanned Aerial System - Target (UAS-T). ***Articles:*** ***Description:*** Continue EMD phase contract activities for the UAS-T to provide threat representative support for test and experimentation missions. ***FY 2012 Accomplishments:*** Continued EMD for the UAS-T to operate and maintain a generic, tactical class, unmanned aircraft system target to support a wide variety of test requirements as well as to provide threat representative support for test and experimentation missions including Counter Rockets, Artillery and Mortars (C-RAM), Black Dart 2012, missile enhancements and Littoral Combat Ship testing. Funds enabled identification and correction of system anomalies identified during operations. Provided for the demonstration flights of production air vehicles to verify the performance of the production equipment. Provided limited engineering capability to address	0.562 0	0.573 0	0.580

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
minor enhancements to the basic target system identified during operations. Provided for the updating of the system drawing package and Operation and Maintenance manual to incorporate modifications made to the system. ***FY 2013 Plans:*** Continues EMD for the UAS-T to operate and maintain a generic, tactical class, unmanned aircraft system target to support a wide variety of test requirements as well as to provide threat representative support for test and experimentation missions including Counter Rockets, Artillery and Mortars (C-RAM), Black Dart 2013, missile enhancements and Littoral Combat Ship testing. Funds enable identification and correction of system anomalies identified during operations. Provides for the demonstration flights of production air vehicles to verify the performance of the production equipment. Provides limited engineering capability to address minor enhancements to the basic target system identified during operations. Provides for the updating of the system drawing package and Operation and Maintenance manual to incorporate modifications made to the system. ***FY 2014 Plans:*** Will continue EMD for the UAS-T to operate and maintain a generic, tactical class unmanned aircraft system target to support a wide variety of test requirements by providing generic threat representative support for test and experimentation missions. Projects to be supported include the Counter Rockets, Artillery and Mortars (C-RAM) project, Stinger proximity fuse development and testing, other missile system upgrade project, JIAMDO sponsored Black Dart 2014, Littoral Combat Ship, and a variety of research and development efforts. Funds will enable the identification and correction of system anomalies identified during operations and the flight demonstration of system corrections. Funds will provide for limited engineering capability to address minor enhancements to the basic target system to meet shortcomings identified during operations. Funds will also provide for updating of the system drawing package and systems documents to incorporate modifications made to the system.			
Accomplishments/Planned Programs Subtotals	7.424	10.052	10.031

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
459: *Ground Targets*	-	3.549	3.982	3.457	-	3.457	3.377	3.410	7.731	4.042	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program funds Army efforts to support test and evaluation (T&E) of advanced weapon systems and supports Army Transformation by developing surrogates, acquiring foreign equipment and developing virtual target computer models of ground vehicle targets. These products are required to adequately stress weapon systems undergoing T&E. This tasking includes long-range planning to determine future target needs and development of coordinated requirement documents; the centralized management of the ground target research, development, test and evaluation processes; execution of the validation process; acquisition of foreign equipment; and continuing maintenance, storage, and development/enhancement/update via engineering services of developed and acquired targets to ensure availability for T&E customers. This program also manages use of current assets and operates centralized spare parts program. The US Army is the Tri-Service lead for providing mobile ground targets for T&E.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Mobile Ground Target Operations	2.553	2.798	2.755
Articles:	0	0	

Description: Mobile Ground Target Operations to provide oversight of five Primary Operating Centers to include operation, storage, maintenance, repair, safety and configuration management. Efforts support users such as Brigade Modernization Command (BMC), Apache Block III, Guided Multiple Launch Rocket System (GMLRS),PM Robotic Unmanned Sensor (PM RUS), Small Diameter Bomb (SDB II), PM Unmanned Aircraft Systems (PM UAS) and others.

FY 2012 Accomplishments:

Continued to fund the Mobile Ground Target Operations to provide oversight of five Primary Operating Centers to include operation, storage, maintenance, repair, safety and configuration management for 138 active and 171 inactive Foreign Mobile Ground Target Vehicles, and acquisition of new material and spare parts. Efforts supported users such as Brigade Modernization Command (BMC), Apache Block III, Guided Multiple Launch Rocket System (GMLRS),PM Robotic Unmanned Sensor (PM RUS), Small Diameter Bomb (SDB II), PM Unmanned Aircraft Systems (PM UAS) and others.

FY 2013 Plans:

Mobile Ground Target Operations will provide oversight of five Primary Operating Centers to include operations, storage, maintenance, repair, safety and configuration management for 105 active and 205 inactive Foreign Mobile Ground Target

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604258A: *TARGET SYSTEMS DEVELOPMENT*	PROJECT 459: *Ground Targets*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Vehicles, and acquisition of new material and spare parts. Efforts support users such as ATEC, Apache Block-III, GMLRS, Brigade Modernization Command, KIOWA, Ground Combat Vehicle, Shadow and others. ***FY 2014 Plans:*** Mobile Ground Target Operations provides oversight of five Primary Operating Centers to include operations, storage, maintenance, repair, safety and configuration management for 105 active and 205 inactive Foreign Mobile Ground Target Vehicles, and acquisition of new material and spare parts. Efforts support users such as ATEC, Apache Block-III, GMLRS, Brigade Modernization Command, KIOWA, Ground Combat Vehicle, Shadow and others.			
Title: Mobile Ground Target Hardware ***Articles:*** ***Description:*** Mobile Ground Targets provides threat fleet with up to date threat representative ground targets that emulate the visual, infrared, radio frequency and acoustic signatures. These ground targets include: 1) air defense systems with emitters 2) main battle tanks; 3) infantry fighting vehicles, 4) armored personnel carriers, 5) Decoys and 6) insurgent representation to adequately stress weapon sensors and provide realistic maneuvers, and communications. Provides targets for multiple customers' DT & OT events to include ATEC, Apache Block-III, GMLRS, Brigade Modernization Command, KIOWA, Ground Combat Vehicle, Shadow and others. ***FY 2013 Plans:*** Mobile Ground Targets provides threat fleet with up to date threat representative ground targets that emulate the visual, infrared, radio frequency and acoustic signatures. These ground targets include: 1) air defense systems with emitters 2) main battle tanks; 3) infantry fighting vehicles, 4) armored personnel carriers, 5) Decoys and 6) insurgent representation to adequately stress weapon sensors and provide realistic maneuvers, and communications. Provides targets for multiple customers' DT & OT events to include ATEC, Apache Block-III, GMLRS, Brigade Modernization Command, KIOWA, Ground Combat Vehicle, Shadow and others.	0.000	0.456 0	0.000
Title: Ground Virtual Targets ***Articles:*** ***Description:*** Government System Test and Evaluation to support the research and development of Ground Virtual Targets. ***FY 2012 Accomplishments:*** Continued Government System Test and Evaluation to fund the research and development of Ground Virtual Targets for evolving Army and DoD simulation standards and implementation techniques. Focused on simulation target models of wheeled and tracked ground vehicles in commonly used model formats; developed simulation target models visualization simulations, infrared (IR) analysis simulations, and radio frequency (RF) analysis simulations; supported verification and validation of models,	0.739 0	0.728 0	0.702

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
and provides archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models were employed to facilitate simulations for both developmental testing (DT) and operational testing (OT); Virtual Targets support test planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models were used by multiple DoD agencies and multiple weapon systems such as the Joint Air to Ground Missile (JAGM) and Longbow Hellfire offices. ***FY 2013 Plans:*** Continue Government System Test and Evaluation to fund the research and development of Ground Virtual Targets for evolving Army and DoD simulation standards and implementation techniques. Focus on simulation target models of wheeled and tracked ground vehicles in commonly used model formats; develop simulation target models visualization simulations, infrared (IR) analysis simulations, and radio frequency (RF) analysis simulations; support verification and validation of models, and provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models are employed to facilitate simulations for both developmental testing (DT) and operational testing (OT); Virtual Targets support test planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models are used by multiple DoD agencies and multiple weapon systems such as the Joint Air to Ground Missile (JAGM) and Longbow Hellfire offices. ***FY 2014 Plans:*** Will continue Government System Test and Evaluation to fund the research and development of Ground Virtual Targets for evolving Army and DoD simulation standards and implementation techniques. Will focus on simulation target models of wheeled and tracked ground vehicles in commonly used model formats; will develop simulation target models visualization simulations, infrared (IR) analysis simulations, and radio frequency (RF) analysis simulations; will support verification and validation of models, and will provide archiving and distribution of simulation target models to simulation developers throughout the Army and DoD T&E communities. Simulation target models will be employed to facilitate simulations for both developmental testing (DT) and operational testing (OT); Virtual Targets support test planning, test rehearsal, post-test analysis, hardware-in-the-loop testing, and execution of test events that are too costly or difficult to be conducted under actual field conditions. These models will be used by multiple DoD agencies and multiple weapon systems such as the Joint Air to Ground Missile (JAGM) and Longbow Hellfire offices.			
Title: Operational Threat Vehicle Company ***Articles:*** ***Description:*** To fund the acquisition and fielding of fully mission capable targets (T-72 Main Battle Tanks, BMP-2 Infantry Fighting Vehicles, and BTR-80 Armored Personnel Carriers). ***FY 2012 Accomplishments:***	0.257 0	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604258A: *TARGET SYSTEMS DEVELOPMENT*	PROJECT 459: *Ground Targets*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Completed the effort to fund certification and fielding of fully mission capable targets (T-72 Main Battle Tanks, BMP-2 Infantry Fighting Vehicles, and BTR-80 Armored Personnel Carriers) to meet emerging requirements for threat representative missions. Provided realistic threat capable targets for use in force-on-force exercises to allow Blue Forces to think and adapt to the changing battle dynamic as it unfolds.			
Accomplishments/Planned Programs Subtotals	3.549	3.982	3.457

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	47.972	37.394	46.672	-	46.672	52.631	58.144	58.448	58.160	Continuing	Continuing
983: *Reagan Test Site (RTS) T&E Investments*	-	8.489	8.823	7.762	-	7.762	7.526	7.261	7.383	0.000	Continuing	Continuing
984: *Major Developmental Testing Instrumentation*	-	30.682	21.615	33.253	-	33.253	39.146	42.818	43.661	49.722	Continuing	Continuing
986: *Major Operational Test Instrumentation*	-	8.801	6.956	5.657	-	5.657	5.959	8.065	7.404	8.438	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Change Summary Explanation: Replacing obsolete radar increased requirements for Range Radar Replacement Program.

A. Mission Description and Budget Item Justification

This program funds the development and acquisition of major developmental test instrumentation for the U.S. Army Test and Evaluation Command's (ATEC) test activities: White Sands Test Center (WSTC), NM; Yuma Test Center, (YTC), AZ; Aberdeen Test Center (ATC), MD; Electronic Proving Ground (EPG), AZ; Redstone Test Center (RTC), AL; and for the Reagan Test Site (RTS) at the U.S. Army Kwajalein Atoll (USAKA), which is managed by the Space and Missile Defense Command. The program also funds development and acquisition of Operational Test Command's (OTC) major field instrumentation. Requirements for instrumentation are identified through a long range survey of project managers, Research Development and Engineering Centers (RDECs), and Battle Laboratories developing future weapon systems and the test programs that support these systems. Army testing facilities are also surveyed to determine major testing capability shortfalls.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*		R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*			
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	49.359	37.394	39.178	-	39.178
Current President's Budget	47.972	37.394	46.672	-	46.672
Total Adjustments	-1.387	0.000	7.494	-	7.494
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.387	-			
• Adjustments to Budget Years	-	-	7.494	-	7.494

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 983: *Reagan Test Site (RTS) T&E Investments*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
983: *Reagan Test Site (RTS) T&E Investments*	-	8.489	8.823	7.762	-	7.762	7.526	7.261	7.383	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This activity funds improvement and modernization (I&M) for the Ronald Reagan Ballistic Missile Defense Test Site (RTS). Funding upgrades and combats parts obsolescence of the radars, telemetry, optics, range safety, communications, command/control and other equipment essential to meet requirements of the Services and DoD agencies and crucial for investment protection of the sensor suite. These upgrades are critical both to maintain a state of the art instrumentation suite and to the successful collection of data supporting test and evaluation assessments and operational decisions for the Army; Navy; Air Force; U.S. Strategic Command (STRATCOM); Missile Defense Agency (MDA); Defense Advanced Research Projects Agency (DARPA); National Aeronautics and Space Administration (NASA); and other customers. Reagan Test Site (RTS) located in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: RTS Optics Modernization Program (ROMP)	1.600	1.250	0.000
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Modernized RTS optics sensor suite, fixing deficiencies and enabling remote operations of the equipment.			
FY 2013 Plans: Continues to modernize RTS optics sensor suite, fixing deficiencies and enabling remote operations of the equipment			
Title: Radar Reliability Improvement Program (RRI).	0.457	0.750	0.587
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 983: *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continued to address technology refresh, obsolescence and sustainment issues for critical radar system operation. ***FY 2013 Plans:*** Continues to address technology refresh, obsolescence and sustainment issues for critical radar system and L-Band Modulator operation. ***FY 2014 Plans:*** Will continue to address critical RADAR issues related to component obsolescence and sustainment that require significant re-design to incorporate commercially available options.			
Title: Radar Computer and Software Refresh ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Designing risk reduction prototype of replacement main radar computer for all RTS radars and refresh software to run on new hardware. Completed Multi Millimeter Wave (MMW) replacement. ***FY 2013 Plans:*** Continues to upgrade the system to a more common and widely available hardware platform with multiple vendor support and software.	2.211 0	0.650 0	0.000
Title: MMW Limited Bandwidth (BW) Expansion Program. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Completed the Upgrade of MMW bandwidth to 4 Gigahertz (GHz).	0.450 0	0.000	0.000
Title: Telemetry (TM) Modernization Study. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:***	0.050 0	0.500 0	0.460

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 983: *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Replaced outdated TM equipment with modern digital systems and enabled remote operation. Started software prototype of next gen software radio approach. ***FY 2013 Plans:*** Continues to replace outdated TM equipment with modern digital systems and enable remote operation. ***FY 2014 Plans:*** Will continue extended software radio approach.			
Title: Multiple Simultaneous Engagement (MSE) Flight Safety. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Modernized and upgraded flight safety systems to accommodate customer requirements for 2x2 engagement. ***FY 2013 Plans:*** Continues to modernize and upgrade flight safety systems to accomodate customer requirements. ***FY 2014 Plans:*** Will design and implement Range Safety Systems (RSS) upgrade of safety control system replacement.	0.159 0	1.050 0	0.610
Title: Legacy Servo Upgrade Program. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to replace and upgrade obsolete antenna servos and interlock systems at the RTS radars. ***FY 2013 Plans:*** Continues to replace and upgrade obsolete antenna serves and interlock systems at the RTS radars. ***FY 2014 Plans:*** Will continue to replace and upgrade obsolete antenna serves and interlock systems at the RTS radars.	0.642 0	0.950 0	1.100
Title: Mission Data Network (MDN) Modernization. ***Articles:*** ***Description:*** MDN Modernization.	2.120 0	2.395 0	1.100

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 983: *Reagan Test Site (RTS) T&E Investments*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Targeted improvements to mission network security architecture. Replaced outdated network equipment and improve on-atoll bandwidth to support increasing mission critical customer requirements. ***FY 2013 Plans:*** Continues replacing outdated network equipment and will improve on-atoll bandwidth to support increasing mission critical customer requirements. ***FY 2014 Plans:*** Will continue new network architecture changes to improve on-toll bandwidth to support increasing custom requirements..			
Title: RTS Automation and Decision Support. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Addition of automation measures and more sophisticated algorithms to improve operator efficiency. ***FY 2013 Plans:*** Continues addition of automation measures and more sophisticated algorithms to improve operator efficiency. ***FY 2014 Plans:*** Will continue addition of automation measures and more sophisticated algorithms to improve operator efficiency.	0.800 0	1.278 0	1.475
Title: TRADEX L-Band Modulator ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will continue replacement tube-based modulator and legacy high-voltage power supply with a commercial solid-state unit.	0.000	0.000	2.430
Accomplishments/Planned Programs Subtotals	8.489	8.823	7.762

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 983: *Reagan Test Site (RTS) T&E Investments*

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 984: *Major Developmental Testing Instrumentation*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
984: *Major Developmental Testing Instrumentation*	-	30.682	21.615	33.253	-	33.253	39.146	42.818	43.661	49.722	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project develops and acquires major test instrumentation to perform developmental testing of weapon systems at U. S. Army Test and Evaluation Command's (ATEC) activities which include: Yuma Test Center (YTC), AZ; Aberdeen Test Center (ATC), MD; Electronic Proving Ground (EPG), AZ; White Sands Test Center (WSTC), NM; Redstone Test Center (RTC), AL.

Projects are designated as a major test program based on their visibility, assessed relative technical risk (medium-high), schedule risk, cost (generally greater than $1.5 Million per year or $7.5 Million for the total project) and applicability to other mission areas or services. These projects are technically demanding, state-of-the-art, unique instrumentation assets or suites to meet the technology shortfalls, and generally result from development programs managed by a professional project management team.

Fiber Optic Network II (FON II) is the installation of digital fiber optic cable and transmission electronics to modernize, secure and expand the backbone telecommunication and data transmission network in support of Aberdeen Test Center. Systems Test and Integration Laboratory (STIL) is the development of a systems integration and test lab for use in developmental testing and integration engineering, including a virtual test environment to support integration testing of aviation electronic systems as a part of modernization of army aircraft. Advanced Distributed Modular Acquisition System (ADMAS) Product Improvement Program (PIP) develops very small and low power pocket sized ADMAS systems which will extend the Versatile Information Systems Integrated Online system's (VISION) capabilities to support dismounted and small robotic platforms. Range Radar Replacement Program (RRRP) will replace obsolete tracking radars at Redstone Test Center (RTC), Aberdeen Test Center (ATC), Electronic Proving Ground (EPG), White Sands Missile Range (WSMR) and Yuma Proving Ground (YPG) with modern instrumentation radars. CRIIS Objective Program provides precision location instrumentation which will significantly increase the T&E ranges' capability to meet the test instrumentation needs of the tri-service range users. Electromagnetic Environmental Effects (E3) Electromagnetic Radiation Effects (EMRE) Systems Modernization will upgrade equipment at the WSMR EMRE site where E3 testing is performed to evaluate survivability and vulnerability of military systems. Project will upgrade and replace signal transmitters, refurbish an anechoic test chamber, replace data acquisition equipment and install a new turntable to support test items. Nuclear Effects Test Capability Modernization upgrades nuclear facilities at White Sands Missile Range (WSMR). These upgrades include the Relativistic Electron Beam Accelerator (REBA), Fast Burn Reactor, Gamma Range Facility, Linear Electron Accelerator (LINAC), Electromagnetic Pulse and the Solar Furnace. Warrior Injury Assessment Manikin (WIAMan) Anthropomorphic Test Device (ATD) plans to develop and produce Warrior-representative ATDs that incorporate associated biomedically-validated injury assessment tools to better characterize dynamic events and injury risks measured in Live Fire Test & Evaluation (LFT&E) and vehicle development efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 984: *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Fiber Optic Network II (FON II) - Aberdeen Test Center (ATC) ***Articles:*** ***Description:*** Continue EMD phase contract activities for the Fiber Optic Network II (FON II) - Aberdeen Test Center (ATC). ***FY 2012 Accomplishments:*** Completed EMD for the Fiber Optic Network II (FON II) - Aberdeen Test Center (ATC). Completed installation of digital fiber optic cable and transmission electronics to modernize, secure and expand the backbone telecommunication and data transmission network in support of Aberdeen Test Center.	2.301 0	0.000	0.000
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Systems Test and Integration Laboratory (STIL). ***Articles:*** ***Description:*** Continue EMD phase contract activities for the Systems Test and Integration Laboratory (STIL). ***FY 2012 Accomplishments:*** Continued EMD for the Systems Test and Integration Laboratory (STIL) for use in developmental testing and integration engineering, including a virtual test environment to support integration testing of aviation electronic systems as a part of modernization of army aircraft. ***FY 2013 Plans:*** Continues EMD for the Systems Test and Integration Laboratory (STIL) for use in developmental testing and integration engineering, including a virtual test environment to support integration testing of aviation electronic systems as a part of modernization of army aircraft. ***FY 2014 Plans:*** Will continue EMD for the Systems Test and Integration Laboratory (STIL) for use in developmental testing and integration engineering, including a virtual test environment to support integration testing of aviation electronic systems as a part of modernization of army aircraft.	3.851 0	5.940 0	5.135
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Advanced Distributed Modular Acquisition System (ADMAS). ***Articles:*** ***Description:*** EMD phase contract activities for the Advanced Distributed Modular Acquisition System (ADMAS) Product Improvement Program (PIP).	1.665 0	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 984: *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Completed EMD for the Advanced Distributed Modular Acquisition System (ADMAS) Product Improvement Program (PIP). Completed the development of very small and low power pocket sized ADMAS systems. ADMAS PIP completed expansion of the current ADMAS Instrumentation Suite, comprised of the Macro and Micro ADMAS. The expansion included updates to the existing hardware and software of current suite, plus the development of two new devices (Nano and Pico ADMAS).			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Range Radar Replacement Program. ***Articles:*** ***Description:*** EMD phase contract activities for the Range Radar Replacement Program. ***FY 2012 Accomplishments:*** Continued Engineering Manufacturing Development (EMD) for the Range Radar Replacement Program for the Fly-out and Close-in Radars systems in preparation for replacement of equipment at Aberdeen Test Center (ATC), Redstone Test Center (RTC), White Sands Test Center (WSTC) and Yuma Test Center (YTC). ***FY 2013 Plans:*** Continues Engineering Manufacturing Development (EMD) for the Range Radar Replacement Program for the Fly-out and Close-in Radars systems in preparation for replacement of equipment at Aberdeen Test Center (ATC), Redstone Test Center (RTC), White Sands Test Center (WSTC) and Yuma Test Center (YTC). ***FY 2014 Plans:*** Will continue Engineering Manufacturing Development (EMD) for the Range Radar Replacement Program for the Fly-out and Close-in Radars systems in preparation for replacement of equipment at Aberdeen Test Center (ATC), Redstone Test Center (RTC), White Sands Test Center (WSTC) and Yuma Test Center (YTC).	16.921 0	15.675 0	22.086
Title: Engineering and Manufacturing Development (EMD) phase contract activity of the Common Range Integrated Instrumentation System (CRIIS) Objective Program. ***Articles:*** ***Description:*** Starts EMD phase contract activities of the Common Range Integrated Instrumentation System (CRIIS) Objective Program. ***FY 2012 Accomplishments:*** Started EMD of the Common Range Integrated Instrumentation System (CRIIS) Objective Program. This was a replacement system for the Advanced Range Data System (ARDS). This system met the critical need for measuring the precision location of units under test within the Time-Space domain. It provided a significant increase to the Test & Evaluation ranges' capability	0.272 0	0.000	0.769

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 984: *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
to meet the test instrumentation needs of the tri-service range users. The improvements were data link, TSPI accuracy, miniaturization, standard interfaces, and system encryption. ***FY 2014 Plans:*** Will continue start of EMD of the Common Range Integrated Instrumentation System (CRIIS) Objective Program. This will be a replacement system for the Advanced Range Data System (ARDS). This system will meet the critical need for measuring the precision location of units under test within the Time-Space domain. It will provide a significant increase to the Test & Evaluation ranges' capability to meet the test instrumentation needs of the tri-service range users. The improvements will be the data link, TSPI accuracy, miniaturization, standard interfaces, and sytem incryption.			
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the E3 Systems Modernization (EMRE) project. ***Articles:*** ***Description:*** EMD phase contract activities for the E3 Systems Modernization (EMRE) project. ***FY 2012 Accomplishments:*** Started EMD for the E3 Systems Modernization (EMRE). Project upgraded and replaced signal transmitters, refurbish an anechoic test chamber, replace data acquisition equipment and install a new turntable to support test items. ***FY 2014 Plans:*** Will continue the EMD for the E3 Systems Modernization (EMRE) T2 and T3 transmitter systems. Project will continue to upgrade and replace signal transmitters, refurbish an anechoic test chamber, replace data acquisition equipment and install a new turntable to support test items.	5.672 0	0.000	3.613
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Nuclear Effects Test Capability Modernization. ***Description:*** Will begin the EMD phase contract activity for the Nuclear Effects Test Capability Modernization. ***FY 2014 Plans:*** Will start the Engineering and Manufacturing Development (EMD) phase contract activity for the Nuclear Effects Test Capability Modernization. This program will upgrade nuclear facilities at White Sands Missile Range (WSMR).	0.000	0.000	0.850
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Warrior Injury Assessment Manikin (WIAMan) Anthropomorphic Test Device (ATD). ***Description:*** Begin the EMD phase contract activity for the WIAMan Anthropomorphic Test Device (ATD).	0.000	0.000	0.800

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 984: *Major Developmental Testing Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2014 Plans: Will begin the EMD phase contract activity for the WIAMan Anthropomorphic Test Device (ATD). This program will develop and produce Warrior-representative ATDs that incorporate associated biomedically-validated injury assessment tools to better characterize dynamic events and injury risks measured in Live Fire Test & Evaluation (LFT&E) and vehicle development efforts.			
Accomplishments/Planned Programs Subtotals	30.682	21.615	33.253

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 986: *Major Operational Test Instrumentation*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
986: *Major Operational Test Instrumentation*	-	8.801	6.956	5.657	-	5.657	5.959	8.065	7.404	8.438	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Operational Test Command (OTC) Advanced Simulation & Instrumentation Systems (OASIS) Enterprise Integration System (EIS) will transition to Army Test and Evaluation Command (ATEC) Test and Evaluation Enterprise Architecture (ATEA).

A. Mission Description and Budget Item Justification

Major Instrumentation and Modeling and Simulation (M&S) in Support of Network Integration Test will develop Major Instrumentation and M&S efforts in support of Network Integration Test related to data and voice communications upgrades for White Sands Missile Range (WSMR), additional common data collection devices, and updated, Army Test and Evaluation Command (ATEC)-wide, distributed data storage, analysis software, and tools. In addition, development and fielding a Real-Time, Hardware-in-the-Loop, M&S Federation, which can be accredited and portray Blue and Threat Computer Network Device (CND) and Controller Area Network (CAN).

Test and Training Common Technology Initiative, Network, Real Time Casualty Assessment (RTCA), Data Collection and After Action Review (AAR) will develop and sustain Army Test and Training Instrumentation Test Bed, support Trade-Off Studies, Development of Common Standards, Analysis of Alternatives, Cost Benefit Analyses, Test Technology Demonstrations and/or Technology Readiness Events. This capability will also provide risk reduction to future developed assets required to meet test and training needs. These tools will collect, store and analyze data from this new dimension of digital battlefield warfare. This effort responds to the current Operations Tempo (OPTEMPO) and Personnel Tempo (PERSTEMPO) demands to force the U.S. Army by virtually replicating a greater number of troop resources in force-on-force testing and training exercises to conduct more realistic, accurate, and comprehensive evaluations at reduced costs.

Operational Test Command (OTC) Advanced Simulation & Instrumentation Systems (OASIS) Enterprise Integration System (EIS) supports the OTC simulation and test support capabilities will transition to Army Test and Evaluation Command (ATEC) Test and Evaluation Enterprise Architecture (ATEA). Operational testing of enterprise/systems of systems (SoS) capabilities requires an integrated test technology tools enterprise: 1) Test Planning & Control systems/networks, 2) Live-virtual-constructive (LVC) simulations, 3) Data Collection, Reduction, Analysis (DCRA), and visualization tools and 4) tactical systems and networks. The OASIS-EIS will support test tool integration in three major areas: 1) harmonize OT test technology integration with other acquisition efforts (RTCA, networks, data collection) at the ATEC level, 2) Joint Network Emulation (JNE) program management to PEO-STRI (PM-ITTS) to support leverage by other PEO STRI and ATEC offices (initially TSMO, EPG and RTC), and 3) develop an ATEC and PEO-STRI program to achieve efficiencies and cost savings through shared development and enhancement of key simulation (primarily gaming, virtual, and constructive), and LVC integration capabilities. Initial focus for shared simulation/LVC enablers will be in the area of network, fires and ISR simulations and LVC architecture planning, engineering and integration tools.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 986: *Major Operational Test Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Operational Test Command (OTC) Advanced Simulation and Instrumentation System (OASIS) Enterprise Integration Solution.	0.740	0.786	3.041
Articles:	0	0	
Description: EMD phase contract activities for the Operational Test Command (OTC) Advanced Simulation and Instrumentation System (OASIS) Enterprise Integration System (EIS). ***FY 2012 Accomplishments:*** Continued EMD by developing Operational Test Command (OTC) Advanced Simulation and Instrumentation Suite (OASIS) Enterprise Integration System (EIS). Funding provided the connecting infrastructure within the enterprise to create a comprehensive operational testing Live-Virtual-Constructive (LVC) environment which also enabled and supported test control, and data collection, reduction and analysis (DCRA). Developed and delivered capabilities that were necessary to adequately support evaluation of emerging systems. Systems lacked the capabilities needed to collect test data during operational tests to provide an adequate level of confidence. Without the necessary data, evaluations of Army systems will be inaccurate and incomplete. Testing of complex systems was too expensive, and augmentation of system under test and ensuring confidence in the test is the only cost effective method. Systems may include, Network Integration Event (NIE) (13.1, 13.2), Defense Common Ground Station-Army (DGCS-A), Warfighter Information Network (WIN-T), Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS). ***FY 2013 Plans:*** Continues EMD by developing Operational Test Command (OTC) Advanced Simulation and Instrumentation Suite (OASIS) Enterprise Integration System (EIS). Funding supports integration of Federation members by OASIS EIS into a LVC environment to support OTC's operational testing support requirements for Joint Network Emulation (JNE), Network Integration Event (NIE) (13.1, 13.2), Defense Common Ground Station-Army (DGCS-A), Warfighter Information Network (WIN-T), Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS). ***FY 2014 Plans:*** Start EMD by expanding into Army Test and Evaluation Command (ATEC) Test and Evaluation Enterprise Architecture (ATEA). Funding will support integration of Federation members by ATEA into the larger ATEC community and support an enterprise into a LVC environment to support testing requirements for Network Integration Event (NIE) (14.1, 14.2), Defense Common Ground Station-Army (DGCS-A), Warfighter Information Network (WIN-T), Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS).			
Title: Major Instrumentation and Modeling and Simulation (M&S) in Support of Network Integration Test	4.862	5.000	1.616
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 986: *Major Operational Test Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Develop Major Instrumentation and Modeling and Simulation (M&S) efforts in support of Network Integration Test. In addition, develop and field a Real-Time, Hardware-in-the-Loop, M&S Federation, which can be accredited and portray Blue and Threat Computer Network Device (CND) and Controller Area Network (CAN) ***FY 2012 Accomplishments:*** Began development of Major Instrumentation and Modeling and Simulation (M&S) efforts in support of Network Integration Test related to limited data and voice communications upgrades for White Sands Missile Range (WSMR). ***FY 2013 Plans:*** Continues to fund critical Major Instrumentation and M&S efforts in support of Network Integration Test related to limited fiber upgrades for WSMR, additional Net Advanced Distributed Modular Acquisition System (ADMAS) Production, and updates, Army Test and Evaluation Command (ATEC)-wide distributes data storage, analysis software and tools. ***FY 2014 Plans:*** Will continue to fund critical Major Instrumentation and M&S efforts in support of Network Integration Test related to limited data and voice communications upgrades for WSMR, additional Net Advanced Distributed Modular Acquisition System (ADMAS) Production, and will update, Army Test and Evaluation Command (ATEC)-wide, will distribute data storage, analyses software and tools.			
Title: Test and Training Common Technology Initiative; Network, Real Time Casualty Assessment (RTCA), Data Collection and After Action Review (AAR)	3.199	1.170	1.000
Articles:	0	0	
Description: Develop and sustain Army Test and Training Instrumentation Test Bed. This capability will also provide risk reduction to future developed assets required to meet test and training needs. These tools will collect, store and analyze data from this new dimension of digital battlefield warfare. ***FY 2012 Accomplishments:*** Began to develop and sustain Army Test and Training Instrumentation Test Bed, supported Trade-Off Studies, development of Common Standards, Analysis of Alternatives, Cost Benefit Analyses, and Test Technology Demonstrations or Technology Readiness Events. ***FY 2013 Plans:*** Continues to support Trade-Off Studies, Analysis of Trade-Off Studies, Analysis of Alternatives, Cost Benefit Analyses, Test Technology Demonstrations or Technology Readiness Events to ensure the requirements and performance specifications for emerging/future instrumentation and tactical engagement simulation systems meet the needs of the operational test and			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0604759A: *Major T&E Investment*	PROJECT 986: *Major Operational Test Instrumentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
evaluation community. The initiative also helps develop and sustain an Army Test and Training Instrumentation Test Bed, as well as increasing the rigor of testing, to ensure that proposed solutions fulfill those requirements and thus reduces risk. ***FY 2014 Plans:*** Will continue to support Trade-Off Studies, Analysis of Trade-Off Studies, Analysis of Alternatives, Cost Benefit Analyses, Test Technology Demonstrations or Technology Readiness Events to ensure the requirements and performance specifications for emerging/future instrumentation and tactical engagement simulation systems meet the needs of the operational test and evaluation community. The initiative will also help develop and sustain an Army Test and Training Instrumentation Test Bed, as well as increase the rigor of testing, to ensure that proposed solutions fulfill those requirements and thus reduce risk.			
Accomplishments/Planned Programs Subtotals	8.801	6.956	5.657

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605103A: *Rand Arroyo Center*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	19.730	21.026	11.919	-	11.919	27.148	25.484	2.259	22.660	Continuing	Continuing
732: *ARROYO CENTER SPT*	-	19.730	21.026	11.919	-	11.919	27.148	25.484	2.259	22.660	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY 2014 funds are realigned to higher priority requirements.

A. Mission Description and Budget Item Justification

This program funds the RAND Arroyo Center, the Department of the Army's Federally Funded Research and Development Center (FFRDC) for studies and analysis. The Arroyo Center draws its researchers from RAND's staff of nearly 700 professionals trained in a broad range of disciplines. Most staff members work in RAND's principal locations-Santa Monica, California; Arlington, Virginia; and Pittsburgh, Pennsylvania. The RAND Arroyo Center provides for continuing analytical research across a broad spectrum of issues and concerns, grouped in four major research areas: Strategy, Doctrine, and Resources; Military Logistics; Manpower and Training; and Force Development and Technology. The RAND Arroyo Center research agenda is primarily focused on mid/long-term concerns. Results and analytical findings directly affect senior leadership deliberations on major issues. Arroyo Center research is sponsored by the Chief of Staff, Vice Chief, the Deputy Chiefs of Staff of the Army; the Army Assistant Secretaries; and most of the Army's major commands. The Arroyo Center is provided guidance from the Army through the Arroyo Center Policy Committee (ACPC), which is co-chaired by the Vice Chief of Staff of the Army and the Assistant Secretary of the Army (Acquisition, Logistics and Technology). The ACPC reviews, monitors, and approves the annual Arroyo Center research plan. Each project requires General Officer (or SES equivalent) sponsorship and involvement on a continuing basis. RAND Arroyo provides the Army with a unique multidisciplinary capability for independent analysis.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	20.352	21.026	21.239	-	21.239
Current President's Budget	19.730	21.026	11.919	-	11.919
Total Adjustments	-0.622	0.000	-9.320	-	-9.320
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.622	-			
• Adjustments to Budget Years	-	-	-9.320	-	-9.320

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605103A: *Rand Arroyo Center*	PROJECT 732: *ARROYO CENTER SPT*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
732: *ARROYO CENTER SPT*	-	19.730	21.026	11.919	-	11.919	27.148	25.484	2.259	22.660	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program funds the RAND Arroyo Center, the Department of the Army's Federally Funded Research and Development Center (FFRDC) for studies and analysis. The Arroyo Center draws its researchers from RAND's staff of nearly 700 professionals trained in a broad range of disciplines. Most staff members work in RAND's principal locations-Santa Monica, California; Arlington, Virginia; and Pittsburgh, Pennsylvania. The RAND Arroyo Center provides for continuing analytical research across a broad spectrum of issues and concerns, grouped in four major research areas: Strategy, Doctrine, and Resources; Military Logistics; Manpower and Training; and Force Development and Technology. The RAND Arroyo Center research agenda is primarily focused on mid/long-term concerns. Results and analytical findings directly affect senior leadership deliberations on major issues. Arroyo Center research is sponsored by the Chief of Staff, Vice Chief, the Deputy Chiefs of Staff of the Army; the Army Assistant Secretaries; and most of the Army's major commands. The Arroyo Center is provided guidance from the Army through the Arroyo Center Policy Committee (ACPC), which is co-chaired by the Vice Chief of Staff of the Army and the Assistant Secretary of the Army (Acquisition, Logistics and Technology). The ACPC reviews, monitors, and approves the annual Arroyo Center research plan. Each project requires General Officer (or SES equivalent) sponsorship and involvement on a continuing basis. RAND Arroyo provides the Army with a unique multidisciplinary capability for independent analysis.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Research addressing manpower and training	5.158	5.898	3.100
Articles:	0	0	
Description: The key issues for the Army, including recruiting and personnel fill requirements; reserve component readiness; leader development; training (major combat operations and stability operations skills); distance learning, simulation training development and application; training support systems; retention (active command/reserve command); officer career fields, selection, assignment sequencing; and medical forces and operations.			
FY 2012 Accomplishments: The Planned Study program included key issues for the Army, which included recruiting and personnel fill requirements; reserve component readiness; leader development; training (major combat operations and stability operations skills); distance learning, simulation training development and application; training support systems; retention (active command/reserve command); officer career fields, selection, assignment sequencing; and medical forces and operations.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605103A: *Rand Arroyo Center*	PROJECT 732: *ARROYO CENTER SPT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
The Planned Study program includes key issues for the Army, including recruiting and personnel fill requirements; reserve component readiness; leader development; training (major combat operations and stability operations skills); distance learning, simulation training development and application; training support systems; retention (active command/reserve command); officer career fields, selection, assignment sequencing; and medical forces and operations. ***FY 2014 Plans:*** The Planned Study program will include numerous key issues for the Army, to include recruiting and personnel fill requirements; reserve component readiness; leader development; training (major combat operations and stability operations skills); distance learning, simulation training development and application; training support systems; retention (active command/reserve command); officer career fields, selection, assignment sequencing; and medical forces and operations.			
Title: Research addressing force development and technology ***Articles:*** ***Description:*** key issues for the Army, including systems and technology analysis; networks and C4ISR; modeling and simulation; force and organizational development; acquisition policies; and assessment of tactics, techniques, and procedures. ***FY 2012 Accomplishments:*** The Planned Study Program in force development and technology included key issues for the Army, including systems and technology analysis; networks and C4ISR; modeling and simulation; force and organizational development; acquisition policies; and assessment of tactics, techniques, and procedures. ***FY 2013 Plans:*** The Planned Study Program in force development and technology includes key issues for the Army, including systems and technology analysis; networks and C4ISR; modeling and simulation; force and organizational development; acquisition policies; and assessment of tactics, techniques, and procedures. ***FY 2014 Plans:*** The Planned Study Program in force development and technology will include key issues for the Army, including systems and technology analysis; networks and C4ISR; modeling and simulation; force and organizational development; acquisition policies; and assessment of tactics, techniques, and procedures.	3.856 0	3.935 0	2.741
Title: Research addressing Army logistics ***Articles:*** ***Description:*** Key issues for the Army, including supply chain management; fleet management and modernization; logistics force development; and infrastructure management.	4.710 0	4.806 0	2.741

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605103A: *Rand Arroyo Center*	PROJECT 732: *ARROYO CENTER SPT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: The Planned Study Program in Army logistics included key issues for the Army, including supply chain management; fleet management and modernization; logistics force development; and infrastructure management. ***FY 2013 Plans:*** The Planned Study Program in Army logistics includes key issues for the Army, including supply chain management; fleet management and modernization; logistics force development; and infrastructure management. ***FY 2014 Plans:*** The Planned Study Program in Army logistics will include key issues for the Army, including supply chain management; fleet management and modernization; logistics force development; and infrastructure management.			
Title: Research addressing strategies, doctrine, and resources	5.038	5.399	2.741
Articles:	0	0	
Description: Key issues for the Army, including the evolving operating environment; capabilities to face new challenges; partner capabilities; capabilities for stability operations; improvement of resource management; learning from past and present operations; and supporting Army wargames and analysis. ***FY 2012 Accomplishments:*** The Planned Study Program in strategy, doctrine, and resources included key issues for the Army, including the evolving operating environment; capabilities to face new challenges; partner capabilities; capabilities for stability operations; improvement of resource management; learning from past and present operations; and supporting Army wargames and analysis. ***FY 2013 Plans:*** The Planned Study Program in strategy, doctrine, and resources includes key issues for the Army, including the evolving operating environment; capabilities to face new challenges; partner capabilities; capabilities for stability operations; improvement of resource management; learning from past and present operations; and supporting Army wargames and analysis. ***FY 2014 Plans:*** The Planned Study Program in strategy, doctrine, and resources will include key issues for the Army, including the evolving operating environment; capabilities to face new challenges; partner capabilities; capabilities for stability operations; improvement of resource management; learning from past and present operations; and supporting Army wargames and analysis.			
Title: Research addressing military health	0.968	0.988	0.596
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605103A: *Rand Arroyo Center*	PROJECT 732: *ARROYO CENTER SPT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Key issues for the Army, including the impact of deployment on soldiers and families; quality of Army health care; medical manpower requirements; medical readiness of soldiers and programs; and implications of advances in medical technology. ***FY 2012 Accomplishments:*** The Planned Study Program in military health included key issues for the Army, including the impact of deployment on soldiers and families; quality of Army health care; medical manpower requirements; medical readiness of soldiers and programs; and implications of advances in medical technology. ***FY 2013 Plans:*** The Planned Study Program in military health includes key issues for the Army, including the impact of deployment on soldiers and families; quality of Army health care; medical manpower requirements; medical readiness of soldiers and programs; and implications of advances in medical technology. ***FY 2014 Plans:*** The Planned Study Program in military health will include key issues for the Army, including the impact of deployment on soldiers and families; quality of Army health care; medical manpower requirements; medical readiness of soldiers and programs; and implications of advances in medical technology.			
Accomplishments/Planned Programs Subtotals	19.730	21.026	11.919

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	141.365	176.816	193.658	-	193.658	188.877	191.742	194.662	198.486	Continuing	Continuing
614: *Army Kwajalein Atoll*	-	141.365	176.816	0.418	-	0.418	0.420	0.424	0.430	0.437	Continuing	Continuing
DW7: *Army Kwajalein Atoll Facilities Sustainment*	-	0.000	0.000	32.998	-	32.998	33.559	34.127	34.710	36.157	Continuing	Continuing
DW8: *Army Kwajalein Atoll Installation Services*	-	0.000	0.000	74.892	-	74.892	76.390	77.918	79.477	81.066	Continuing	Continuing
DW9: *Army Kwajalein Atoll Restoration And Modernization*	-	0.000	0.000	9.600	-	9.600	2.000	2.000	2.000	2.000	Continuing	Continuing
DX2: *Army Kwajalein Test Ranges and Mission Support*	-	0.000	0.000	75.750	-	75.750	76.508	77.273	78.045	78.826	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Note: In FY14 along with funding being realigned to Army Kwajalein Atoll, additional increase reflects two major focus areas: increase in facility Sustainment, Restorization, and Modernization (SRM) / increase to address critical Information Technology (IT) infrastructure / DoD Information Assurance Certification and Accreditation Process (DIACAP) compliance.

A. Mission Description and Budget Item Justification

The U.S. Army Kwajalein Atoll/Ronald Reagan Ballistic Missile Defense Test Site (USAKA/RTS), located in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB). Its function is to support test and evaluation of major Army and DoD acquisition programs and to provide space operations (surveillance and object identification) in support of U.S. Strategic Command (USSTRATCOM) and National Aeronautics and Space Administration (NASA) scientific and space programs. Programs supported include Army missile defense, Air Force and Navy Intercontinental Ballistic Missile (ICBM) developmental and operational tests; Army, Air Force and Defense Advanced Research Projects Agency (DARPA) hypersonic developmental tests; Missile Defense Agency (MDA) demonstration/validation tests; , USSTRATCOM space situational awareness requirements (inc contributions to the U.S. Space Surveillance Network); and NASA Space Shuttle and orbital debris experiments. USAKA/RTS is a government-managed/contractor-operated (GMCO) site and is dependent upon its associated support contractors for operations and maintenance (O&M). Program funds contractors to accomplish O&M for both the RTS instrumentation suite and installation/base operations and provides mission essential bandwidth via a fiber optics cable system. Funding is required to maintain O&M support, while accepting moderate risk of continued degradation of USAKA/RTS infrastructure (housing, offices, and facilities), higher future repair costs, and reduced logistical support capability. The instrumentation suite consists of a number of sophisticated, one-of-a-kind, radar, optical, telemetry, command/control/communications, safety, and data reduction systems. These systems include the four unique radars of the Kiernan Reentry Measurement Site (KREMS); Super Recording Automatic Digital Optical Tracker

(SRADOT) long range video-metric tracking systems; high density data recorders for high data-rate telemetry collected by nine antennas; an underwater acoustic impact location system; and data analysis/reduction hardware/software. The Advanced Research Project Agency (ARPA) Long-Range Tracking and Instrumentation Radar (ALTAIR), and the Target Resolution Discrimination Experiment (TRADEX) radars located at USAKA/RTS, are two of only three radars world-wide that have deep-space tracking capability. The Millimeter Wave Radar (MMW) is the most powerful imaging radar in the world. Funding enables weapon system assessment of operational effectiveness and suitability for the Army, Air Force, Navy and MDA, which all have programs planned that have significant test and data gathering requirements at USAKA/RTS. This test data cannot be obtained except through the use of technical facilities available on and in the vicinity of USAKA/RTS. Program supports Army's PATRIOT air defense system and the Advanced Hypersonic Weapon technology development program; Air Force's Minuteman III ICBM and the Space and Missile Center's associated programs; MDA's Ballistic Missile Defense System, Flexible Target Family (FTF), and Family of Systems; NASA's Space Transportation System (STS), Small Expendable Deployer System and Orbital Debris Measurement Programs.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	145.377	176.816	65.955	-	65.955
Current President's Budget	141.365	176.816	193.658	-	193.658
Total Adjustments	-4.012	0.000	127.703	-	127.703
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-4.012	-			
• Adjustments to Budget Years	-	-	127.703	-	127.703

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT 614: *Army Kwajalein Atoll*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
614: *Army Kwajalein Atoll*	-	141.365	176.816	0.418	-	0.418	0.420	0.424	0.430	0.437	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The U.S. Army Kwajalein Atoll/Ronald Reagan Ballistic Missile Defense Test Site (USAKA/RTS), located in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB). Its function is to support test and evaluation of major Army and DoD acquisition programs and to provide space operations (surveillance and object identification) in support of U.S. Strategic Command (USSTRATCOM) and National Aeronautics and Space Administration (NASA) scientific and space programs. Programs supported include Army missile defense, Air Force and Navy Intercontinental Ballistic Missile (ICBM) developmental and operational tests; Army, Air Force and Defense Advanced Research Projects Agency (DARPA) hypersonics developmental tests; Missile Defense Agency (MDA) demonstration/validation tests; , USSTRATCOM space situational awareness requirements (inc contributions to the U.S. Space Surveillance Network); and NASA Space Shuttleand orbital debris experiments. USAKA/RTS is a government-managed/contractor-operated (GMCO) site and is dependent upon its associated support contractors for operations and maintenance (O&M). Program funds contractors to accomplish O&M for both the RTS instrumentation suite and installation/base operations and provides mission essential bandwidth via a fiber optics cable system. Funding is required to maintain O&M support, while accepting moderate risk of continued degradation of USAKA/RTS infrastructure (housing, offices, and facilities), higher future repair costs, and reduced logistical support capability. The instrumentation suite consists of a number of sophisticated, one-of-a-kind, radar, optical, telemetry, command/control/communications, safety, and data reduction systems. These systems include the four unique radars of the Kiernan Reentry Measurement Site (KREMS); Super Recording Automatic Digital Optical Tracker (SRADOT) long range video-metric tracking systems; high density data recorders for high data-rate telemetry collected by nine antennas; an underwater acoustic impact location system; and data analysis/reduction hardware/software. The Advanced Research Project Agency (ARPA) Long-Range Tracking and Instrumentation Radar (ALTAIR), and the Target Resolution Discrimination Experiment (TRADEX) radars located at USAKA/RTS, are two of only three radars world-wide that have deep-space tracking capability. The Millimeter Wave Radar (MMW) is the most powerful imaging radar in the world. Funding enables weapon system assessment of operational effectiveness and suitability for the Army, Air Force, Navy and MDA, which all have programs planned that have significant test and data gathering requirements at USAKA/RTS. This test data cannot be obtained except through the use of technical facilities available on and in the vicinity of USAKA/RTS. Program supports Army's PATRIOT air defense system and the Advanced Hypersonic Weapon technology development program; Air Force's Minuteman III ICBM and the Space and Missile Center's associated programs; MDA's Ballistic Missile Defense System, Flexible Target Family (FTF), and Family of Systems; NASA's Space Transportation System (STS), Small Expendable Deployer System and Orbital Debris Measurement Programs.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	10.438	10.300	0.418
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT 614: *Army Kwajalein Atoll*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to provide management support (salaries, training, travel, Space & Missile Defense Command (SMDC) matrix, etc) to support test and evaluation of major Army and DoD missile systems and to provide space operations-surveillance and object identification. ***FY 2013 Plans:*** Continue to provide management support (salaries, training, travel, Space & Missile Defense Command (SMDC) matrix, etc) to support test and evaluation of major Army and DoD missile systems and to provide space operations-surveillance and object identification. ***FY 2014 Plans:*** Will continue to provide management support (salaries, training, travel, Space & Missile Defense Command (SMDC) matrix, etc) to support test and evaluation of major Army and DoD missile systems and to provide space operations-surveillance and object identification.			
Title: Sustainment and Restoration/Modernization ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2013 Plans:*** Continue to accomplish facility maintenance and repair projects, including design and demolition.	0.000	30.000 0	0.000
Title: Procure petroleum, oils and lubricants (POL). ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to procure petroleum, oils and lubricants (POL). Approx 80% of POL is for power generation and the remainder is for intra atoll marine and aviation transportation. ***FY 2013 Plans:*** Continue to procure petroleum, oils and lubricants (POL).	23.114 0	23.000 0	0.000
Title: Procure other mission services. ***Articles:***	2.115 0	2.160 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT 614: *Army Kwajalein Atoll*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to procure other mission services. ***FY 2013 Plans:*** Continue to procure other mission services.			
Title: Transportation	7.072	7.200	0.000
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to provide air and sea transportation (cargo to and from continental United States). ***FY 2013 Plans:*** Continue to provide air and sea transportation (cargo to and from continental United States).			
Title: Kwajalein Cable System (KCS)	11.197	11.400	0.000
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to provide funding for Kwajalein Cable System (KCS) fiber optic cable for annual service contract. ***FY 2013 Plans:*** Continue to provide funding for Kwajalein Cable System (KCS) fiber optic cable for annual service contract.			
Title: Direct Customers	48.142	49.017	0.000
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to support Army, MDA, NASA and Air Force developmental and operational missile testing. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT 614: *Army Kwajalein Atoll*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue to support Army, MDA, NASA and Air Force development and operational missile testing.			
Title: Logistical Support of the self-contained islands of USAKA	34.450	40.539	0.000
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to provide logistical support (facilities maintenance and repair, aviation, automotive, marine, medical, food services, education, information management , DIACAP certification and accreditation, environmental compliance, etc.) to self contained islands of USAKA. ***FY 2013 Plans:*** Continue to provide logistical support (facilities maintenance and repair, aviation, automotive, marine, medical, food services, education, information management , DIACAP certification and accreditation, environmental compliance, etc.) to self contained islands of USAKA.			
Title: RTS Distributed Operations	4.837	3.200	0.000
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to provide for RTS Distributed Operations (distributed operations of the Range sensors from Continental U.S.). ***FY 2013 Plans:*** Continue to provide for RTS Distributed Operations (distributed operations of the Range sensors from Continental U.S.).			
Accomplishments/Planned Programs Subtotals	141.365	176.816	0.418

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT 614: *Army Kwajalein Atoll*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DW7: *Army Kwajalein Atoll Facilities Sustainment*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DW7: *Army Kwajalein Atoll Facilities Sustainment*	-	0.000	0.000	32.998	-	32.998	33.559	34.127	34.710	36.157	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Maintains US Army Kwajalein Atoll Installation facilities in the current condition and includes regularly scheduled adjustments and inspections, preventative maintenance tasks, and emergency response for minor repairs as well as major repairs or replacement of facility components expected to occur periodically throughout the life cycle of facilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Facility Sustainment	0.000	0.000	32.998
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Will continue to provide sustainment of technical and BASOPS facilities in order to arrest the degradation of facilities to an unusable / failing or failed state.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	32.998

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DW8: *Army Kwajalein Atoll Installation Services*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DW8: *Army Kwajalein Atoll Installation Services*	-	0.000	0.000	74.892	-	74.892	76.390	77.918	79.477	81.066	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The U.S. Army Kwajalein (USAKA) located in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB). Its function is to support test and evaluation of major Army and DoD acquisition programs and to provide space operations (surveillance and object identification) in support of U.S. Strategic Command (USSTRATCOM) and National Aeronautics and Space Administration (NASA) scientific and space programs. USAKA is a government-managed/contractor-operated (GMCO) site and is dependent upon its associated support contractors for operations and maintenance (O&M). Program funds contractors to accomplish O&M for installation/base operations other Installation Services Support (ISS). Funding is required to maintain O&M support, while accepting moderate risk of continued degradation of USAKA infrastructure (housing, offices, and facilities), higher future repair costs, and reduced logistical support capability. Other ISS consists of: Medical services, education services, food /grocery services and logistical requirements needed to support Installation Operations and Management and ensure the continued T&E and space operations of the Regan Test Site as a Major Range and Test Facility Base (MRTFB) activity.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Management Support ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide government personnel support (salaries, training, travel, GPC, HQ overhead, etc.) to enable the management of the test and evaluation of major Army and DoD missile systems.	0.000	0.000	5.230
Title: Procure petroleum, oils and lubricants (POL) ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will procure petroleum, oils and lubricants (POL). Approx 90% of POL will be for power generation and the remainder will be for intra atoll marine and aviation transportation, and for intra-island land transportation and heavy equipment.	0.000	0.000	24.283
Title: Procure other mission services	0.000	0.000	0.500

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DW8: *Army Kwajalein Atoll Installation Services*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Will procure other government agency services in support of OCONUS- and CONUS-based facility leases			
Title: Transportation ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide passenger and cargo transportation via air (Air Mobility Command) and sea (SDDC) between Kwajalein Atoll and CONUS.	0.000	0.000	8.087
Title: Base Operations and Other Installation Support Services ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide base operations and logistical support (facilities maintenance and repair, aviation, automotive, marine, medical, food services, education, environmental compliance, etc.)	0.000	0.000	36.792
Accomplishments/Planned Programs Subtotals	0.000	0.000	74.892

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DW9: *Army Kwajalein Atoll Restoration And Modernization*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DW9: *Army Kwajalein Atoll Restoration And Modernization*	-	0.000	0.000	9.600	-	9.600	2.000	2.000	2.000	2.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Funds the Restoration US Army Kwajalein Atoll Installation critical infrastructure (real property /facilities) to such a condition that they may be used for original designated purpose. Restoration includes repair or replacement work to restore facilities damaged by inadequate sustainment, excessive age, natural disaster, fire, accident, or other causes. Funds the alteration or replacement of facilities to implement new or higher standards, to accommodate new functions, and to replace building components that last more than 50 years (such as the framework or foundation)

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Facility Restoration / Modernization	0.000	0.000	9.600
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Will continue to provide restoration of technical and BASOPS facilities in order to address potential failure of aging, critical, real-property facilities			
Accomplishments/Planned Programs Subtotals	0.000	0.000	9.600

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DX2: *Army Kwajalein Test Ranges and Mission Support*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DX2: *Army Kwajalein Test Ranges and Mission Support*	-	0.000	0.000	75.750	-	75.750	76.508	77.273	78.045	78.826	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Ronald Reagan Ballistic Missile Defense Test Site (RTS), located with the U.S. Army Kwajalein Atoll (USAKA) in the Republic of the Marshall Islands, is a remote, secure activity of the Major Range and Test Facility Base (MRTFB). Its function is to support test and evaluation of major Army and DoD acquisition programs and to provide space operations (surveillance and object identification) in support of U.S. Strategic Command (USSTRATCOM) and National Aeronautics and Space Administration (NASA) scientific and space programs. Programs supported include Army missile defense, Air Force and Navy Intercontinental Ballistic Missile (ICBM) developmental and operational tests; Army, Air Force and Defense Advanced Research Projects Agency (DARPA) hypersonic developmental tests; Missile Defense Agency (MDA) demonstration/validation tests; , USSTRATCOM space situational awareness requirements (inc contributions to the U.S. Space Surveillance Network); and NASA Space Shuttle and orbital debris experiments. RTS is a government-managed/contractor-operated (GMCO) site and is dependent upon its associated support contractors for operations and maintenance (O&M). Program funds contractors to accomplish O&M for RTS instrumentation suites and provides mission essential bandwidth via a fiber optics cable system. The instrumentation suite consists of a number of sophisticated, one-of-a-kind, radar, optical, telemetry, command/control/communications, safety, and data reduction systems. These systems include the four unique radars of the Kiernan Reentry Measurement Site (KREMS); Super Recording Automatic Digital Optical Tracker (SRADOT) long range video-metric tracking systems; high density data recorders for high data-rate telemetry collected by nine antennas; an underwater acoustic impact location system; and data analysis/reduction hardware/software. The Advanced Research Project Agency (ARPA) Long-Range Tracking and Instrumentation Radar (ALTAIR), and the Target Resolution Discrimination Experiment (TRADEX) radars located at USAKA/RTS, are two of only three radars world-wide that have deep-space tracking capability. The Millimeter Wave Radar (MMW) is the most powerful imaging radar in the world. Funding enables weapon system assessment of operational effectiveness and suitability for the Army, Air Force, Navy and MDA, which all have programs planned that have significant test and data gathering requirements at RTS. This test data cannot be obtained except through the use of technical facilities available on and in the vicinity of RTS. Program supports Army's PATRIOT air defense system and the Advanced Hypersonic Weapon technology development program; Air Force's Minuteman III ICBM and the Space and Missile Center's associated programs; MDA's Ballistic Missile Defense System, Flexible Target Family (FTF), and Family of Systems; NASA's Space Transportation System (STS), Small Expendable Deployer System and Orbital Debris Measurement Programs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Management Support	0.000	0.000	4.212
Description: Funding is provided for the following effort			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DX2: *Army Kwajalein Test Ranges and Mission Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will provide government personnel support (salaries, training, and travel, GPC) to enable the management of the test and evaluation of major Army and DoD missile systems.			
Title: Test Sustainment and Restoration ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide sustainment of technical RTS mission specific facilities in order to address potential failure of aging, critical, and real-property facilities.	0.000	0.000	3.535
Title: Procure other mission services ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will procure other government agency services in support of DIACAP accreditation, OCONUS- and CONUS-based facility leases and communication systems.	0.000	0.000	2.976
Title: Transportation ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide mission specific material and passenger transportation via air (Air Mobility Command) and sea (SDDC) between Kwajalein Atoll and CONUS.	0.000	0.000	4.945
Title: Long-haul Communications ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide funding for lease of the Kwajalein Cable System (KCS) fiber optic cable between Kwajalein Island and Guam, and for backup satellite communications support between Kwajalein Island and CONUS.	0.000	0.000	11.652
Title: Technical Support Services ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:***	0.000	0.000	45.230

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605301A: *ARMY KWAJALEIN ATOLL*	PROJECT DX2: *Army Kwajalein Test Ranges and Mission Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will provide technical Operations and Maintenance (O&M) support (test planning, instrumentation operation s and maintenance, systems engineering, flight safety, launch ordnance, Kwajalein Mobile range Safety System (WORTHY), etc) to assure the capability of the Range to support test and space missions.			
Title: RTS Distributed Operations (RDO) ***Description:*** Funding is provided for the following effort ***FY 2014 Plans:*** Will provide for FOC for RTS Distributed Operations establishment of the Range Operations Center – Huntsville, which consists of the Huntsville Operations Control Center (HOCC) and the Space Operations Control Center (SOCC). These centers will provide test and space mission command and control C2.	0.000	0.000	3.200
Accomplishments/Planned Programs Subtotals	0.000	0.000	75.750

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	27.923	27.902	37.158	-	37.158	53.324	67.112	83.484	85.283	Continuing	Continuing
312: *Army/Joint Experimentation*	-	8.869	8.330	5.794	-	5.794	2.889	0.516	0.525	0.534	Continuing	Continuing
317: *Current Force Capability Gaps*	-	17.200	17.677	29.489	-	29.489	48.570	64.720	81.156	82.949	Continuing	Continuing
33B: *Soldier-Centered Analyses For Future Force*	-	1.854	1.895	1.875	-	1.875	1.865	1.876	1.803	1.800	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Provide Contractor Year Equivalent (CME) support to TRADOC Capability Development and Integration Directorates (CDIDs) across TRADOC to develop and integrate the capabilities for which ASA(ALT) community is developing and fielding materiel solutions. FY14 is the first year of incremental funding until 100% of the requirement is funded in FY 2017 and beyond.

A. Mission Description and Budget Item Justification

Army Experimentation mission enables integrated examinations with US Joint Forces Command (USJFCOM), Army Test and Evaluation Commnad (ATEC), Research, Development and Experimentation Command (RDECOM), Army battle laboratories, operational units, researach labs materiels developers, industry and academia to collaborate in the development, refinement, and assessment of future force concepts. The intended outcome of this integrative effort is to develop concept capability plans that inform the Capabilities Integration Development System (CIDS) process and define future requirements, enabling identification and acquistion of critical Doctrine, Organization, Training, Materiel, Leader Development, Personnel and Facilities (DOTMLPF) capabilities for the future force to provide land power capabilities needed by Joint and Army commanders. In FY 2012-2018, Research, Development, Test and Evaluation (RDT&E) funding specifically enables the World Class Blue Force (subject matter experts overseeing and coordinating experiments efforts from Army Capabilities Integration Center (ARCIC) proper in collaboration with the Schools and Centers), support for Red Cell analysis, and support to Maneuver Brigade Experiments. Experimentation enables enhanced situational awareness, planning requirements, employment and management of accelerated decision cycles in a network-enabled force, and training requirements of new and emerging technologies.

ARCIC, Accelerated Capabilities Division (ACD) (formerly Asymmetric Warfare Division) develops immediate capability solutions in support of the Chief of Staff of the Army (CSA) prioritized Current Force capability gaps (i.e. Force Protection, Networked Battle Command, Logistics and Medical in Counterinsurgency Operations (COIN) and Soldier Protection). ACD conducts Concept of Operations (CONOPS) and DOTMLPF analysis required to ensure capability gap candidate solutions are properly integrated prior to being equipped to deployed forces. Supports pre-deployment and in-theater assessments to ensure candidate solution meet identifiied requirements, support tactics, techniques and procedures development for use by deployed forces, and ensure equipped systems provide the necessary capability to fill an identified gap. These assessments support determination of a path forward for equipped system by identifying them as a potential Program of Record (POR) or

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*

sustain in theater. CONOPS, DOTMLPF-Cost analysis and assessment assist deployed forces by ensuring they are able to properly employ equipped systems and assist senior Army leadership in determining how best to resource solution to high priority capability gaps.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	28.755	27.902	24.458	-	24.458
Current President's Budget	27.923	27.902	37.158	-	37.158
Total Adjustments	-0.832	0.000	12.700	-	12.700
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.832	-			
• Adjustments to Budget Years	-	-	12.700	-	12.700

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 312: *Army/Joint Experimentation*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
312: *Army/Joint Experimentation*	-	8.869	8.330	5.794	-	5.794	2.889	0.516	0.525	0.534	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Army Experimentation is the conduct of experiments involving Soldiers and Leaders within live, virtual, and contructive environments of exploring concepts, capability requirements and solutions across Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) domains in order to learn and mitigate risk for current and future forces. Experiments inform Army future concepts and assess high-risk conceptual assumptions in order to focus required capabilities and represent the user's requirements in the future Army. TRADOC's partnership with ASA(ALT) in connecting Soldiers to the ideas and capabilities earlier rather than later, provides essential user feedback and assists the acquisition community with informing the Army's investment portfolio and decreasing the number of engineering design changes. Army experiments use the combined resources of Army battle laboratories, operational units, research labs, materiel developers, industry and academia to collaborate in the development, refinements, and assessment of future force concepts - to inform capability developments and validate concepts for current and future force. In FY12-18, Research, Development, Test and Evaluation (RDT&E) funding enables World Class Blue Force (WCBLUFOR) to provide technical and tactical expertise in Army experiment efforts, in collaboration and integration with Joint, Interagency, Intergovermental, and Multinational partners. In the near-term, Army experimentation will focus on Prevent, Shape, and Win as foundational elements for this campaign, assessed across all joint campaign phases, with Army level issues across the breadth of a champaign that highlights integration of Army 2020 initiatives.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Experimentation - World Class Blue Force Analysts	3.524	3.524	3.400
Articles:	0	0	
Description: Experimentation with future concepts requires commanders who understand those concepts, but military personnel are generally proficient in current doctrine, not future Army concepts. The WCBLUFOR bridge this gap with experienced commanders who are versed in future Army concepts. These subject matter experts provide technical and tactical expertise, play senior blue roles in experiments, develop orders, train and mentor staff, and provide analytic expertise. Requisite skill sets that are not available on our TDAs.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 312: *Army/Joint Experimentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
WCBLUFOR assisted and mentored planning, execution and evaluation of experiments supporting Army capstone, operational and functional concepts to provide credible incorporation of concepts into experiments. WCBLUFOR also support analysis and coordination for the Army's Campaign of Learning - both what we had learned and what remained to be learned. ***FY 2013 Plans:*** WCBLUFOR assist and mentor planning, execution and evaluation of experiments supporting Army capstone, operational and functional concepts to provide credible incorporation of concepts into experiments. WCBLUFOR also support analysis and coordination for the Army's Campaign of Learning - both what we have learned and what remains to be learned. ***FY 2014 Plans:*** WCBLUFOR will assist and will mentor planning, execution and evaluation of experiments supporting Army capstone, operational and functional concepts to provide credible incorporation of concepts into experiments. WCBLUFOR also will support analysis and coordination for the Army's Campaign of Learning - both what we have learned and what remains to be learned.			
Title: Experimentation - Maneuver Brigade Experiments ***Articles:*** ***Description:*** Perform maneuver brigade experiments that will address 1) integration of Army in 2020 initiatives; 2) development of future Infantry Bridgade Combat Team (IBCT), Stryker Bridgade Combat Team (SBCT), and Airborne Brigade Comabt Team (ABCT) capability Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) requirements and DOTMLPF solutions; and 3) acceleration and integration of capabilities for current force Brigade Combat Teams (BCTs). ***FY 2012 Accomplishments:*** Conducted experiments to address learning demands supporting assigned Army Warfighting Challenges (AWFC). Results informed the Integrated Learning Plan for each AWFC; specifically supporting concepts and Formation Based Analysis. ***FY 2014 Plans:*** Will conduct experiments to address learning demands supporting assigned Army Warfighting Challenges (AWFC). Results will inform the Integrated Learning Plan for each AWFC; specifically supporting concepts and Formation Based Analysis.	5.345 0	0.000	1.200
Title: Experimentation - High-Fidelity Live-Virtual-Constructive Experiments ***Articles:*** ***Description:*** Experiments address concept and capability developments including integration of capabilities for all BCT types; development of future Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) requirements and solutions; and acceleration and integration of capabilities for current force Brigade Combat Teams (BCTs) and above brigade.	0.000	4.806 0	1.194

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 312: *Army/Joint Experimentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2013 Plans: Experiments continue to address learning demands supporting critical Army Warfighting Challenges (AWFC); capstone, operational and concepts; and Formation Based Analysis. Experiments support learning in order to mitigate risk to Soldiers and developments providing tangible insurance against acquisition failure as well as a means to win the first battle of the next war. ***FY 2014 Plans:*** Experiments will continue to address learning demands supporting critical Army Warfighting Challenges (AWFC); capstone, operational and concepts; and Formation Based Analysis. Experiments will support learning in order to mitigate risk to Soldiers and developments providing tangible insurance against acquisition failure as well as a means to win the first battle of the next war.			
Accomplishments/Planned Programs Subtotals	8.869	8.330	5.794

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 317: *Current Force Capability Gaps*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
317: *Current Force Capability Gaps*	-	17.200	17.677	29.489	-	29.489	48.570	64.720	81.156	82.949	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Training and Doctrine Command (TRADOC) lead for Accelerated Capability Developments (ACD) to address current critical operational needs. Enable development and deployment/employment of accelerated capabilities (both materiel and non-materiel) to the current force. Serve as TRADOC central coordinating organization for Headquarters Department of the Army (HQDA) staff support requirements related to accelerated capabilities developments. Integrate ACD activities to ensure unity and priority of effort and synchronization and optimization of resources. Integrate accelerated capabilities development activities between proponent force modernization domains to include Joint/Service coordination.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Counter Improvised Explosive Device Adapt the Force (AtF) (formerly Improvised Explosive Device (IED) Integrated Concept Development Team (ICDT))	3.072	3.447	0.800
Articles:	0	0	
Description: The IED ICDT is responsible for conducting Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) assessments; performs gap analyses identified by HQDA and Joint Urgent Operational Needs Statement (JUONS).			
FY 2012 Accomplishments: Lead the Adapt the Force efforts under Army Counter-IED (CIED) Strategy supporting development and maintenance of AtF CIED database and resolution of DOTMLPF issues associated with integration of various CIED initiatives. Was responsible for coordination and facilitating IED-Defeat Council of Colonels and General Officer Steering Committees producing guidance and directives for Army-wide IED-Defeat Training initiatives and systems. Supported TRADOC CoEs with CIED SMEs and products for all CIED Lines of Effort (DtD, ATN, Robotics).			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 317: *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Leads the Adapt the Force efforts under Army Counter-IED (CIED) Strategy supporting development and maintenance of AtF CIED database and resolution of DOTMLPF issues associated with integration of various CIED initiatives. Is responsible for coordination and faciliating IED-Defeat Council of Colonels and General Officer Steering Committees producing guidance and directives for Army-wide IED-Defeat Training initiative and systems. Supports TRADOC CoEs with CIED SMEs and products for all CIED Lines of Effort. ***FY 2014 Plans:*** Will lead the Adapt the Force efforts under Army Counter-IED (CIED) Strategy supporting development and maintenance of AtF CIED database and resolution of DOTMLPF issues associated with integration of various CIED initiatives. Will be responsible for coordination and facilitating IED-Defeat Council of Colonels and General Officer Steering Committees producing guidance and directives for Army-wide IED-Defeat Training initiative and systems. Will support TRADOC CoEs with CIED SMEs and products for all CIED Lines of Effort.			
Title: Demo/Assess Command and Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)- Joint Integration and Non-Lethal Fires ***Articles:*** ***Description:*** Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) Operation Needs Statement (ONS) (classified) is a compliation of C5ISR capabilities that eliminate critical capability performance gaps in Operation Enduring Freedom (OEF). Phase 1 improvements include higher level network security and increased network bandwidth down to battalion level, network modem upgrades, increased biometrics and support, aerial layer network extension, network extension to mobile user (hand held), and full motion video. ***FY 2012 Accomplishments:*** C5ISR ONS (classified) was a compliance of C5ISR capabilities that eliminated critical capability performance gaps in OEF. Phase 1 improvements included higher level network security and increased network bandwidth down to battalion level, network modem upgrades, increased biometrics and support, aerial layer network extension, network extension to mobile user (hand held), and full motion video.	2.400 0	0.000	0.000
Title: Aerial Sensor Portfolio ***Articles:*** ***Description:*** Funding is needed to support the Aerial Sensor Portolio. ***FY 2012 Accomplishments:*** Aerial Sensor Portfolio (excluding Task Force Observe, Detect, Indentify, and Neutralize - TF ODIN systems) supported the accelerated developments of directed, ONS-based, quick reaction aerial sensor capabilities (Desert Owl I and II, Radiant Falcon,	3.300 0	0.280 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 317: *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Copperhead II, Black Kite). Supported improved Aerial Intelligence, Surveillance, and Reconnaissance (ISR) Information System processing. Consisted of aerial sensor and command control systems organized to defeat assigned threats in current operational environments by integrating collection and analysis of intelligence data, shorten sensor to responder timelines, and facilitate planning, sensor cueing, data collection, and communications. ***FY 2013 Plans:*** Aerial Sensor Portfolio (excluding Task Force Observe, Detect, Indentify, and Neutralize - TF ODIN systems) supports the accelerated developments of directed, ONS-based, quick reaction aerial sensor capabilities (Desert Owl I and II, Radiant Falcon, Copperhead II, Black Kite). Supports improved Aerial Intelligence, Surveillance, and Reconnaissance (ISR) Information System processing. Consists of aerial sensor and command control systems organized to defeat assigned threats in current operational environments by integrating collection and analysis of intelligence data, shorten sensor to responder timelines, and facilitate planning, sensor cueing, data collection, and communications.			
Title: Communications and Networks Portfolio	2.693	0.535	0.000
Articles:	0	0	
Description: Funding is needed for Communications and Networks Portfolio. ***FY 2012 Accomplishments:*** Communications and Network Portfolio capabilities included Intelligence, Surveillance, and Reconnaissance (ISR) Net, Trojan Swarm, Heterogeneous Aerial Reconnaissance Team (HART), Enroute Mission Planning and Rehearsal System (EMPRS), Army Cellular Capability Development and Connecting Soldiers to Digital Applications (CSDA). Task supported development, deployment, and assessment of communications and networking of these and other directed systems provided the Warfighter a network connectivity with mission command applications. Network provided single user interface, including aerial tier, capable of assessing all required data applications, and service via the common operating environment. Network supported distributed and small unit operations beyond line-of-sight with focus on Company and below Brigade and Battalion mission command on-the-move capabilities. Additionally network reduced dependence on satellite communications when connectivity was lost. ***FY 2013 Plans:*** Communications and Network Portfolio capabilities include Intelligence, Surveillance, and Reconnaissance (ISR) Net, Trojan Swarm, Heterogeneous Aerial Reconnaissance Team (HART), Enroute Mission Planning and Rehearsal System (EMPRS), Army Cellular Capability Development and Connecting Soldiers to Digital Applications (CSDA). Task is to support development, deployment, and assessment of communications and networking of these and other directed systems to provide the Warfighter a network connectivity with mission command applications. Network provides single user interface, including aerial tier, capable of assessing all required data applications, and service via the common operating environment. Network supports distributed and			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 317: *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
small unit operations beyond line-of-sight with focus on Company and below Brigade and Battalion mission command on-the-move capabilities. Additionally network reduces dependence on satellite communications when connectivity is lost.			
Title: Operational Energy (formerly Demo/Assess Operational Power and Energy) ***Articles:*** ***Description:*** Funding is needed for Operational Power and Energy ***FY 2012 Accomplishments:*** TRADOC Accelerated Capability Developments supported TRADOC Power and Energy staff management and integration responsibilities. Supported proponents with their responsibilities relative to doctrine, organization, training, material, leader development and education, personnel, and facilities plus related matters. Leveraged Proponent input to Joint Capabilities Integration and Development System, Science and Technology, Concept Development, Capability Development for Rapid Transition, and Capability Gap Analysis Army. ***FY 2013 Plans:*** TRADOC Accelerated Capability Developments supports TRADOC Power and Energy staff management and integration responsibilities. Supports proponents with their responsibilities relative to doctrine, organization, training, material, leader development and education, personnel, and facilities plus related matters. Leverages Proponent input to Joint Capabilities Integration and Development System, Science and Technology, Concept Development, Capability Development for Rapid Transition, and Capability Gap Analysis Army. ***FY 2014 Plans:*** Will continue acceleration of Operational Energy initiative for remote Combat Outposts and Soldier Power initiatives. Operational Energy will provide the warfighter with increased levels of agility, flexibility, and interoperability when operating in the expeditionary environment. Operational energy solutions will approach extend combat and tactical systems' mission endurance and resilence, ensure uninterrupted and optimal energy to systems within the mission command network, and mitigate force risk by reducing energy demand. Phase two of multi-phased approached will support development of integrated operational energy solutions will require a system-of-systems engineering approach. This approach will ensure that designs identify and address effects on the force when delivering solutions provide necessary employment guidance and assess impacts on operational effectiveness.	2.250 0	1.846 0	3.000
Title: Integrated Protection Initiative (IPI) ***Articles:*** ***Description:*** Funds are needed for Integrated Protection Initiative. ***FY 2012 Accomplishments:***	3.485 0	2.468 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
TRADOC Accelerated Capability Developments initiative provided integration and assessment support across DOTMLPF domains to equip, train, and deploy capability support for OEF problem of isolated maneuver elements at Command Outposts (COPs)/ Forward Operating Bases (FOBs) which had difficulty locating ground targets and lack timely response to engage these targets in organic, lethal, effects while minimizing collateral damage and exposure of Soldiers to unnecessary risk. ***FY 2013 Plans:*** TRADOC Accelerated Capability Developments initiative provides integration and assessment support across DOTMLPF domains to equip, train, and deploy capability support for OEF problem of isolated maneuver elements at Command Outposts (COPs)/ Forward Operating Bases (FOBs) which have difficulty locating ground targets and lack timely response to engage these targets in organic, lethal, effects while minimizing collateral damage and exposure of Soldiers to unnecessary risk.			
Title: Army Expeditionary Warrior Experiment (formerly Prototype Solution Demonstrations) ***Articles:*** ***Description:*** Army Expeditionary Warrior Experiment (AEWE) addresses live, prototype experimentation requirements. ***FY 2013 Plans:*** AEWE addresses live, prototype experimentation requirements with a primary focus on the Soldier and Small Unit, examining concepts and capabilities for the current and future force. AEWE provides Capability Developers, the S&T community and industry a repeatable, credible, rigorous, and validated operational experiment venue to support DOTMLPF concepts and materiel development efforts. FY13 focusses on Spiral H and J support. ***FY 2014 Plans:*** This campaign of experiments will be critical at the Maneuver Center as we conduct research, development, and experimentation to ensure our future Maneuver Force is prepared and equipped to fight and win in a complex operating environment. Through doctrine development, leveraging emerging technology and partnering with industry, the Maneuver Center in an advocate for the Maneuver Force. FY14 campaign of experiments, Spiral I, will be focused on technologies to support five primary study areas: Cellular Communications, Robotics, Solider Load and Protection, Power Solutions and Resupply.	0.000	1.200 0	0.760
Title: Capability Packages (CP) ***Articles:*** ***Description:*** Capability Packages are a key element of the Army's transition to a brigade combat team (BCT) modernization strategy. ***FY 2013 Plans:*** Capability Packages are the key element of the Army's transition to a brigade combat team (BCT) modernization strategy to build a versatile mix of mobile, networked and combat effective BCTs. Following the Defense Secretary's guidance to accelerate	0.000	0.800 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
proven solutions, these packages upgrade our units every few years so the best capabilities available at that time go to the Soldiers who need them most, based on the continually evolving combat environment. These bundles of capabilities include doctrine, organization, and training in conjunction with materiel to fill the highest priority shortfalls and mitigate risk for Soldiers. The incremental deliveries are build upon one another as the Army continually adapts and modernizes.			
Title: Robotics ***Articles:*** ***Description:*** Testing and demonstration of increased unmanned ground vehicle capabilities. ***FY 2013 Plans:*** Tests and demonstrates increasingly capable unmanned ground vehicles in four separate categories (soldier transportable, self transportable, vehicle transportable, and applique) through venues such as the Robotics Rodeo, Mounted Maneuver Battle Lab (MMBL), and Brigade Modernization Command (BMC) events. Successful robotic systems is considered for in theater usage and DOTMLPF assessments for transition decisions. ***FY 2014 Plans:*** Will support the Army robotics Campaign Plan development, and resolution of DOTMLPF issues associated with integration of various Robotics initiatives. Will be responsible for participation as member of Joint Ground Robotics Integration Team meetings and in producing guidance and directives for Army-wide Robotic SMEs and products for applicable initiative being resourced and assessed. Will include initiatives directly related to robotics such as operational control units (OCUs) like Tactical Robotic Controller and systems linked to the controllers.	0.000	1.325 0	2.650
Title: Tunnel Detection (TD) ***Articles:*** ***Description:*** Test and demonstration of sensor technology. ***FY 2013 Plans:*** Test and demonstrate a suite of sensor technology systems capable of detecting, exploiting, and remediating, clandestine purpose-built tunnels.	0.000	1.175 0	0.000
Title: Exploitation ***Articles:*** ***Description:*** Document and Media Exploitation (DOMEX) is the collection and exploitation of captured equipment, documents, and media.	0.000	1.400 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 317: *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2013 Plans: Document and Media Exploitation (DOMEX) Tactical, operational, and strategic leaders are enabled with accurate information about enemy forces through the rapid and accurate extraction, exploitation, and analysis of captured enemy documents, media, and materiel. Tactically, DOMEX is the collection and exploitation of captured equipment, documents, and media to generate actionable intelligence. The DOMEX is a critical part of target exploitation, especially as it relates to actions on the objective during site exploitation activities. Efforts in exploitation also support Special Operations Command (SOCOM) with DOTMLPF assessments of classified solutions supporting technical reconnaissance, and information operations associated with exploitation.			
Title: Non Standard Training Gap Initiative (formerly Non-Standard Capability Training Gaps) ***Articles:*** ***Description:*** Training for accelerated capabilites is accomplished primarily through mandated New Equipment Training (NET) with no process for follow on efforts. This incongruity is detrimental to effective and consistent training for the force. ***FY 2013 Plans:*** The Army has not established an approved mechanism to train non-standard equipment within operational formations or CoEs. This deficiency compels training independent of evaluated/verifiable methods. There is minimal assistance in the development of Training Support Packages (TSP) and varying levels of oversight to validate if the maximum benefit of the training and capability has been attained. This incongruity is detrimental to effective and consisitent training for the force. Training for accelerated capabilities is accomplished primary through mandated New Equipment Training (NET) with no process for follow on efforts. Supports TRADOC CoEs in development of Pilot Training Programs to establish process for the integration on non-standard capability training. ***FY 2014 Plans:*** Will lead the Non Standard Equipment (NSE) training process initiative supporting the development, execution, evaluation, and maintenance of the 2nd pilot program to develop a standardized and effective NSE training process for deployed units. ARCIC Accelerated Capabilities Division (ACD) will be responsible for facilitating and coordinating stakeholders in the execution, evaluation, and maintenance of Pilot Program 2 on the NSE training process.	0.000	3.201 0	3.137
Title: Tower Hawk ***Description:*** Provides support to development, integration, and equiping of solutions to the field for integrated base defense while providing long range pinpoint offensive action. ***FY 2014 Plans:***	0.000	0.000	2.500

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 317: *Current Force Capability Gaps*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Will provide support to development, integration, and equiping of solutions to the field for integrated base defense while providing long range pinpoint offensive action against insurgents identified in hostile acts. ACD will provide the integration efforts across DOTMLPF as part of coordination and facilitation efforts between Project Offices, TRADOC CoEs, and test agencies.			
Title: Small Unit Learder Situational Awareness Tool (SULSAT) ***Description:*** Supports the Army Robotics Campaign Plan initiatives by addressing DOTMLPF issues associated with integration of emerging Robotics initiatives. ***FY 2014 Plans:*** Will provide support to the Army Robotics Campaign Plan initiatives by addressing DOTMLPF issues associated with integration of emerging Robotics initiatives such as Small Unit Leader Situational Awareness Tools (SULSAT). This will require cutting-edge technology in multiple fields, including high speed graphics computing, 3-D imaging, virtual reality, and visualization. This capability will be able to visualize internal and external structures of buildings as well as potential threats, and then disseminate that information to soldiers and small-unit leaders.	0.000	0.000	1.002
Title: Black Kite ***Description:*** Micro Air Vehicle (MAV) with increased sensor capability in support of Army Counter-IED (CIED) Strategy. ***FY 2014 Plans:*** Micro Air Vehicle (MAV) with increased sensor capability in support of Army Counter-IED (CIED) Strategy associated with integration of various (CIED initiatives. Supports Army-wide IED-Defeat Training initiatives and systems. Coordinated and integrated with TRADOC CoEs with CIED SMEs and products for all CIED Line of Efforts.	0.000	0.000	0.740
Title: Contractor Year Equivalent (CME) Support to TRADOC Capability Development and Integration Directorates (CDIDs) ***Description:*** Provides CMEs to CDIDs across TRADOC to develop and integrate capabilities. ***FY 2014 Plans:*** Will provide approximately 87 CMEs to CDIDs across TRADOC to develop and integrate the capabilities for which the ASA(ALT) community is developing and fielding materiel solutions. FY14 will be the first year of incremental funding until 100% of the requirement is funded in FY 2017 and beyond.	0.000	0.000	14.900
Accomplishments/Planned Programs Subtotals	17.200	17.677	29.489

C. Other Program Funding Summary ($ in Millions)

N/A

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C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 33B: *Soldier-Centered Analyses For Future Force*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
33B: *Soldier-Centered Analyses For Future Force*	-	1.854	1.895	1.875	-	1.875	1.865	1.876	1.803	1.800	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project will provide early application of human performance and human figure modeling tools in the development of Soldier-focused requirements to shape technology for Future Force development. Design analyses, constructive simulations and Soldier-in-the-loop assessments will ensure that manpower requirements and workload and skill demands are considered to avoid information and physical task overloads, and take optimum advantage of aptitudes, individual and collective training, and numbers of Soldiers for an affordable Future Force. The cited work is consistent with the Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). Work in this project is performed by the Army Research Laboratory (ARL).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Manpower and Personnel Integration (MANPRINT)	1.854	1.895	1.875
Articles:	0	0	
Description: Provide dedicated modeling and analysis cell for early and accurate MANPRINT estimates to Army Materiel Command (AMC), Research, Development, and Engineering Command (RDECOM) and its Research, Development, and Engineering Centers (RDECs), TRADOC Centers, Schools and Centers of Excellence (CoEs), Army Test and Evaluation Command (ATEC) and other service laboratories.			
FY 2012 Accomplishments: Developed method to trace quantified Human System Integration (HSI) risks from Warfighter and platform performance up to mission execution.			
FY 2013 Plans: Develop analysis methodology to link HSI risk mitigation (i.e. specific system design changes) to manpower and health care cost avoidance.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605326A: *Concepts Experimentation Program*	PROJECT 33B: *Soldier-Centered Analyses For Future Force*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Will develop and demonstrate model based links between Systems Engineering (SE) and MANPRINT tools and methods to leverage common data elements and resources to better inform acquisition tradeoff decisions.			
Accomplishments/Planned Programs Subtotals	1.854	1.895	1.875

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605502A: *SMALL BUSINESS INNOVATIVE RESEARCH*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	208.324	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
861: *SMALL BUS TECH - AMC*	-	24.717	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
M40: *SMALL BUSINESS-AMC*	-	183.607	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

The Small Business Innovation Research (or SBIR) program is a United States Government program, coordinated by the Small Business Administration, in which 2.6% of the total extramural research budgets of all federal agencies with extramural research budgets in excess of $100 million are reserved for contracts or grants to small businesses. A similar program, the Small Business Technology Transfer Program (STTR), uses a similar approach to the SBIR program to expand public/private sector partnerships between small businesses and nonprofit U.S. research institutions, and is funded at present at .35% of the relevant agencies' extramural research budgets.

A. Mission Description and Budget Item Justification

There is no FY13 funding. This program is for SBIR only and only shows prior years.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	208.324	0.000	0.000	-	0.000
Total Adjustments	208.324	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	208.324	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605502A: *SMALL BUSINESS INNOVATIVE RESEARCH*	PROJECT 861: *SMALL BUS TECH - AMC*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
861: *SMALL BUS TECH - AMC*	-	24.717	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (or SBIR) program is a United States Government program, coordinated by the Small Business Administration, in which 2.6% of the total extramural research budgets of all federal agencies with extramural research budgets in excess of $100 million are reserved for contracts or grants to small businesses. A similar program, the Small Business Technology Transfer Program (STTR), uses a similar approach to the SBIR program to expand public/private sector partnerships between small businesses and nonprofit U.S. research institutions, and is funded at present at .35% of the relevant agencies' extramural research budgets.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: SBIR	24.717	0.000	0.000
Articles:	0		
Description: SBIR			
FY 2012 Accomplishments: SBIR			
Accomplishments/Planned Programs Subtotals	24.717	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605502A: *SMALL BUSINESS INNOVATIVE RESEARCH*	PROJECT M40: *SMALL BUSINESS-AMC*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M40: *SMALL BUSINESS-AMC*	-	183.607	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (or SBIR) program is a United States Government program, coordinated by the Small Business Administration, in which 2.6% of the total extramural research budgets of all federal agencies with extramural research budgets in excess of $100 million are reserved for contracts or grants to small businesses. A similar program, the Small Business Technology Transfer Program (STTR), uses a similar approach to the SBIR program to expand public/private sector partnerships between small businesses and nonprofit U.S. research institutions, and is funded at present at .35% of the relevant agencies' extramural research budgets.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Small Business - AMC	183.607	0.000	0.000
Articles:	0		
Description: funds to support Small Business - AMC			
FY 2012 Accomplishments: Small Business - AMC			
Accomplishments/Planned Programs Subtotals	183.607	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605601A: *ARMY TEST RANGES AND FACILITIES*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	366.327	369.900	340.659	-	340.659	325.178	277.847	278.681	320.330	Continuing	Continuing
F30: *ARMY TEST RANGES & FACILITIES*	-	366.327	369.900	340.659	-	340.659	325.178	277.847	278.681	320.330	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

11. Adjustments to Budget Years - Army consolodated three Test and Evaluation Command Headquarters: Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements under one Program Element. Funds reprogrammed effective FY14.

13. Other Adjustments 2 - Restoral of RMD703 wedge placed erroneously in PE0605601A: efficiency - civilian hiring freeze (99,568 in FY2012).

14. Other Adjustments 3 - Adjustment due to RMD700A1 issued 7 December 2012, directing HME funding by realigning funds from PE0605601A to PE0605602A for fiscal years FY2014 (3,464) and FY2015 (4,152)

A. Mission Description and Budget Item Justification

This project provides the institutional funding required to operate the developmental test activities, in accordance with Section 232 of the FY2003 National Defense Authorization Act (NDAA), required by Department of Defense (DOD) Program Executive Officers, Program and Product Managers, and Research, Development, and Engineering Centers. Resources provided by this project operate seven elements of the DOD Major Range and Test Facility Base (MRTFB): White Sands Test Center (WSTC),White Sands Missile Range, New Mexico; High Energy Laser System Test Facility (HELSTF), White Sands Test Center, White Sands Missile Range, New Mexico; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; and Yuma Test Center (YTC), Yuma Proving Ground, Arizona, Cold Regions Test Center (CRTC) Fort Greely, Alaska and Tropic Regions Test Center (TRTC) at various locations. This project also funds the Army's developmental test capability at Redstone Test Center (RTC), Redstone Arsenal, Alabama.

This project finances the overhead (institutional) test operating cost not appropriately billed to test customers, recurring test infrastructure/capability sustainment requirements, replacement of test equipment, test operating procedures, and test revitalization/upgrade projects to maintain current testing capabilities and improvements to safety, environmental protection, efficiency of test operations, and technological advances. The developmental test capabilities at these test ranges have been uniquely established, are in place to support test and evaluation (T&E) requirements of funded weapons programs, and are required to assure technical performance, adherence to safety requirements, reliability, logistics supportability, Title 10 Live Fire Test and Evaluation, transportability, environmental effects, electromagnetic effects, and quality of materiel in development and in production.

In accordance with the FY03 NDAA, this project funds the indirect test costs associated with the rapid testing of systems and equipment needed in support of the Overseas Contingency Operations (OCO), such as individual soldier protection equipment and up-armoring the Army's wheeled vehicle fleet. This project sustains

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
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the developmental Test & Evaluation capability required to support Army as well as Joint Service or Other Service systems, materiel, and technologies. Types of systems scheduled for developmental testing include; Aircraft, Air Delivery, Unmanned Aerial Systems, Unmanned Ground Vehicles, Air and Missile Defense Systems, Engineering Equipment, Direct fire, Indirect fire, Nonlethal weapons, Ammunition, Automotive Systems, Intelligence Surveillance and Reconnaissance, Ground Soldier System, Missiles, Rockets, Directed Energy Weapons, Network Centric and Command, Control, and Communication.

Specific systems supported in FY13 with continued support in FY14 include: Network Integration Evaluations (NIE), personnel protective equipment (including Body Armor), up-armoring vehicle ballistic protection on route clearance vehicles, Family of Medium Tactical Vehicles Long Term Armor Strategy (FMTV LTAS), and Joint Light Tactical Vehicle (JLTV); Stryker upgrades; armor gun shields for tactical vehicles; reactive and active armor; Individual Semi-Automatic Airburst System (XM25 ISAAS); the Mine Resistant Ambush Protected (MRAP) Vehicles; Rocket, Artillery, Mortar (RAM); Guided Multiple Launch Rocket System (GMLRS) Unitary Rocket; Counter Remote Control IED (RCIED) Electronic Warfare (CREW); Warfighter Information Network Tactical (WIN-T); Distributed Common Ground System - Army (DCGS-A); Aviation Transformation (AH-64 Block III); aviation protection systems (Common Missile Warning System (CMWS) and Common Infrared Countermeasure (CIRCM), missile defense (PAC-3), Terminal High Altitude Area Defense (THAAD)); Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS); Unmanned Aerial Systems (Tactical Unmanned Aerial Systems, Extended Range Multi-Purpose, Hunter, RQ-16 Class I UAS, Long Endurance Multi-INT Vehicle (LEMV, Telluride, Raven)); Unmanned Ground Vehicles (Small Unmanned Ground Vehicle (SUGV), Grey Eagle, Kiowa Warrior Upgrades, CMWS Hostile Fire Indication, Excalibur, Green Ammo, Nett Warrior, Joint Tactical Radio System (JTRS), Joint Battle Command-Platform (JBC-P) Aircraft Hostile Fire Detection System (HFDS), Paladin Integrated Management (PIM), and Longbow Hellfire Modular Missile System (LBHMMS)).

Direct costs are borne by materiel developers in accordance with DoD Directive 3200.11 and DOD Financial Management Regulation 7000.14R.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	311.650	369.900	366.330	-	366.330
Current President's Budget	366.327	369.900	340.659	-	340.659
Total Adjustments	54.677	0.000	-25.671	-	-25.671
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	3.377	-			
• Adjustments to Budget Years	-	-	-22.207	-	-22.207
• Other Adjustments 2	51.300	-	-3.464	-	-3.464

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
F30: *ARMY TEST RANGES & FACILITIES*	-	366.327	369.900	340.659	-	340.659	325.178	277.847	278.681	320.330	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project provides the institutional funding required to operate the developmental test activities, in accordance with Section 232 of the FY2003 National Defense Authorization Act (NDAA), required by Department of Defense (DOD) Program Executive Officers, Program and Product Managers, and Research, Development, and Engineering Centers. Resources provided by this project operate seven elements of the DOD Major Range and Test Facility Base (MRTFB): White Sands Test Center (WSTC),White Sands Missile Range, New Mexico; High Energy Laser System Test Facility (HELSTF), White Sands Test Center, White Sands Missile Range, New Mexico; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; and Yuma Test Center (YTC), Yuma Proving Ground, Arizona, Cold Regions Test Center (CRTC) Fort Greely, Alaska and Tropic Regions Test Center (TRTC) at various locations. This project also funds the Army's developmental test capability at Redstone Test Center (RTC), Redstone Arsenal, Alabama.

This project finances the overhead (institutional) test operating cost not appropriately billed to test customers, recurring test infrastructure/capability sustainment requirements, replacement of test equipment, test operating procedures, and test revitalization/upgrade projects to maintain current testing capabilities and improvements to safety, environmental protection, efficiency of test operations, and technological advances. The developmental test capabilities at these test ranges have been uniquely established, are in place to support test and evaluation (T&E) requirements of funded weapons programs, and are required to assure technical performance, adherence to safety requirements, reliability, logistics supportability, Title 10 Live Fire Test and Evaluation, transportability, environmental effects, electromagnetic effects, and quality of materiel in development and in production.

In accordance with the FY03 NDAA, this project funds the indirect test costs associated with the rapid testing of systems and equipment needed in support of the Overseas Contingency Operations (OCO), such as individual soldier protection equipment and uparmoring the Army's wheeled vehicle fleet. This project sustains the developmental Test & Evaluation capability required to support Army as well as Joint Service or Other Service systems, materiel, and technologies. Types of systems scheduled for developmental testing include; Aircraft, Air Delivery, Unmanned Aerial Systems, Unmanned Ground Vehicles, Air and Missile Defense Systems, Engineering Equipment, Direct fire, Indirect fire, Nonlethal weapons, Ammunition, Automotive Systems, Intelligence Surveillance and Reconnaissance, Ground Soldier System, Missiles, Rockets, Directed Energy Weapons, Network Centric and Command, Control, and Communication.

Specific systems supported in FY13 with continued support in FY14 include: Network Integration Evaluations (NIE), personnel protective equipment (including Body Armor), up-armoring vehicle ballistic protection on route clearance vehicles, Family of Medium Tactical Vehicles Long Term Armor Strategy (FMTV LTAS), and Joint Light Tactical Vehicle (JLTV); Stryker upgrades; armor gun shields for tactical vehicles; reactive and active armor; Individual Semi-Automatic Airburst System (XM25 ISAAS); the Mine Resistant Ambush Protected (MRAP) Vehicles; Rocket, Artillery, Mortar (RAM); Guided Multiple Launch Rocket System (GMLRS) Unitary Rocket; Counter Remote Control IED (RCIED) Electronic Warfare (CREW); Warfighter Information Network Tactical (WIN-T); Distributed Common Ground System - Army (DCGS-A); Aviation Transformation (AH-64 Block III); aviation protection systems (Common Missile Warning System (CMWS) and Common Infrared Countermeasure

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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(CIRCM), missile defense (PAC-3), Terminal High Altitude Area Defense (THAAD)); Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS); Unmanned Aerial Systems (Tactical Unmanned Aerial Systems, Extended Range Multi-Purpose, Hunter, RQ-16 Class I UAS, Long Endurance Multi-INT Vehicle (LEMV, Telluride, Raven)); Unmanned Ground Vehicles (Small Unmanned Ground Vehicle (SUGV), Grey Eagle, Kiowa Warrior Upgrades, CMWS Hostile Fire Indication, Excalibur, Green Ammo, Nett Warrior, Joint Tactical Radio System (JTRS), Joint Battle Command-Platform (JBC-P) Aircraft Hostile Fire Detection System (HFDS), Paladin Integrated Management (PIM), and Longbow Hellfire Modular Missile System (LBHMMS)).

Direct costs are borne by materiel developers in accordance with DoD Directive 3200.11 and DOD Financial Management Regulation 7000.14R.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Mission Support	171.960	157.992	131.944
Articles:	0	0	

Description: Mission Support. Funds support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supports indirect cost previously paid by the customer for which funding was realigned, as approved by Assistant Secretary of the Army for Acquisition, Logistics and Technology and validated by Deputy Assistant Secretary of the Army for Cost and Economics, from the Army PEO/PMs and non-Army DOD customers.

FY 2012 Accomplishments:

Funded support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supported indirect cost previously paid by the customer for which funding was realigned, as approved by Assistant Secretary of the Army for Acquisition, Logistics and Technology and validated by Deputy Assistant Secretary of the Army for Cost and Economics, from the Army PEO/PMs and non-Army DOD customers.

FY 2013 Plans:

Funds support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supports indirect cost previously paid by the customer for which funding was realigned, as approved by Assistant Secretary of the Army for Acquisition, Logistics and

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Technology and validated by Deputy Assistant Secretary of the Army for Cost and Economics, from the Army PEO/PMs and non-Army DOD customers. ***FY 2014 Plans:*** Funds will support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding will support indirect cost previously paid by the customer for which funding was realigned, as approved by Assistant Secretary of the Army for Acquisition, Logistics and Technology and validated by Deputy Assistant Secretary of the Army for Cost and Economics, from the Army PEO/PMs and non-Army DOD customers.			
Title: T&E Civilian Pay	121.539	134.829	136.588
Articles:	0	0	
Description: This funding supports the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance is customer funded. The test customer pays all direct costs that are directly attributable to the use of a test facility or resource for testing of a particular program. Funding is essential to maintain core T&E skills as part of the Government civilian workforce. ***FY 2012 Accomplishments:*** Funded the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance was customer funded. The test customer paid all direct costs that are directly attributable to the use of a test facility or resource for testing of a particular program. Funding was essential to maintain core T&E skills as part of the Government civilian workforce. ***FY 2013 Plans:*** Funds support the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance is customer funded. The test customer pays all direct costs that are directly attributable to the use of a test facility or resource for testing of a particular program. Funding is essential to maintain core T&E skills as part of the Government civilian workforce. ***FY 2014 Plans:*** Funds will support the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance will be customer funded. The test customer will pay all direct costs that are directly attributable to the use of a test facility or resource for testing of a particular program. Funding will be essential to maintain core T&E skills as part of the Government civilian workforce.			
Title: Contractor Support	55.477	64.105	62.127

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	
Description: This funding supports contractor labor costs not appropriately billable to the customer. Contract labor is essential to augment core civilian T&E personnel. Functions performed include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. Funding supports contractor efforts related to mission support. ***FY 2012 Accomplishments:*** Funded contractor labor costs not appropriately billable to the customer. Contract labor was essential to augment core civilian T&E personnel. Functions performed include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. Funding supported contractor efforts related to mission support. ***FY 2013 Plans:*** Funds support contractor labor costs not appropriately billable to the customer. Contract labor is essential to augment core civilian T&E personnel. Functions performed includes range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. Funding supports contractor efforts related to mission support. ***FY 2014 Plans:*** Funds will support contractor labor costs not appropriately billable to the customer. Contract labor will be essential to augment core civilian T&E personnel. Functions performed will include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support. Funding will support contractor efforts related to mission support.			
Title: Revitalization/Upgrade	5.000	10.000	10.000
Articles:	0	0	
Description: Funds support the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements are required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving test and evaluation capabilities for the highest priority Army programs. ***FY 2012 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Funded revitalization/upgrade of test infrastructure and capabilities. MRTFB elements were required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding was focused on improving test and evaluation capabilities for the highest priority Army programs. ***FY 2013 Plans:*** Funds supports the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements are required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding is focused on improving test and evaluation capabilities for the highest priority Army programs. ***FY 2014 Plans:*** Funds will support the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements will be required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving test and evaluation capabilities for the highest priority Army programs.			
Title: Automotive Technology Facility (ATEF) ***Articles:*** ***Description:*** Provides funding for sustainment and maintenance for the Automotive Technology Facility (ATEF). ATEF is an engineered test track located at Aberdeen Proving Ground, Maryland for sustained high speed testing of the entire gamut of wheeled and tracked vehicles, manned and robotic, ranging from 2 to 119 tons on multiple surfaces. ***FY 2012 Accomplishments:*** Funded the sustainment and maintenance for the Automotive Technology Facility (ATEF) requirements.	0.900 0	0.000	0.000
Title: Critical Overseas Contingency Operations Requirements ***Articles:*** ***Description:*** Funding is provided for the following effort: ***FY 2012 Accomplishments:*** The purpose for this request was the requirement for additional funding to support increased infrastructure sustainment requirements that had resulted from supporting unplanned workload. This unplanned workload reduced funds available to test capability sustainment and facility upgrades and increased wear and tear on test facilities and equipment used during tests. Obligation of funds to supported unanticipated work with a subsequent negative impact upon sustainment requirements.	8.513 0	0.000	0.000
Title: High Energy Laser System Test Facility (HELSTF) ***Articles:***	2.938 0	2.974 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Provides partial funding for the sustainment requirement for HELSTF capability at White Sands Missile Range (WSMR) in New Mexico. HELSTF includes an array of chemical and solid state laser systems, beam directors, sensors, associated test instrumentation and centralized data processing capabilities. ***FY 2012 Accomplishments:*** Partially funded the sustainment requirement for HELSTF capability at White Sands Missile Range (WSMR) in New Mexico. HELSTF included an array of chemical and solid state laser systems, beam directors, sensors, associated test instrumentation and centralized data processing capabilities. ***FY 2013 Plans:*** Provides partial funding for the sustainment requirement for HELSTF capability at White Sands Missile Range (WSMR) in New Mexico. HELSTF includes an array of chemical and solid state laser systems, beam directors, sensors, associated test instrumentation and centralized data processing capabilities.			
Accomplishments/Planned Programs Subtotals	366.327	369.900	340.659

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	68.968	69.183	66.061	-	66.061	64.882	63.069	64.037	64.620	Continuing	Continuing
628: *Developmental Test Technology & Sustainment*	-	45.829	45.498	46.814	-	46.814	46.293	45.614	46.291	39.571	Continuing	Continuing
62C: *Modeling and Simulation Instrumentaion*	-	23.139	23.685	19.247	-	19.247	18.589	17.455	17.746	25.049	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This Program Element provides critical front-end investments for development of new test methodologies; test standards; advanced test technology concepts for long range requirements; future test capabilities; advanced development of M&S and instrumentation prototypes; and the full development of test instrumentation for the United States Army Test and Evaluation Command (ATEC), which includes the Operational Test Command (OTC) at Ft Hood, Texas; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; White Sands Test Center (WSTC) at White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Yuma Test Center (YTC) at Yuma Proving Grounds (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska and the Tropics Regions Test Center (TRTC), at various locations); Redstone Test Center (RTC), Redstone Arsenal, Alabama; and West Desert Test Center (WDTC) at Dugway Proving Ground (DPG), Utah. OTC consists of four forward Test Directorates (Airborne and Special Operations Test Directorate, Fort Bragg, North Carolina; Integrated Test and Evaluation Directorate, Fort Bliss, Texas; Fires Test Directorate, Fort Sill, Oklahoma; and Intelligence Electronic Warfare Test Directorate, Fort Huachuca, Arizona) together with four other Test Directorates (Aviation; Maneuver; Mission Command; Maneuver Support and Sustainment) at Ft Hood, Texas. These activities support the development and fielding cycle of all Army acquisition programs including rapid fielding initiatives in support of operations in Afghanistan. Sustainment funding maintains existing testing capabilities at all locations by replacing unreliable, uneconomical, and irreparable instrumentation, as well as incremental upgrades of hardware and software for M&S and instrumentation systems to assure adequate test data collection capabilities. This data supports acquisition milestone decisions for all commodity areas throughout the Army including programs such as the Joint Light Tactical Vehicle (JLTV), Ground Combat Vehicle (GCV), Network Integration Evaluation (NIE), Terminal High Altitude Area Defense (THAAD), Patriot Advance Capability Phase 3 (PAC-3), Armored Multipurpose Vehicle (AMPV), Warfighter Information Network - Tactical (WIN-T), Joint Tactical Radio System (JTRS), and the Army Battle Command System (ABCS) which includes Joint Battle Command - Platform. This Program Element develops and sustains developmental and operational test capabilities that provide key support to the Army's three roles: Prevent, Shape, and Win Decisively. In addition this Program Element supports Overseas Contingency Operations by providing instrumentation to support ATEC's 24/7 mission at YTC, Arizona, WSMR, New Mexico and ATC, Maryland supporting the Joint Improvised Explosive Device Defeat Organization (JIEDDO), as well as efforts throughout ATEC in support of the Army's Rapid Equipping the Force (REF) initiative.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*			R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	70.116	69.183	64.432	-	64.432
Current President's Budget	68.968	69.183	66.061	-	66.061
Total Adjustments	-1.148	0.000	1.629	-	1.629
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.148	-			
• Adjustments to Budget Years	-	-	1.629	-	1.629

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
628: *Developmental Test Technology & Sustainment*	-	45.829	45.498	46.814	-	46.814	46.293	45.614	46.291	39.571	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters - Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for the program management and oversight of test technology and instrumentation investment accounts under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

This program provides critical front-end investments for development of new test methodologies, test standards, advanced test technology concepts for long range requirements, future test capabilities, and advanced instrumentation prototypes for subordinate commands of the Army Test and Evaluation Command (ATEC). These capabilities are required to support developmental testing requirements of high priority Army systems being rapidly fielded to Afghanistan, and those systems supporting Army modernization efforts. Where practical, efficiencies will be gained through the common use of developmental instrumentation in operational testing. A key element is sustaining aging instrumentation which maintains existing capabilities at test facilities by replacing unreliable, uneconomical and irreparable instrumentation, as well as lifecycle replacement and incremental upgrades of instrumentation and software, reducing their average age to assure adequate testing capabilities. This project develops and sustains developmental test instrumentation and capabilities that provide the data necessary to support acquisition milestone decisions for all commodity areas throughout the Army. Significant examples include new instrumentation for the testing of body armor and other soldier protective equipment, advanced methods for testing the survivability of ground vehicles and aircraft, refurbishment of kineto-tracking mounts (precise optical instruments used in missile and aviation testing), and an expanded instrumentation suite in support of the growing mission to test Command, Control, Communication and Computer (C4) systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Program Management	5.943	5.756	0.000
Articles:	0	0	
Description: Provides command-level oversight, management and technical support for the DT test technology and instrumentation investment accounts. Provides support to ATEC Capstone efforts in coordinating development of common instrumentation and technology needs for developmental and operational testing. Provides management and support costs for direct interface with the T&E Executive Agent, management of needs and solutions calls for T&E Reliance oversight, management			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
of the Small Business Innovation Research (SBIR), and support of the Army principal of the Test Resource Advisory Group (TRAG). ***FY 2012 Accomplishments:*** Funded the existing requirement for the development of common instrumentation and technology to support developmental and operational testing. Supported the Army principal of the Test Resource Advisory Group (TRAG). ***FY 2013 Plans:*** Continuation of the existing requirement for the development of common instrumentation and technology to support developmental and operational testing. Support of the Army principal of the Test Resource Advisory Group (TRAG).			
Title: Developmental Test Technology Investment	35.647	36.377	42.908
Articles:	0	0	
Description: Develops, acquires and sustains critical test technology and instrumentation: Provides the necessary test instrumentation, computer and communications systems, data collection, analysis and reporting equipment and other test capabilities to successfully develop and test the Army weapons and equipment. Provides the necessary live, virtual and constructive environment, hardware-in-the-loop capabilities and models and simulations needed for testing the Army materiel. Acquires instrumentation for reliability, availability and maintainability (RAM) data collection on tracked and wheeled vehicles; ballistic transducers for measuring chamber pressures during ammunition tests; supports development of common data collection instrumentation used in testing across all test commodity areas and test lifecycles; acquires instrumentation for electromagnetic environmental effects (E3) on ground and air systems; continues replacement and upgrade of range control instrumentation, radar, optics and telemetry equipment used in missile testing; acquires data recorders, signal conditioning equipment, data processing equipment and other instrumentation for various aircraft tests; upgrades natural environments test instrumentation used for testing weapon systems, vehicles, munitions and support equipment in extreme hot desert plus tropic environments as well as extreme cold conditions; continues upgrade of survivability/vulnerability test capabilities in support of live fire, active protection systems, and homemade explosive characterization; upgrades and replaces mobile range communications equipment and digital end devices; and develops advanced test technologies and instrumentation for testing next generation materiel such as advanced armor protection, multi-spectral sensors, and advanced soldier systems. ***FY 2012 Accomplishments:*** Provided, acquired and upgraded instrumentation for RAM, ballistic, missile, aviation and environmental testing across all test commodity areas and supported the test capability of live fire survivability testing. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue to provide, acquire and upgrade instrumentation for RAM, ballistic, missile, aviation and environmental testing across all test commodity areas and support the test capability of live fire survivability testing. ***FY 2014 Plans:*** Will continue to provide, acquire and upgrade instrumentation for RAM, ballistic, missile, aviation and environmental testing across all test commodity areas and support the test capability of live fire survivability testing.			
Title: Homemade Explosive Characterization Study ***Description:*** Homemade explosives are the prevalent underbody threat in Operation Enduring Freedom area of operation. Currently live fire testing cannot use Army G2-validated homemade explosive surrogate because its performance has varied greatly from test-to-test. This study will characterize subscale and full scale repeatability of Army G2-validated surrogate homemade explosive charge for use in live fire test events and compare the performance relative to TNT standard. Results from this homemade explosive characterization will inform efforts to improve combat vehicle survivability. ***FY 2014 Plans:*** Will obtain data to quantify target responses of homemade explosive surrogates and additional standard TNT mine threats used in live fire testing and provide data set to support future verification, validation, and accreditation (VV&A) of underbody blast modeling and simulation tools.	0.000	0.000	3.464
Title: Automotive Technology Evaluation Facility ***Articles:*** ***Description:*** Automotive Technology Evaluation Facility (ATEF) Test Track Upgrades - An automated traffic control system will be installed to monitor vehicle positions on the course and control accesses to and from the facility. Continuous vehicle monitoring is required for range safety and automatic collision avoidance while simultaneously conducting sustained speed endurance, vehicle dynamics and stability, robotic/autonomous vehicle control and traction control testing. ***FY 2012 Accomplishments:*** Maintained automated traffic control system and continue monitoring range safety while conducting simultaneous vehicle testing. An instrumentation suite will be procured to collect and transmit real-time test data, consisting of on-board data acquisition equipment, telemetry receiving stations, wireless communications network, vehicle position systems, a fiber-optic network interface, and will be equipped with a driverless test vehicle guidance system. ***FY 2013 Plans:*** Maintain automated traffic control system and continue monitoring range safety while conducting simultaneous vehicle testing. An instrumentation suite will be procured to collect and transmit real-time test data, consisting of on-board data acquisition equipment,	2.995 0	2.901 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
telemetry receiving stations, wireless communications network, vehicle position systems, a fiber-optic network interface, and will be equipped with a driverless test vehicle guidance system.			
Title: Army Test and Evaluation Command (ATEC) Common Test Technology for Developmental Testing, Operational Testing, and Evaluation	1.244	0.464	0.442
Articles:	0	0	
Description: Army Test and Evaluation Command (ATEC) Common Test Technology for Developmental Testing, Operational Testing, and Evaluation. Provides support for development of a Test and Evaluation Enterprise Architecture to facilitate use of common tools and standards; support for critical Test Technology Domain Focus Areas of Instrumentation, Modeling and Simulation, Threats, Data Management, and Networks; and support, implementation of ATEC Regulation 70-15			
FY 2012 Accomplishments: Provided support for development of the VISION digital library, the development of test and evaluation enterprises to facilitate use of common tools and standards. Supported critical test technology domain focus areas of instrumentation, modeling and simulation, threats, data management and Networks. Implementation of ATEC Reg 70-15			
FY 2013 Plans: Due to the consolidation of headquarters functions within ATEC, most efforts funded by this project have been transferred to the appropriate headquarters account. This project will continue to support the sustainment of the Starship instrumentation monitoring and control software.			
FY 2014 Plans: Due to the consolidation of headquarters functions within ATEC, most efforts funded by this project have been transferred to the appropriate headquarters account. This project will continue to support the sustainment of the Starship instrumentation monitoring and control software.			
Accomplishments/Planned Programs Subtotals	45.829	45.498	46.814

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *Modeling and Simulation Instrumentaion*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
62C: *Modeling and Simulation Instrumentaion*	-	23.139	23.685	19.247	-	19.247	18.589	17.455	17.746	25.049	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The US Army Test and Evaluation Command (USATEC) plans, conducts and reports on operational tests, assessments and experiments in order to provide essential information for the acquisition and fielding of War Fighting Systems. Operational Test (OT) Instrumentation collects required data from both the systems being tested and the surrounding activities. OT simulation enhances the live forces conducting operational testing by simulating additional units, message traffic, effects, and terrain. The Army's OPTEMPO has reduced the number of tactical units and vehicles available to support OT, making augmentation through simulation needed at times to test in a realistic, operational environment. The Program Executive Office for Simulation, Training, and Instrumentation (PEO STRI) Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS) provides development of major simulation and instrumentation systems while ATEC adapts systems from other organizations, purchases off-the-shelf systems, develops minor new systems, and sustains all ATEC simulation and instrumentation systems. The OT Simulation and Instrumentation (S&I) (Sustainment and Minor Development) program funds the expertise and the adaptation, purchases, minor development and sustainment requirements that support systems undergoing OT. Costs unique to specific systems under test may require Program Manager (PM) funding.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Modeling, Simulation and Instrumentation	23.139	23.685	19.247
Articles:	0	0	

Description: Develop and enhance ATEC's simulation/stimulation of Mission Command, Fire Support, Air Defense, Reconnaissance and Surveillance, and Network systems. Improve and sustain our Real-Time Casualty Assessment (RTCA) (including geo-pairing) capabilities. Plus develop, enhance, and sustain our Performance Instrumentation Systems, Time Space Positioning Information (TSPI) and Telemetry Systems, and Imaging Systems together with their associated data management.

FY 2012 Accomplishments:

FY12 Accomplished Programs - The individually accomplished technology projects within all the domains as described in ATEC Regulation 70-15, Table 1, 22 Mar 06, include but are not limited to: DoD Information Assurance Certification and Accreditation Process (DIACAP) for all ATEC MS&I Systems, Sustainment and ATEC Technology Capabilities and associated data management, Test Technology Execution Capabilities – Operational Test Advanced Simulation and Instrumentation Systems (OASIS) and associated data management, Network Control Systems/Battle Command Simulation and associated data management, Real-Time Casualty Assessment (RTCA) (including GEO Pairing) and associated data management, Fires

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *Modeling and Simulation Instrumentaion*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Simulation and Instrumentation - ExCIS FSA and associated data management, Intelligence Surveillance and Reconnaissance (ISR) Simulation and Instrumentation - Intelligence Modeling ans Simulation for Evaluation (IMASE) and associated data management, Performance Instrumentation Systems and associated data management, Time Space Positioning Information (TSPI) and Telemetry Systems and associated data management, and Imaging Systems and associated data management. ***FY 2013 Plans:*** FY13 Planned Programs - The individually accomplished technology projects within all the domains as described in ATEC Regulation 70-15, Table 1, 22 Mar 06, include but are not limited to: DoD Information Assurance Certification and Accreditation Process (DIACAP) for all ATEC MS&I Systems, Sustainment and ATEC Technology Capabilities and associated data management, Test Technology Execution Capabilities – Operational Test Advanced Simulation and Instrumentation Systems (OASIS) and associated data management, Network Control Systems/Battle Command Simulation and associated data management, Real-Time Casualty Assessment (RTCA) (including GEO Pairing) and associated data management, Fires Simulation and Instrumentation - ExCIS FSA and associated data management, Intelligence Surveillance and Reconnaissance (ISR) Simulation and Instrumentation - Intelligence Modeling and Simulation for Evaluation (IMASE) and associated data management, Performance Instrumentation Systems and associated data management, Time Space Positioning Information (TSPI) and Telemetry Systems and associated data management, and Imaging Systems and associated data management. ***FY 2014 Plans:*** FY14 Planned Programs - Continue to develop and enhance ATEC's simulation/stimulation of Mission Command, Fire Support, Air Defense, Reconnaissance and Surveillance, and Network systems. Begin an effort to improve our Real-Time Casualty Assessment (RTCA) (including geo-pairing) capabilities to support future GCV, AMPV, and the Bradley Performance Improvement Program (PIP), Stryker PIP, and Abrams PIP OTs. Plus develop and sustain our Performance Instrumentation Systems and associated data management, Time Space Positioning Information (TSPI) and Telemetry Systems and associated data management, and Imaging Systems and associated data management.			
Accomplishments/Planned Programs Subtotals	23.139	23.685	19.247

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *Modeling and Simulation Instrumentaion*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605604A: *Survivability/Lethality Analysis*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	42.088	44.753	43.280	-	43.280	41.736	41.350	41.616	42.004	Continuing	Continuing
675: *Army Survivability Analysis & Evaluation Support*	-	42.088	44.753	43.280	-	43.280	41.736	41.350	41.616	42.004	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project funds analytical products necessary for inherently-governmental Army Test & Evaluation Command/Army Evaluation Center's (ATEC/AEC) mission. Products result from investigating, analyzing, assessing, and reporting on the survivability of Soldiers, and on the survivability, lethality and vulnerability (SLV) of the highest priority Army systems whether those systems are employed during stability, support, defensive, or offensive missions. Developed through measurement, experiment, test support, and modeling and simulation (M&S), the products funded by this project are used in many ways to make the Army force more survivable. The project provides quantitative lethality and survivability analyses and data for fielded and developmental systems as the Army makes the required choices to decisively transform into a modular Brigade Combat Team (BCT) based organization. Specific survivability analysis products include assessments of systems such as Warfighter Information Network Tactical (WIN-T), Mine Resistant Ambush Protected (MRAP), Stryker, Ground Combat Vehicle (GCV), Army fire support systems, direct fire munitions; Army air defense and missile defense systems; Army aviation systems including Unmanned Aerial Vehicles; network communications and other network enabled battle command systems communication systems; and selected joint services systems particularly relevant to the Army's joint and expeditionary role. Products also include analysis and data concerning individual Soldier items including protective equipment such as helmets and vests. These survivability products are leveraged into rapid-equipping initiatives and other technical support for operational forces involved in the current fight. Continued development of these products also guarantees preservation of the Army's vitally needed technical corporate memory for expert survivability advice.

Survivability analyses funded by this project are conducted across the spectrum of battlefield threats to include guns, missiles, mines and other methods of inflicting physical damage; jammers, countermeasures, and other electronic warfare techniques; information assurance and computer network operations; and directed energy weapons. This survivability information enables developers, users, and decision makers to perform credible survivability tradeoffs for both Soldiers and materiel. These technical survivability details enable properly informed decisions concerning systems and tactics that maximize both the combat power and survivability of Army forces. Survivability data and analysis results funded by this project are efficiently leveraged for many different Army uses, reducing total cost to the Army by eliminating the need for duplicative capabilities funded by individual system developers. Central funding of this mission assures the Army accurate and consistent treatment of survivability across all classes of systems, across all formal system Evaluations, and across the Army's AR 5-5 studies process. Work program is prioritized principally by the ATEC/AEC and is used by them in the Army's formal Evaluation process in such a way that ATEC can comply with its legally mandated responsibility to assess system survivability along with effectiveness and suitability. Program Managers (PM) and the Program Executive Officers (PEO) use the survivability analyses and data funded by this project to make design decisions that are optimized for survivability, to direct specific weapon system development efforts that are needed for survivability enhancement, and to structure product improvement programs. Soldier survivability data and analysis is leveraged to support the survivability portion of the HQDA G1 MANPRINT program. TRADOC combat developers exploit the survivability products funded by this project to initiate and improve

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0605604A: *Survivability/Lethality Analysis*

survivability/lethality requirements, and to develop and refine doctrine and tactics. Also, the quantitative analytical results funded by the project are leveraged as core inputs to formal AR 5-5 studies and other studies as directed by Army leaders. While the Army is at war, analytical results funded by this project are also directly leveraged for survivability support to current operations. Finally, for particularly urgent or controversial survivability issues, data and analysis funded by this project are used directly by senior Army decision makers to assure technically sound program/production decisions.

This project also supports highly technical specialized information assurance and computer network defense survivability analysis of Army battle command/networked systems as well as Army network architectures and technology. Supports ATEC and other electronic warfare vulnerability testers and evaluators by developing and providing highly technical specialized field countermeasure environments that threat forces may employ against Army communications networks, air defense and other systems. In conjunction wit

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	43.414	44.753	43.280	-	43.280
Current President's Budget	42.088	44.753	43.280	-	43.280
Total Adjustments	-1.326	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.326	-			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605604A: *Survivability/Lethality Analysis*	PROJECT 675: *Army Survivability Analysis & Evaluation Support*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675: *Army Survivability Analysis & Evaluation Support*	-	42.088	44.753	43.280	-	43.280	41.736	41.350	41.616	42.004	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project funds analytical products necessary for inherently-governmental Army Test & Evaluation Command/Army Evaluation Center's (ATEC/AEC) mission. Products result from investigating, analyzing, assessing, and reporting on the survivability of Soldiers, and on the survivability, lethality and vulnerability (SLV) of the highest priority Army systems whether those systems are employed during stability, support, defensive, or offensive missions. Developed through measurement, experiment, test support, and modeling and simulation (M&S), the products funded by this project are used in many ways to make the Army force more survivable. The project provides quantitative lethality and survivability analyses and data for fielded and developmental systems as the Army makes the required choices to decisively transform into a modular Brigade Combat Team (BCT) based organization. Specific survivability analysis products include assessments of systems such as WIN-T, Mine Resistant Ambush Protected (MRAP), Stryker, Ground Combat Vehicle (GCV), Army fire support systems, direct fire munitions; Army air defense and missile defense systems; Army aviation systems including Unmanned Aerial Vehicles; network communications and other network enabled battle command systems communication systems; and selected joint services systems particularly relevant to the Army's joint and expeditionary role. Products also include analysis and data concerning individual Soldier items including protective equipment such as helmets and vests. These survivability products are leveraged into rapid-equipping initiatives and other technical support for operational forces involved in the current fight. Continued development of these products also guarantees preservation of the Army's vitally needed technical corporate memory for expert survivability advice.

Survivability analyses funded by this project are conducted across the spectrum of battlefield threats to include guns, missiles, mines and other methods of inflicting physical damage; jammers, countermeasures, and other electronic warfare techniques; information assurance and computer network operations; and directed energy weapons. This survivability information enables developers, users, and decision makers to perform credible survivability tradeoffs for both Soldiers and materiel. These technical survivability details enable properly informed decisions concerning systems and tactics that maximize both the combat power and survivability of Army forces. Survivability data and analysis results funded by this project are efficiently leveraged for many different Army uses, reducing total cost to the Army by eliminating the need for duplicative capabilities funded by individual system developers. Central funding of this mission assures the Army accurate and consistent treatment of survivability across all classes of systems, across all formal system Evaluations, and across the Army's AR 5-5 studies process. Work program is prioritized principally by the ATEC/AEC and is used by them in the Army's formal Evaluation process in such a way that ATEC can comply with its legally mandated responsibility to assess system survivability along with effectiveness and suitability. Program Managers (PM) and the Program Executive Officers (PEO) use the survivability analyses and data funded by this project to make design decisions that are optimized for survivability, to direct specific weapon system development efforts that are needed for survivability enhancement, and to structure product improvement programs. Soldier survivability data and analysis is leveraged to support the survivability portion of the HQDA G1 MANPRINT program. TRADOC combat developers exploit the survivability products funded by this project to initiate and improve

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605604A: *Survivability/Lethality Analysis*	PROJECT 675: *Army Survivability Analysis & Evaluation Support*

survivability/lethality requirements, and to develop and refine doctrine and tactics. Also, the quantitative analytical results funded by the project are leveraged as core inputs to formal AR 5-5 studies and other studies as directed by Army leaders. While the Army is at war, analytical results funded by this project are also directly leveraged for survivability support to current operations. Finally, for particularly urgent or controversial survivability issues, data and analysis funded by this project are used directly by senior Army decision makers to assure technically sound program/production decisions.

This project also supports highly technical specialized information assurance and computer network defense survivability analysis of Army battle command/networked systems as well as Army network architectures and technology. Supports ATEC and other electronic warfare vulnerability testers and evaluators by developing and providing highly technical specialized field countermeasure environments that threat forces may employ against Army communications networks, air defense and other systems. In conjunction with PMs and Army intelligence agencies, analyzes technical vulnerabilities of foreign weapons, network related systems, and intelligence Electronic Warfare (EW) systems to U.S. Army EW systems. Provides survivability analysis to SoS Network Vulnerability Assessments to CIO G6, Network Integration Evaluation (NIE)to triad (the Brigade Modernization Command (BMC), the Army Test and Evaluation Command (ATEC), and the System of Systems Integration (SoSI)Directorate). Without the survivability products funded by this project, ATEC would not have a technically credible account of survivability issues at milestone decision points and systems could be fielded with unknown vulnerabilities leading to unnecessary US casualties. PMs would make design choices that failed to properly optimize survivability, TRADOC would generate requirements that were not technically credible, and the Army studies process would rest on an inaccurate and inconsistent basis.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Survivability, Lethality, Vulnerability (SLV) Analyses for Ground, Aviation, Munitions, and Soldier Systems	19.250	20.768	20.542
Articles:	0	0	
Description: Conduct integrated survivability, lethality, vulnerability analyses for developmental aviation, ground, soldier and munition systems including Joint Cargo Aircraft (JCA), MRAP, Stryker, Ground Soldier System, Excalibur, and Intelligent Mine System (IMS). Completed ballistic survivability/vulnerability analysis for MRAP T&E, Guided Multiple Launch Rocket system (GMLRS) Unitary Initial Operational Test and Evaluation (IOT&E) and Excalibur Live Fire Test and Evaluation (LFT&E) System Engineering Test-P1 test events, which included providing pre-shot predictions, performing damage assessments after each live fire test, completing post-shot analyses, behind armor debris (BAD) test/analyses, and crew survivability analysis and providing technical data required by ATEC for the Systems Evaluation Reports. Additionally, results and recommendations from our crosswalk of MRAP LFT&E assessed casualty/selected Theater casualty incidents were briefed to MRAP PM & vendors, ATEC, HQDA and DOT&E resulting in vehicle design improvements for MRAP platforms.			
FY 2012 Accomplishments: Provided survivability, lethality and vulnerability assessments of competing prototypes to inform downselect decision for MS B. Provided findings and recommendations for survivability enhancements to appropriate Army stakeholders. Produced a set of tools/methodologies for predicting personnel incapacitation from lower leg and lower spine injuries caused by an under-body blast event, as well as generate experimental validation data for limited accreditation of these tools for test and evaluation.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605604A: *Survivability/Lethality Analysis*	PROJECT 675: *Army Survivability Analysis & Evaluation Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Conducts survivability/vurnerability assessments of the RPG Protection and Underbody Blast Protection demonstrators provided by the GCV Technology Development contractors. Initiates the Paladin Improvement Management (PIM) vehicle Componennt Ballistic Tests. ***FY 2014 Plans:*** Will conduct vulnerability analysis for future helicopter systems, such as future vertical lift. Will conduct analysis for Kiowa CASUP MS C evaluations to include ballistic survivability assessment, MANPADs threat assessments, and EW, IA and chemical survivability assessments.			
Title: C4ISR System Survivability Assessments	15.100	15.805	15.067
Articles:	0	0	
Description: This effort produces assessments of the survivability of C4ISR systems in Electronic (EW) and Information Warfare (IW) threat environments and conducts Electronic Attack (EA) and Information Assurance (IA) projects that reveal critical vulnerabilities in C4ISR systems. It also defines, demonstrates, and recommends mitigation options to proponents and evaluators of C4ISR. An IW vulnerability database is maintained for the benefit of the community. ***FY 2012 Accomplishments:*** Provided EW and Information Assurance/Computer Network Operations (IA/CNO) modeling and analysis results to Army Evaluation Center (AEC) for their evaluation report. Provided verification and validation data in EW modeling and simulation to support AEC accreditation decision. ***FY 2013 Plans:*** EW and IA/CND modeling and analysis results provide to AEC for their evaluation reports. Continues conducting EW and IA modeling, testing and analysis of system evaluated in NIE events. Supports C4ISR systems survivability EW/IA modelint analysis and test verification and validation of performance, for example, multi-spectral signature measurements. Conducts C41SR system IO/EW/ES assessment. At the completion of the survivability assessment; if warranted, ARL/SLAD, Product Manager and Combat Developer in concert with the intelligence community should consider the initiation of a product improvement program (P31 strategy) to develop and field additional survivability enhanncement measures [Electronic Proteoct/CND] to address future threat capabilities which may place the Army C41SR system at risk to enemy targeting in the evolving EW threat environment during Army RESET. ***FY 2014 Plans:*** Will conduct modeling and simulation on WIN-T Inc 3 in support of AEC's survivability evaluation of JC4ISR radio's Milestone C decision scheduled for FY15. Will continue to conduct priority modeling, testing and analyses of MNVR, Rifleman and Handheld, Manpack and Small Form Fit (HMS) systems.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605604A: *Survivability/Lethality Analysis*	PROJECT 675: *Army Survivability Analysis & Evaluation Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Will conduct Electronic Protection (EP) and Information Assurance (IA), survivability analysis Investigations to help identify and mitigate capability gaps in areas such as: C4ISR, battlespace awareness, joint fires, intelligence fusion with secure data sharing and combat identification. Will work with AEC, product developer and TRADOC user communities to provide integrated SV solutions that are necessary to counter increasingly smart and sophisticated evolving EW and IW threats. Will provide analysis of systems and networks during System-of-Systems Network Vulnerability Assessments and Network Integration Evaluations.			
Title: Survivability, Lethality, Vulnerability (SLV) Analyses for Developmental Air and Missile Defense Systems	5.938	6.230	5.905
Articles:	0	0	
Description: Conduct integrated SLV analyses for developmental air and missile defense systems, pre-planned product improvements of current systems, and recently fielded systems. These systems include the Ballistic Missile Defense System (BMDS), Terminal High Altitude Air Defense (THAAD), PATRIOT, Surface-Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM), Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS), and Sentinel.			
FY 2012 Accomplishments: Provided survivability input to AEC for THAAD materiel release review board milestone assessment, provided IA/CNO and EW support to Patriot Advanced Capability-3 supporting contractor verification test and developmental test and evaluation (DTE), and provided ongoing EW support to JLENS DTE.			
FY 2013 Plans: Continues FMS AEA upgrade for Patriot. Prepares for PDB-8 testing. Provides electronic countermeasures ground support to JLENS Limited User Test (LUT) testing and provides JLENS computer network operations testing and assessment to ATEC.			
FY 2014 Plans: Will provide Patriot mobile flight simulator (FMS) with simulated adv. electronic attack countermeasure waveforms. Will leverage capability to support air and missile defense systems. Will conduct LFT&E testing and lethality assessment of PATRIOT MSE missile assessing new lethality enhancers. Will provide IA testing on multiple air and missile defense system, e.g. counter artillery rocket & mortar (C-RAM) and future efforts, e.g. integrated air& missile defense (IAMD).			
Title: System-of-systems survivability simulation (S4)	1.800	1.950	1.766
Articles:	0	0	
Description: Provide S4 to support SLV analyses.			
FY 2012 Accomplishments: Supported major program decisions (PEO Integration, ATEC, PEO System of system engineering (SoSE) with SoS analysis.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605604A: *Survivability/Lethality Analysis*	PROJECT 675: *Army Survivability Analysis & Evaluation Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Conducts system-of-systems analyses to support major program decisions in support of ATEC formal evaluations. ***FY 2014 Plans:*** Will support Army Test and Evaluation Command electronic warfare analysis of software radio. Will conduct decision making process development in the context of system of systems survivability analysis.			
Accomplishments/Planned Programs Subtotals	42.088	44.753	43.280

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605605A: *DOD High Energy Laser Test Facility*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.018	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
E97: *DOD HELSTF*	-	0.018	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The High Energy Laser Systems Test Facility (HELSTF) provides a one-of-a-kind, broad based high energy laser (HEL) test and evaluation capability which directly supports testing of laser variants of the Future Combat Systems (FCS). Specifically, HEL weapons will play a major role in the Counter Rockets, Artillery and Mortars (CRAM) initiative and can be a key component of the Future Force supporting Full Dimensional Protection. HELSTF is part of the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB) and supports Tri-Service HEL research and development to include damage, vulnerability, propagation, and lethality laser testing as well as HEL weapon developmental and operational test and evaluation (DTE&OTE). The HELSTF's laser development support capabilities include a fully certified open-air HEL test range, test cells for bringing breadboard to brassboard test devices, fully integrated Command, Control, Communications & Intelligence (C3I) systems and a suite of beam directors to perform both static and dynamic tracking tests. Other capabilities include an extensive array of fully instrumented test sites, full laser meteorological support, and an approved site for above-the-horizon dynamic HEL testing certified for predictive avoidance by the Laser Clearing House. HELSTF's location on White Sands Missile Range (WSMR) provides unparalleled testing flexibility because of WSMR's 3200 square miles of controlled land mass and 7000 square miles of controlled airspace. This location also enables HELSTF to leverage the existing WSMR T&E infrastructure. Current HELSTF facilities include the Sea Lite Beam Director (SLBD), the Mid-Infrared Advanced Chemical Laser (MIRACL), the Large Vacuum Chamber (LVC) with associated Vacuum Test System (VTS), the Solid State Laser testbed, the Tactical High Energy Laser (THEL) testbed, and the Low Power Chemical Laser (LPCL). This multiple use facility supports testing of laser effects for targets ranging from material coupon testing up through full-scale static and dynamic targets, explosive targets, and testing of targets in a high altitude space environment. HELSTF has embarked on its own modernization to fully upgrade its mission control systems, develop state-of-the-art HEL diagnostic capabilities, data reduction, and a mobile HEL diagnostic test suite to support DTE and OTE for potential HEL weapons in the Army Future Force in all relevant combat environments.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*			R-1 ITEM NOMENCLATURE PE 0605605A: *DOD High Energy Laser Test Facility*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	0.018	0.000	0.000	-	0.000
Current President's Budget	0.018	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605605A: *DOD High Energy Laser Test Facility*	PROJECT E97: *DOD HELSTF*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
E97: *DOD HELSTF*	-	0.018	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Beginning FY12, the funding will be moved to Army Test Ranges and Facilities project F30.

A. Mission Description and Budget Item Justification

The High Energy Laser Systems Test Facility (HELSTF) provides a one-of-a-kind, broad based high energy laser (HEL) test and evaluation capability which directly supports testing of laser variants of the Future Combat Systems (FCS). Specifically, HEL weapons will play a major role in the Counter Rockets, Artillery and Mortars (CRAM) initiative and can be a key component of the Future Force supporting Full Dimensional Protection. HELSTF is part of the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB) and supports Tri-Service HEL research and development to include damage, vulnerability, propagation, and lethality laser testing as well as HEL weapon developmental and operational test and evaluation (DTE&OTE). The HELSTF's laser development support capabilities include a fully certified open-air HEL test range, test cells for bringing breadboard to brassboard test devices, fully integrated Command, Control, Communications & Intelligence (C3I) systems and a suite of beam directors to perform both static and dynamic tracking tests. Other capabilities include an extensive array of fully instrumented test sites, full laser meteorological support, and an approved site for above-the-horizon dynamic HEL testing certified for predictive avoidance by the Laser Clearing House. HELSTF's location on White Sands Missile Range (WSMR) provides unparalleled testing flexibility because of WSMR's 3200 square miles of controlled land mass and 7000 square miles of controlled airspace. This location also enables HELSTF to leverage the existing WSMR T&E infrastructure. Current HELSTF facilities include the Sea Lite Beam Director (SLBD), an IPG Photonics 20 kilo-watt fiber laser, the Large Vacuum Chamber (LVC) with associated Vacuum Test System (VTS), the Ground Target Irradiance Measurement (GTIM) system, the Target Reflected Energy Measurement (TREM) system, the Solid State Laser testbed, the Pointer Tracker System (PTS) beam director, and a suite of low power lasers to support testing. This multiple use facility supports testing of laser effects for targets ranging from material coupon testing up through full-scale static and dynamic targets, explosive targets, and testing of targets in a high altitude space environment. HELSTF has embarked on its own modernization to fully upgrade its mission control systems, develop state-of-the-art HEL diagnostic capabilities, data reduction, and a mobile HEL diagnostic test suite to support DTE and OTE for potential HEL weapons in the Army Future Force in all relevant combat environments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Laser T&E programs	0.018	0.000	0.000
Articles:	0		
Description: Funding is provided for the following effort			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605605A: *DOD High Energy Laser Test Facility*	PROJECT E97: *DOD HELSTF*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Beginning FY12, the funding will be moved to Army Test Ranges and Facilities PE 0605601 project F30.			
Accomplishments/Planned Programs Subtotals	0.018	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	5.555	5.762	6.025	-	6.025	5.990	5.954	6.044	6.144	Continuing	Continuing
092: *AIRCRAFT CERTIFICATION*	-	5.555	5.762	6.025	-	6.025	5.990	5.954	6.044	6.144	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Airworthiness Certification program ensures flight safety and safe operation of Army aircraft and aviation systems by means of technical design approval and qualification of systems to appropriate airworthiness standards. It provides independent airworthiness qualification of all assigned developmental and in-production Army aircraft, both manned and unmanned, as required by AR 70-62, and is essential for ensuring the safe operation of Army aircraft. This program, when fully funded, performs all engineering functions (design, analysis, testing, demonstrations, and system specification compliance) essential for certifying the airworthiness of assigned Army aircraft, to include performing safety-of-flight investigations/assessments, evaluating system risks, developing Airworthiness Impact Statements, developing Airworthiness Releases, and evaluating Safety of Flight Messages and Aviation Safety Action Messages for new and upgraded aircraft systems. This program also provides management/execution of the Army's Aeronautical Design Standards (ADS) program; management/execution of airworthiness approval for new systems and materiel changes for all assigned Army aircraft systems; airworthiness engineering support to the Program Executive Office for Aviation (PEO Avn) and the Technology Applications Program Office (TAPO, the Army's Special Operations Aircraft program office) in developing requirements for major development/ modification and for any future systems/subsystems; and management of the test and evaluation process in support of the airworthiness qualification process. The Airworthiness Certification program also performs general research and development in support of aircraft qualification and overarching airworthiness projects that involve multiple aircraft models. Current ongoing programs requiring airworthiness qualification are PEO Aviation and TAPO Future Force systems including Longbow Apache Block II and III; Chinook F-model; Blackhawk M-model and; Special Operations MH-47G and MH-60M; Armed Aerial Scout (AAS); Light Utility Helicopter; Gray Eagle unmanned aircraft system (UAS); Enhanced Multi-sensor Airborne Reconnaissance and Sensor System (EMARSS); and Shadow-C UAS. Additionally the Airworthiness Certification program supports application of other critical aviation subsystems onto Army aircraft, including Aircraft Survivability Equipment (e.g. Advanced Threat Infrared Countermeasures (ATIRCM), Common Missile Warning System (CMWS), Aviation Mission Equipment (e.g. advanced multiband radios like the Joint Tactical Radio System (JTRS) and digital data links), Common Sensor (electro-optical multi-spectrum visual sensor), and Blue Force Tracker. The D092 funding profile for the FY14 President's Budget Submission marginally funds the airworthiness certification program and therefore the effort will be limited to resourcing military use civil derivative aircraft technical qualification through the Federal Aviation Administration's Military Certification Office; development of airworthiness procedures, specifications, critical standards, and other design and qualification documents; participation in airworthiness related tri-service activities (e.g. National Airworthiness Council, Joint Aeronautical Commanders Group) and international airworthiness related activities mandated by treaty (e.g. Flight Into Non-segregated Airspace (FINAS); and limited early airworthiness involvement in Technology Transition projects (e.g. Joint Multi Role (JMR) Technology Demonstrator and Future Vertical Lift aircraft) and other Office of the Secretary of Defense initiatives.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*			R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	5.621	5.762	6.054	-	6.054
Current President's Budget	5.555	5.762	6.025	-	6.025
Total Adjustments	-0.066	0.000	-0.029	-	-0.029
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.066	-			
• Adjustments to Budget Years	-	-	-0.029	-	-0.029

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*	PROJECT 092: *AIRCRAFT CERTIFICATION*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
092: *AIRCRAFT CERTIFICATION*	-	5.555	5.762	6.025	-	6.025	5.990	5.954	6.044	6.144	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Airworthiness Certification program ensures safe flight operation of Army aircraft and aviation systems by means of technical design approval and qualification of systems to appropriate airworthiness standards. It provides independent airworthiness qualification for all assigned developmental and in-production Army aircraft, both manned and unmanned, as required by AR 70-62, and is essential for ensuring the safe operation of Army aircraft. This program, when fully funded, performs all engineering functions (design, analysis, testing, demonstrations, and system specification compliance) essential for certifying the airworthiness of assigned Army aircraft, to include performing safety-of-flight investigations/assessments, evaluating system risks, developing Airworthiness Impact Statements, developing Airworthiness Releases, and evaluating Safety of Flight Messages and Aviation Safety Action Messages for new and upgraded aircraft systems. This program also provides management/execution of the Army's Aeronautical Design Standards (ADS) program; management/execution of airworthiness approval for new systems and materiel changes for all assigned Army aircraft systems; airworthiness engineering support to the Program Executive Office for Aviation (PEO Avn) and the Technology Applications Program Office (TAPO, the Army's Special Operations Aircraft program office) in developing requirements for major development/modification and for any future systems/subsystems; and management of the test and evaluation process in support of the airworthiness qualification process. The Airworthiness Certification program also performs general research and development in support of aircraft qualification and overarching airworthiness projects that involve multiple aircraft models. Current ongoing programs requiring airworthiness qualification are PEO Aviation and TAPO Future Force systems including Longbow Apache Block III; Chinook F-model; Blackhawk M-model and; Special Operations MH-47G and MH-60M; Armed Aerial Scout (AAS); Light Utility Helicopter; Gray Eagle unmanned aircraft system (UAS); Enhanced Multi-sensor Airborne Reconnaissance and Sensor System (EMARSS); and modified Shadow UAS. Additionally the Airworthiness Certification program supports application of other critical aviation subsystems onto Army aircraft, including Aircraft Survivability Equipment (e.g. Advanced Threat Infrared Countermeasures (ATIRCM), Common Missile Warning System (CMWS), Aviation Mission Equipment (e.g. advanced multiband avionics and Tactical Radio Systems and digital data links), Common Sensor (electro-optical multi-spectrum visual sensor), and Blue Force Tracker. The D092 funding profile for the FY14 President's Budget Submission partially funds the airworthiness certification program and therefore the effort will be limited to resourcing military use civil derivative aircraft technical qualification through the Federal Aviation Administration's Military Certification Office; development of airworthiness procedures, specifications, critical standards, and other design and qualification documents; participation in senior leadership mandated airworthiness tri-service activities (e.g. National Airworthiness Council, Joint Aeronautical Commanders Group) and international airworthiness related activities mandated by treaty (e.g. Flight Into Non-segregated Airspace (FINAS); and limited early airworthiness involvement in Technology Transition projects (e.g. Joint Multi Role (JMR) Technology Demonstrator and Future Vertical Lift aircraft) and other OSD initiatives.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*	PROJECT 092: *AIRCRAFT CERTIFICATION*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Certification Assessments and Studies Force Modernization Aircraft	0.050	0.050	0.050
Articles:	0	0	
Description: Perform assessments and studies in support of Force Modernization Aircraft Systems ***FY 2012 Accomplishments:*** Conducted technical and airworthiness qualification assessments and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems or multi-system programs (e.g. AH-64 Block III, UH-60M, MH-47G, MH-60M, AAS, etc). ***FY 2013 Plans:*** Conduct technical and airworthiness qualification assessments and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems or multi-system programs (e.g. AH-64 Block III, UH-60M, MH-47G, MH-60M, AAS, etc). ***FY 2014 Plans:*** Will conduct technical and airworthiness qualification assessments and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems or multi-system programs (e.g. AH-64 Block III, UH-60M, MH-47G, MH-60M, AAS, etc).			
Title: Certification Requirements and Studies for Future Aircraft	0.773	0.773	0.975
Articles:	0	0	
Description: Perform studies to support airworthiness certification requirements for Future Aircraft Systems ***FY 2012 Accomplishments:*** Conducted studies of Airworthiness Certification requirements for future aircraft systems and other technology transition programs (e.g. Joint Multi-Roll Aircraft, Versatile Affordable Advanced Turbine Engine Program) ***FY 2013 Plans:*** Conduct studies of Airworthiness Certification requirements for future aircraft systems and other technology transition programs (e.g. Joint Multi-Roll Aircraft, Versatile Affordable Advanced Turbine Engine Program) ***FY 2014 Plans:*** Will conduct studies of Airworthiness Certification requirements for future aircraft systems and other technology transition programs (e.g. Joint Multi-Roll Technology Demonstrator Aircraft, Future Vertical Lift Aircraft, Improved Turbine Engine Program)			
Title: Design Standards	2.856	2.951	3.000
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*	PROJECT 092: *AIRCRAFT CERTIFICATION*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Support the development, implementation and maintenance to support Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching Airworthiness qualification documentation ***FY 2012 Accomplishments:*** Developed, implemented, and maintained Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation. ***FY 2013 Plans:*** Develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation. ***FY 2014 Plans:*** Will develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation.			
Title: Certification Assessments of Technology Upgrades	0.050	0.050	0.050
Articles:	0	0	
Description: Perform certification assessments of technology upgrades. ***FY 2012 Accomplishments:*** Conducted technical and airworthiness certification assessments of technology upgrades to Army force modernization aircraft systems or programs (e.g. Advanced Threat Infrared Countermeasures integration, Common Missile Warning System integration, Common Sensor integration) ***FY 2013 Plans:*** Conduct technical and airworthiness certification assessments of technology upgrades to Army force modernization aircraft systems or programs (e.g. Advanced Threat Infrared Countermeasures integration, Common Missile Warning System integration, Common Sensor integration) ***FY 2014 Plans:*** Will conduct technical and airworthiness certification assessments of technology upgrades to Army force modernization aircraft systems or programs (e.g. Advanced Threat Infrared Countermeasures integration, Common Missile Warning System integration, Common Sensor integration)			
Title: Commercial Derivative Aircraft	0.548	0.548	0.550
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*	PROJECT 092: *AIRCRAFT CERTIFICATION*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Technical and airworthiness qualification for Commercial Derivative Aircraft ***FY 2012 Accomplishments:*** Provided technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration ***FY 2013 Plans:*** Provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration ***FY 2014 Plans:*** Will provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration			
Title: Technology Advancement	1.278	1.390	1.400
Articles:	0	0	
Description: Support efforts to establish and maintain aircraft safety for a fleet of aircraft. ***FY 2012 Accomplishments:*** Led and participated in national and international airworthiness certification committees, conferences and working groups responsible for establishing and maintaining aircraft safety for a fleet of aircraft (e.g. National Airworthiness Council, Joint Aviation Commanders Group, Joint Council on Aging Aircraft, Joint Propulsion Coordinating Committee, North Atlantic Treaty Organization (NATO) working groups, Air and Space Interoperability Council (ASIC) Working Groups, Global Air Traffic Management working groups). ***FY 2013 Plans:*** Lead and participate in national and international airworthiness certification committees, conferences and working groups responsible for establishing and maintaining aircraft safety for a fleet of aircraft (e.g. National Airworthiness Council, Joint Aviation Commanders Group, Joint Council on Aging Aircraft, Joint Propulsion Coordinating Committee, North Atlantic Treaty Organization (NATO) working groups, Air and Space Interoperability Council (ASIC) Working Groups, Global Air Traffic Management working groups). ***FY 2014 Plans:*** Will lead and participate in national and international airworthiness certification committees, conferences and working groups responsible for establishing and maintaining aircraft safety for a fleet of aircraft (e.g. National Airworthiness Council, Joint Aeronautical Commanders Group, Joint Propulsion Coordinating Committee, North Atlantic Treaty Organization (NATO)			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605606A: *AIRCRAFT CERTIFICATION*	PROJECT 092: *AIRCRAFT CERTIFICATION*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Airworthiness working groups, Air and Space Interoperability Council (ASIC) Airworthiness Working Groups, Global Air Traffic Management working groups).			
Accomplishments/Planned Programs Subtotals	5.555	5.762	6.025

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605702A: *Meteorological Support to RDT&E Activities*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	7.062	7.402	7.349	-	7.349	7.240	7.230	7.267	8.378	Continuing	Continuing
128: *Meteorological Support to RDT&E Activities*	-	7.062	7.402	7.349	-	7.349	7.240	7.230	7.267	8.378	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

10. $.109 million withheld in FY12 for SBIR/STTR.

A. Mission Description and Budget Item Justification

All functions and resources in this Program Element (PE) are managed by the U.S. Army Test and Evaluation Command (ATEC). Meteorological support to research, development, test, and evaluation (RDT&E) activities provides standard and specialized weather forecasts and data for test reports to satisfy Army/Department of Defense RDT&E test requirements for modern weaponry, e.g., (1) unique atmospheric analysis and sampling to include atmospheric transmittance, extinction, optical scintillation, infrared temperature, aerosol/smoke cloud dispersion characteristics, and ballistic meteorological measurements; (2) test event forecasting to include prediction of sound propagation for ballistic firing tests, specialized prediction of light levels and target to background measurements, and predictions for electro-optical testing and ballistic artillery/mortar firing; and (3) advisory and warning products such as go/no-go test recommendations for ballistic and atmospheric probe missiles, smoke/obscurant tests, hazard predictions for chemical agent munitions disposal, monitoring dispersion of simulant clouds for chemical/biological detector tests, simulated nuclear blasts, and weather warnings for test range safety. Provides technical support to Army Program Executive Officers (PEOs), Project Managers (PMs), and the Army test ranges and sites at: White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Dugway Proving Ground (DPG), Utah; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Redstone Test Center (RTC), Redstone Arsenal, Alabama; Yuma Proving Ground (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, AK); Fort Belvoir, Virginia; and Fort A.P. Hill, Virginia. This program develops methodologies and acquires instrumentation and systems that allow meteorological teams to support current and future Army/DoD RDT&E requirements. It finances indirect meteorological support operating costs not billable to customers and replacement/upgrade of meteorological instrumentation and support systems. Direct costs for meteorological support services are not funded by this PE, but are borne by the customer (i.e., materiel/weapons developers and project/product managers) in accordance with DoD Directive 7000.14R, October 1999. This program is essential to the accomplishment of the Army's developmental test mission in that precise weather modeling and measurements directly influence test item performance and quantify test item weather dependencies and vulnerabilities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*			R-1 ITEM NOMENCLATURE PE 0605702A: *Meteorological Support to RDT&E Activities*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	7.171	7.402	7.325	-	7.325
Current President's Budget	7.062	7.402	7.349	-	7.349
Total Adjustments	-0.109	0.000	0.024	-	0.024
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.109	-			
• Adjustments to Budget Years	-	-	0.024	-	0.024

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605702A: *Meteorological Support to RDT&E Activities*	PROJECT 128: *Meteorological Support to RDT&E Activities*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
128: *Meteorological Support to RDT&E Activities*	-	7.062	7.402	7.349	-	7.349	7.240	7.230	7.267	8.378	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project provides meteorological support to research, development, test, and evaluation (RDT&E) activities and provides standard and specialized weather forecasts and data for test reports to satisfy Army/Department of Defense RDT&E test requirements for modern weaponry, e.g., (1) unique atmospheric analysis and sampling to include atmospheric transmittance, extinction, optical scintillation, infrared temperature, aerosol/smoke cloud dispersion characteristics, and ballistic meteorological measurements; (2) test event forecasting to include prediction of sound propagation for ballistic firing tests, specialized prediction of light levels and target to background measurements, and predictions for electro-optical testing and ballistic artillery/mortar firing; and (3) advisory and warning products such as go/no-go test recommendations for ballistic and atmospheric probe missiles, smoke/obscurant tests, hazard predictions for chemical agent munitions disposal, monitoring dispersion of simulant clouds for chemical/biological detector tests, simulated nuclear blasts, and weather warnings for test range safety. Provides technical support to Army Program Executive Officers (PEOs), Project Managers (PMs), and the Army test ranges and sites at: White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Dugway Proving Ground (DPG), Utah; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Redstone Test Center (RTC), Redstone Arsenal, Alabama; Yuma Proving Ground (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, AK); Operational Test Command (OTC), Fort Hood, Texas; Fort Belvoir, Virginia; and Fort A.P. Hill, Virginia. This program develops methodologies and acquires instrumentation and systems that allow meteorological teams to support current and future Army/DoD RDT&E requirements. It finances indirect meteorological support operating costs not billable to customers and replacement/upgrade of meteorological instrumentation and support systems. Direct costs for meteorological support services are not funded by this PE, but are borne by the customer (i.e., materiel/weapons developers and project/product managers) in accordance with DoD Directive 7000.14R, October 1999. This program is essential to the accomplishment of the Army's developmental test mission in that precise weather modeling and measurements directly influence test item performance and quantify test item weather dependencies and vulnerabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Civilian Pay and Support Costs	2.680	2.534	2.354
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Provided indirect costs (personnel salaries) for generating weather forecasts, severe weather warnings and advisories; staff meteorological services; and atmospheric measurements in support of Army/DoD tests and projects at nine Army sites/test			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605702A: *Meteorological Support to RDT&E Activities*	PROJECT 128: *Meteorological Support to RDT&E Activities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
ranges, and alternate test sites as required. Provided program management for meteorological support to the Army research, development, test and evaluation community and technical review/assistance to ranges and meteorological support teams. Included collaboration between Army meteorologists and the National Center for Atmospheric Research (NCAR) toward improvements to the Four-Dimensional Weather (4DWX) System. ***FY 2013 Plans:*** Provides indirect costs (personnel salaries) for generating weather forecasts, severe weather warnings and advisories; staff meteorological services; and atmospheric measurements in support of Army/DoD tests and projects at nine Army sites/test ranges, and alternate test sites as required. Provides program management for meteorological support to the Army research, development, test and evaluation community and technical review/assistance to ranges and meteorological support teams. Includes collaboration between Army meteorologists and the National Center for Atmospheric Research (NCAR) toward improvements to the Four-Dimensional Weather (4DWX) System. ***FY 2014 Plans:*** Will provide indirect costs (personnel salaries) for generating weather forecasts, severe weather warnings and advisories; staff meteorological services; and atmospheric measurements in support of Army/DoD tests and projects at nine Army sites/test ranges, and alternate test sites as required. Will provide program management for meteorological support to the Army research, development, test and evaluation community and technical review/assistance to ranges and meteorological support teams. Will include collaboration between Army meteorologists and the National Center for Atmospheric Research (NCAR) toward improvements to the Four-Dimensional Weather (4DWX) System.			
Title: Four Dimensional Weather System (4DWX) and Instrumentation	4.382	4.868	4.995
Articles:	0	0	
Description: Provides funding for meteorological instrumentation and technology to support RDT&E activities at Army test ranges. Includes funding for development and enhancement of the 4DWX system, an advanced meteorological support system that provides high-resolution weather forecasts and analyses. The 4DWX analyses and forecasts of the 3-dimensional structure of the atmosphere over time (4th dimension) are used in test planning, conduct, and forensic analyses. ***FY 2012 Accomplishments:*** Continued 4DWX system enhancements and modernization to improve forecast accuracy in support of Army RDT&E mission requirements, including selection of probabilistic modeling approach, improved data assimilation procedures, and configuration of 4DWX for each test range to optimize accuracy; and development of a Verification and Validation (V&V) plan for 4DWX. Instrumentation funding was used to continue a multiyear effort to replace/upgrade obsolete instrumentation, including upper-air sounding systems, upgrades to weather stations, renovation of radar wind profilers, replacement of Doppler acoustic sounders			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605702A: *Meteorological Support to RDT&E Activities*	PROJECT 128: *Meteorological Support to RDT&E Activities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
(wind profile measurements), and relocation of sodar systems (equipment to measure vertical weather profiles) between ranges to maximize use of equipment. ***FY 2013 Plans:*** Continues 4DWX system enhancements and modernization to improve forecast accuracy in support of Army RDT&E mission requirements, including selection of probabilistic modeling approach, improved data assimilation procedures, and configuration of 4DWX for each test range to optimize accuracy; and development of a Verification & Validation (V&V) plan for 4DWX. Instrumentation funding is used to continue a multiyear effort to replace/upgrade obsolete instrumentation, including upper-air sounding systems, upgrades to weather stations, renovation of radar wind profilers, replacement of Doppler acoustic sounders (wind profile measurements), and relocation of sodar systems (equipment to measure vertical weather profiles) between ranges to maximize use of equipment. ***FY 2014 Plans:*** Will continue 4DWX system enhancements and modernization to improve forecast accuracy in support of Army RDT&E mission requirements, including development of probabilistic modeling, development and use of improved parameterizations of wind flow over complex terrain features; improved data assimilation procedures, and configuration of 4DWX for each test range to optimize accuracy; and development and implementation of a Verification & Validation system for 4DWX. Instrumentation funding will be used to continue a multiyear effort to replace/upgrade obsolete instrumentation, including upper-air sounding systems, upgrades to weather stations, renovation of radar wind profilers, replacement of Doppler acoustic sounders (wind profile measurements), and relocation of sodar systems (equipment to measure vertical weather profiles) between ranges to maximize use of equipment.			
Accomplishments/Planned Programs Subtotals	7.062	7.402	7.349

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	19.498	19.954	19.809	-	19.809	19.138	18.998	19.055	17.873	Continuing	Continuing
541: *MATERIEL SYS ANALYSIS*	-	19.498	19.954	19.809	-	19.809	19.138	18.998	19.055	17.873	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program element funds Department of the Army (DA) civilians at the Army Materiel Systems Analysis Activity (AMSAA) to conduct responsive and effective materiel systems analysis in support of senior Army decision making for equipping the U.S. Army. AMSAA conducts systems and engineering analyses to support Army decisions in technology; materiel acquisition; and the design, development, fielding, and sustaining of Army weapon/materiel systems. As part of this mission, AMSAA develops and certifies systems performance data used in Army studies, and develops baseline systems performance methodology and Models and Simulations (M&S).

AMSAA exercises HQDA responsibility for verification, validation, and accreditation of item-level performance M&S for combat effects, including the development and maintenance of common data formats. Similarly, AMSAA also exercises HQDA responsibility for developing, maintaining, improving, verifying, validating and accrediting item-level performance data and M&S for combat effects and logistics. In support of its materiel systems analysis mission, AMSAA analyzes the performance and combat effectiveness of conceptual, developmental, and fielded systems. Unique models and methodologies have been developed to predict critical performance variables, such as weapon accuracy, target acquisition, rate of fire, and probability of inflicting catastrophic damage, survivability, mobility and system reliability. AMSAA generates performance and effectiveness measures and ensures their standard use across major Army and Joint studies. AMSAA conducts and supports various systems analysis efforts across the entire materiel system life cycle, such as: Analysis of Alternatives (AoAs); system cost/performance tradeoffs and early technology trade-offs to inform system and acquisition program risk assessments; weapons/systems mix analyses; business case analyses and cost benefit analyses; requirements analyses; technology insertion studies; reliability growth studies; Physics of Failure (PoF) analyses; and analytical support for Test and Evaluation. AMSAA also maintains, pursuant to Army Acquisition Executive direction, the Center for Army Acquisition and Materiel Lessons Learned (CAAMLL). These analyses are used by the Army Research, Development and Engineering Command; Army Materiel Command; Training and Doctrine Command; Army Test and Evaluation Command; Program Executive Officers/Project Managers; Headquarters, Department of the Army (HQDA) (both Army Staff and Assistant Secretaries in the HQDA Secretariat); and Office of Secretary of Defense (OSD)/Department of Defense (DoD) Leadership. AMSAA analyses and data are used by these organizations in making acquisition, procurement, and logistics decisions in order to provide quality equipment and procedures to the Soldier.

AMSAA's M&S capabilities support the development, linkage, and accreditation of live, virtual, and constructive simulations, and provide unique tools that support systems analysis of individual systems and the combined-arms environment. AMSAA maintains a significant number of models and simulations, most of which were developed in-house to address specific analytical requirements. This M&S infrastructure provides a hierarchical modeling process that is unique to AMSAA and allows for a comprehensive performance and effectiveness prediction capability that can be utilized to make trade-off and investment decisions prior to extensive and expensive hardware testing of proposed systems/technologies for Current and Future Force efforts. AMSAA is the Army's executive agent for the verification,

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*

validation, and accreditation of item/system level performance models. In this role, AMSAA assists model developers with the development and execution of verification and validation plans to ensure new models and simulations provide credible information/results for decision making.

AMSAA exercises HQDA responsibility for Army reliability methodology development. In this role, as the Army's Executive Agent for reliability and maintainability standardization improvement, AMSAA develops and implements reliability and maintainability reform initiatives that support acquisition decisions and lifecycle management. AMSAA develops and applies engineering approaches that assess the reliability of Army materiel and also provides recommendations on ways to improve reliability, thereby reducing logistics footprint, reducing life cycle costs, and extending failure-free periods for deployed equipment. AMSAA's electronic and mechanical Physics of Failure (PoF) program pioneered the Army's involvement in utilizing computer-aided engineering tools in the analysis of root-cause failure mechanisms at the component level during the system design process. AMSAA's reliability engineering and PoF tools/analyses have been used extensively to support the design improvement of developmental and fielded systems used in Current Operations resulting i

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	19.638	19.954	19.809	-	19.809
Current President's Budget	19.498	19.954	19.809	-	19.809
Total Adjustments	-0.140	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.140	-			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*	PROJECT 541: *MATERIEL SYS ANALYSIS*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
541: *MATERIEL SYS ANALYSIS*	-	19.498	19.954	19.809	-	19.809	19.138	18.998	19.055	17.873	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program element funds Department of the Army (DA) civilians at the Army Materiel Systems Analysis Activity (AMSAA) to conduct responsive and effective materiel systems analysis in support of senior Army decision making for equipping the U.S. Army. AMSAA conducts systems and engineering analyses to support Army decisions in technology; materiel acquisition; and the design, development, fielding, and sustaining of Army weapon/materiel systems. As part of this mission, AMSAA develops and certifies systems performance data used in Army studies, and develops baseline systems performance methodology and Models and Simulations (M&S).

AMSAA exercises HQDA responsibility for verification, validation, and accreditation of item-level performance M&S for combat effects, including the development and maintenance of common data formats. Similarly, AMSAA also exercises HQDA responsibility for developing, maintaining, improving, verifying, validating and accrediting item-level performance data and M&S for combat effects and logistics. In support of its materiel systems analysis mission, AMSAA analyzes the performance and combat effectiveness of conceptual, developmental, and fielded systems. Unique models and methodologies have been developed to predict critical performance variables, such as weapon accuracy, target acquisition, rate of fire, and probability of inflicting catastrophic damage, survivability, mobility and system reliability. AMSAA generates performance and effectiveness measures and ensures their standard use across major Army and Joint studies. AMSAA conducts and supports various systems analysis efforts across the entire materiel system life cycle, such as: Analysis of Alternatives (AoAs); system cost/performance tradeoffs and early technology trade-offs to inform system and acquisition program risk assessments; weapons/systems mix analyses; business case analyses and cost benefit analyses; requirements analyses; technology insertion studies; reliability growth studies; Physics of Failure (PoF) analyses; and analytical support for Test and Evaluation. AMSAA also maintains, pursuant to Army Acquisition Executive direction, the Center for Army Acquisition and Materiel Lessons Learned (CAAMLL). These analyses are used by the Army Research, Development and Engineering Command; Army Materiel Command; Training and Doctrine Command; Army Test and Evaluation Command; Program Executive Officers/Project Managers; Headquarters, Department of the Army (HQDA) (both Army Staff and Assistant Secretaries in the HQDA Secretariat); and Office of Secretary of Defense (OSD)/Department of Defense (DoD) Leadership. AMSAA analyses and data are used by these organizations in making acquisition, procurement, and logistics decisions in order to provide quality equipment and procedures to the Soldier.

AMSAA's M&S capabilities support the development, linkage, and accreditation of live, virtual, and constructive simulations, and provide unique tools that support systems analysis of individual systems and the combined-arms environment. AMSAA maintains a significant number of models and simulations, most of which were developed in-house to address specific analytical requirements. This M&S infrastructure provides a hierarchical modeling process that is unique to AMSAA and allows for a comprehensive performance and effectiveness prediction capability that can be utilized to make trade-off and investment decisions prior to extensive and expensive hardware testing of proposed systems/technologies for Current and Future Force efforts. AMSAA is the Army's executive agent for the verification,

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*	PROJECT 541: *MATERIEL SYS ANALYSIS*

validation, and accreditation of item/system level performance models. In this role, AMSAA assists model developers with the development and execution of verification and validation plans to ensure new models and simulations provide credible information/results for decision making.

AMSAA exercises HQDA responsibility for Army reliability methodology development. In this role, as the Army's Executive Agent for reliability and maintainability standardization improvement, AMSAA develops and implements reliability and maintainability reform initiatives that support acquisition decisions and lifecycle management. AMSAA develops and applies engineering approaches that assess the reliability of Army materiel and also provides recommendations on ways to improve reliability, thereby reducing logistics footprint, reducing life cycle costs, and extending failure-free periods for deployed equipment. AMSAA's electronic and mechanical Physics of Failure (PoF) program pioneered the Army's involvement in utilizing computer-aided engineering tools in the analysis of root-cause failure mechanisms at the component level during the system design process. AMSAA's reliability engineering and PoF tools/analyses have been used extensively to support the design improvement of developmental and fielded systems used in Current Operations resulting in improved reliability, reduced Operational and Support costs, and reduced logistics expenditures and footprint. AMSAA, in conjunction with the Army Evaluation Center, has formed the Center for Reliability Growth (CRG), which is developing critical tools, methodology, policies, formal guidance, and educational materials needed to help acquisition programs to achieve their required reliability during the acquisition process. The reliability improvements achieved for major weapon systems will translate into billions of dollars in operating and support cost savings across the life cycle.

AMSAA's unique analytical capabilities are supporting the Army Evaluation Center to assess and determine the essential analytical requirements to enhance Army evaluations and reduce extensive testing. AMSAA's support in this area improves evaluation products and result in better materiel solutions to the Warfighter. AMSAA assists in various systems evaluations which support various Acquisition Category (ACAT) materiel system decisions, and provides quick response analyses in support of rapid initiatives for Current Operations.

As the Army's center for materiel systems analysis, AMSAA provides the technical capability to support Army and DoD decision makers throughout the entire acquisition process in responding to analytical requirements across the full spectrum of materiel. AMSAA's unique in-house, consistent, integrated analytical capability is a critical asset that provides Army leadership with timely, independent, unbiased, reliable, and high quality analysis to support complex decisions required for Army Transformation and Current Operations. AMSAA's integrated set of skills and tools are focused on its core mission to be responsive to the breadth and depth of systems analysis requirements critical in supporting Army decisions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Materiel Systems Analysis	19.498	19.954	19.809
Articles:	0	0	
Description: These funds are used by the US Army Materiel Systems Analysis Activity (AMSAA) to conduct various materiel systems analysis efforts in support of senior Army decision makers during FY13-18. AMSAA will continue to conduct analyses, materiel systems performance data generation and certification, methodology development, Modeling and Simulation (M&S) development, and verification, validation, and accreditation. The accomplishments include performance and combat effectiveness analyses of materiel systems and technology base programs for the Department of Army Secretariat/Staff, the Army Materiel Command, the Research, Development and Engineering Command, Program Executive Officers/Program Managers, the Training			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*	PROJECT 541: *MATERIEL SYS ANALYSIS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014

and Doctrine Command, the Army Service Component Commands, the Army Test and Evaluation Command, and the Office of the Secretary of Defense (OSD). These analyses form the basis for Analysis of Alternatives (AoAs), system cost/performance tradeoffs, early technology trade-offs, weapons/systems mix analyses, system risk assessments, business case analyses, cost benefit analyses, requirements analyses, technology insertion studies, reliability growth studies, Physics of Failure (PoF) analyses and analytical support for Test and Evaluation.

FY 2012 Accomplishments:

Critical AMSAA analyses continued to support Army Modernization efforts and key milestone decision reviews. AMSAA conducted follow-on studies for major Army programs as required and continued to provide essential certified weapons system performance data for Army studies as needed. Efforts continued on Irregular Warfare (IW) related tasks, analyses, and model enhancements. AMSAA became fully operational as a key part of the Army Center for Reliability Growth (CRG). The CRG develops critical tools, methodology, policies, formal guidance and educational materials needed to assist acquisition programs to achieve and/or stay on their required reliability growth curves. AMSAA also, pursuant to Army Acquisition Executive memo dated 8 January 2012, established the Center for Army Acquisition Lessons Learned (CAALL). CAALL is a critical link in addressing requirements from the 2009 Weapons Systems Acquisition Reform Act (WSARA) as well as the Decker-Wagner study on acquisition reform to conduct acquisition program risk assessments and trade-space analyses, between cost, schedule and system performance, in order to allow earlier identification, and corrective action, of risks and hazards concerning major Army acquisition efforts. AMSAA achieved Initial Operational Capability (IOC) of the CAALL by the end of fiscal year 2012. AMSAA continued to enhance the essential methodologies, tools, and models and simulations to facilitate accurate analytical products.

FY 2013 Plans:

Critical AMSAA analyses continue to support Army Modernization efforts and key milestone decision reviews for conceptual and developmental (Acquisition Category (ACAT) 1, ACAT 2 and ACAT 3) programs. AMSAA is conducting follow-on studies for major Army programs as required and continues to provide essential certified weapons system performance data for all major Army studies. AMSAAs technical work program relating to Analyses of Alternative (AoA) (both providing analysis inputs and certified data as well as leading specified AoAs), Business Case Analyses, Cost Benefit Analyses and Risk Assessments continues to increase substantially (from already high levels in fiscal year 2011 and fiscal year 2012) as a result of DOD/DA efforts to meet the requirements laid out in the Weapons System Acquisition Reform Act (WSARA) of 2009. Efforts continue on current operations and Irregular Warfare (IW) related tasks, analyses, and model enhancements. AMSAA is fully operational as a key part of the Army Center for Reliability Growth (CRG). The CRG is developing critical tools, methodology, policies, formal guidance and educational materials needed to assist acquisition programs achieve and/or stay on their required reliability growth curves, thus leading to increased system reliability and reduced operating and support costs. AMSAA will achieve Full Operational Capability (FOC) of the Center for Army Acquisition Lessons Learned (CAALL) by the end of fiscal year 2013, as directed by Army Acquisition Executive memo dated 8 January 2012, to fully operationalize and implement its acquisition risk assessment and

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*	PROJECT 541: *MATERIEL SYS ANALYSIS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
cost, schedule and system performance trade-space analysis capability. AMSAA continues to enhance its comprehensive set of essential verified and validated item/system level methodologies, tools, and models and simulations to insure accurate and up-to-date analytical products across the full spectrum of Army capability/commodity areas. ***FY 2014 Plans:*** Critical US Army Materiel Systems Analysis Activity (AMSAA) analyses continue supporting Army Modernization efforts and key milestone decision reviews for conceptual and developmental Acquisition Category (ACAT) 1, ACAT 2 and ACAT 3) programs, including but not limited to Ground Combat Vehicle, Armed Aerial Scout, Improved Turbine Engine, Joint Light Tactical Vehicle, Armored Multipurpose Vehicle, Electronic Warfare and Indirect Fire Protection. AMSAA is conducting follow-on studies for major Army programs undergoing engineering change proposals (including but not limited to Abrams, Bradley and Stryker), and continues to provide essential certified weapons system performance data for all major Army studies. AMSAAs technical work program relating to Analyses of Alternative (AoA) (both providing analytic input and certified data as well as leading specified AoAs), Business Case Analyses, Cost Benefit Analyses and Risk Assessments continues to increase substantially (from already high levels in previous fiscal years) as a result of DOD/DA efforts to meet the requirements laid out in the 2009 Weapons System Acquisition Reform Act. Efforts continue on current operations and Irregular Warfare related tasks, analyses, and model enhancements, specifically those supporting system performance data development and materiel system performance analysis. AMSAA is fully operational as a key part of the Army Center for Reliability Growth (CRG). The CRG develops critical tools, methodology, and policy guidance to enable acquisition programs achievement of required reliability growth targets, thus leading to increased system reliability and reduced operating and support costs. The Center for Army Acquisition and Materiel Lessons Learned (CAAMLL), which achieved Full Operational Capability at the end of fiscal year 2013 (as directed by Army Acquisition Executive memo dated 8 January 2012), will for the first time provide the Army a one-stop repository of data, information and lessons learned from historical materiel acquisition efforts. Additionally, CAAMLL FOC will fully operationalize and implement AMSAAs acquisition risk assessment and cost, schedule and system performance trade-space analysis capability. Together, these two efforts (a repository and trade-space analysis) will enable the Army to fully implement several key Decker-Wagner report recommendations as directed by the Secretary of the Army on 15 July 2011. AMSAA continues to enhance its comprehensive set of essential verified and validated item/system level methodologies, tools, and models and simulations to insure accurate and up-to-date analytical products across the full spectrum of Army capability/commodity areas.			
Accomplishments/Planned Programs Subtotals	19.498	19.954	19.809

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605706A: *MATERIEL SYSTEMS ANALYSIS*	PROJECT 541: *MATERIEL SYS ANALYSIS*

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605709A: *EXPLOITATION OF FOREIGN ITEMS*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	5.435	5.535	5.941	-	5.941	7.141	5.989	5.764	5.862	Continuing	Continuing
C28: *ACQ/EXPLOIT THREAT ITEMS (MIP)*	-	5.435	5.535	5.941	-	5.941	7.141	5.989	5.764	5.862	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This is a continuing program for the acquisition and exploitation of foreign materiel with potential advanced technology threats to US systems, as well as emerging and destructive threats such as cyber vulnerabilities, biometric systems, and evolving improvised explosive devices. The primary aim of the program is to maximize the efficiency of research and development for force and materiel development by reducing the uncertainties associated with these threats. The program also answers general scientific and technical intelligence requirements, provides materiel for realistic testing and training, and aids in the development of countermeasures to threat materiel and technologies. Operations have increased the amount of captured threat materiel that require immediate exploitation to develop countermeasures and force protection measures for US forces. Acquisition and exploitation are executed according to Army Foreign Materiel Program (FMP) Plan prioritization and with the approval of the Army Deputy Chief of Staff for Intelligence (G2).

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	5.436	5.535	5.593	-	5.593
Current President's Budget	5.435	5.535	5.941	-	5.941
Total Adjustments	-0.001	0.000	0.348	-	0.348
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.001	-			
• Adjustments to Budget Years	-	-	0.348	-	0.348

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605709A: *EXPLOITATION OF FOREIGN ITEMS*	PROJECT C28: *ACQ/EXPLOIT THREAT ITEMS (MIP)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
C28: *ACQ/EXPLOIT THREAT ITEMS (MIP)*	-	5.435	5.535	5.941	-	5.941	7.141	5.989	5.764	5.862	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This is a continuing program for the acquisition and exploitation of foreign materiel with potential advanced technology threats to US systems, as well as emerging and destructive threats such as cyber vulnerabilities, biometric systems, and evolving improvised explosive devices. The primary aim of the program is to maximize the efficiency of research and development for force and materiel development by reducing the uncertainties associated with these threats. The program also answers general scientific and technical intelligence requirements, provides materiel for realistic testing and training, and aids in the development of countermeasures to threat materiel and technologies. Operations have increased the amount of captured threat materiel that require immediate exploitation to develop countermeasures and force protection measures for US forces. Acquisition and exploitation are executed according to Army Foreign Materiel Program (FMP) Plan prioritization and with the approval of the Army Deputy Chief of Staff for Intelligence (G2).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Army FMP Acquisition	1.818	1.835	1.980
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Continued to focus efforts on the acquisition of threat related foreign materiel systems and state-of-the-art technologies of military significance.			
FY 2013 Plans: Continue to focus efforts toward the acquisition of threat-related foreign materiel systems and state-of-the-art technologies of military significance.			
FY 2014 Plans: Will continue to focus efforts on the acquisition of threat related foreign materiel systems and state-of-the-art technologies of military significance.			
Title: FMP Exploitation	3.617	3.700	3.961
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605709A: *EXPLOITATION OF FOREIGN ITEMS*	PROJECT C28: *ACQ/EXPLOIT THREAT ITEMS (MIP)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Base: Initiated, continued, and/or completed exploitation on foreign threat ground systems and technologies of Army interest as identified by Army FMP prioritization. ***FY 2013 Plans:*** Initiates, continues, or completes exploitation projects on ground systems of Army interest identified in the appropriate Army FMP Exploitation Programs. ***FY 2014 Plans:*** Will initiate, continue, and/or complete exploitation on foreign threat ground systems and technologies of Army interest as identified by Army FMP prioritization.			
Accomplishments/Planned Programs Subtotals	5.435	5.535	5.941

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605712A: *Support of Operational Testing*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	68.311	67.789	55.504	-	55.504	54.301	54.197	54.594	53.721	Continuing	Continuing
001: *ATEC Joint Tests And Follow-On Test & Eval*	-	4.276	4.565	0.162	-	0.162	0.152	0.141	0.143	0.146	Continuing	Continuing
V02: *ATEC Activities*	-	64.035	63.224	55.342	-	55.342	54.149	54.056	54.451	53.575	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters, Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for the Operational Test Command (OTC), subordinate command to ATEC, under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

This Program Element provides the resources to operate the Army's operational test directorates located at Fort Hood, TX; Fort Bragg, NC; Fort Bliss, TX; Fort Huachuca, AZ; and Fort Sill, OK; all managed by the Operational Test Command (OTC), a subordinate command of the Army Test and Evaluation Command (ATEC). Project V02 currently provides support for the one Test and Evaluation Coordination Offices (TECO) located at Fort Leonard Wood, MO and one Infantry Support Cell at Fort Benning, GA. TECOs previously located in Fort Lee, VA and Fort Knox, KY have been consolidated in Fort Benning, GA.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	68.678	67.789	62.737	-	62.737
Current President's Budget	68.311	67.789	55.504	-	55.504
Total Adjustments	-0.367	0.000	-7.233	-	-7.233
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.367	-			
• Adjustments to Budget Years	-	-	-7.233	-	-7.233

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605712A: *Support of Operational Testing*	PROJECT 001: *ATEC Joint Tests And Follow-On Test & Eval*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
001: *ATEC Joint Tests And Follow-On Test & Eval*	-	4.276	4.565	0.162	-	0.162	0.152	0.141	0.143	0.146	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters, Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for Joint Tests and Follow-On Test and Evaluations, under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

This project funds the Army's direct costs of planning and conducting Multi-service Tests and Evaluations (MOTE) for which there is no Army Project Manager (PM) and Army requirements for Joint Test and Evaluation (JT&E). These are required to evaluate concepts and address needs and issues that occur in joint military environments and provide information required by Congress, Office of the Secretary of Defense, the Unified Commands, and the Department of Defense components relative to joint operations. This project also funds Follow-on Test and Evaluation (FOTE), as necessary. FOTE may be required after a full production decision to assess system training and logistics, to verify correction of deficiencies identified during earlier testing and evaluation, and to ensure that initial production items meet operational effectiveness, suitability and supportability thresholds. There has been a shift of focus for items funded by this project due to continuing operations in the US Central Command (CENTCOM). Traditional system workload has dropped off and has been replaced by rapid fielding initiatives. In response to this shift, the Army Test and Evaluation Command (ATEC) has established a forward operational assessment team in theater and a rapid response cell. These groups facilitate MOTE, JT&E, and FOTE events in the rapid environment. Traditional acquisition requirements are expected to return to normal when operations in Iraq and Afghanistan wind down.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Joint operational testing and evaluation.	1.024	1.035	0.162
Articles:	0	0	
Description: Joint operational testing and evaluation			
FY 2012 Accomplishments: Provided funding to support OCO task force requirements (TDY, Civ Pay and associated overhead expenses)			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605712A: *Support of Operational Testing*	PROJECT 001: *ATEC Joint Tests And Follow-On Test & Eval*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provides funding to support OCO task force requirements (TDY, Civ Pay and associated overhead expenses) ***FY 2014 Plans:*** All operational costs for HQ ATEC will now be charged to Program Element 0605898AM65			
Title: Multi-Service Operational Test and Evaluation/Follow-on testing and evaluations	3.252	3.530	0.000
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Continued to Fund Integrated broadcasting service spiral enterprise T&E ***FY 2013 Plans:*** Will continue to Fund Integrated broadcasting service spiral enterprise T&E			
Accomplishments/Planned Programs Subtotals	4.276	4.565	0.162

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605712A: *Support of Operational Testing*	PROJECT V02: *ATEC Activities*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
V02: *ATEC Activities*	-	64.035	63.224	55.342	-	55.342	54.149	54.056	54.451	53.575	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters, Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for the Operational Test Command (OTC), subordinate command to ATEC, under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

The Operational Test Command (OTC) conducts operational tests required by public law that provide significant data to the Army decision-makers on key Army systems and concepts. This project finances recurring costs for the Operational Test Command that are essential for conducting realistic and continuous testing in the critical areas of equipment, doctrine, force design and training. These recurring costs include civilian pay, requirements for test support contracts, temporary duty, supplies and equipment. This project funds requirements for the Operational Test Command's eight test directorates and one support activity located at Fort Hood, TX; Fort Bragg, NC; Fort Sill, OK/Ft. Bliss, TX; and Fort Huachuca, AZ. The primary mission of these test directorates is to perform detailed planning, execution, and reporting of Initial Operational Test and Evaluation (IOTE), and Force Development Test and Experimentation (FDTE). Project V02 currently provides support for the one Test and Evaluation Coordination Offices (TECOs) located at Fort Leonard Wood, MO and one Infantry Support Cell at Fort Benning, GA. TECOs previously located in Fort Lee, VA and Fort Knox, KY have been consolidated in Fort Benning, GA.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Operational Test Command (OTC) Activities	51.521	52.728	55.342
Articles:	0	0	
Description: Operational costs including: civilian pay, support contracts, temporary duty, supplies and equipment for subordinate elements of the Operational Test Command.			
FY 2012 Accomplishments: Operational costs included civilian pay, support contracts, temporary duty, supplies and equipment for subordinate elements of the Operational Test Command.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605712A: *Support of Operational Testing*	PROJECT V02: *ATEC Activities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Operational costs include civilian pay, support contracts, temporary duty, supplies and equipment for subordinate elements of the Operational Test Command. ***FY 2014 Plans:*** Operational costs will include civilian pay, support contracts, temporary duty, supplies and equipment for subordinate elements of the Operational Test Command.			
Title: Operational cost for HQ ATEC activities	12.514	10.496	0.000
Articles:	0	0	
Description: Operational costs for HQ ATEC including: civilian pay, support contracts, temporary duty, supplies and equipment for non-AMHA (Army Management Headquarters Activity) HQ ATEC. ***FY 2012 Accomplishments:*** Operational costs for HQ ATEC included civilian pay, support contracts, temporary duty, supplies and equipment for non-AMHA (Army Management Headquarters Activity) HQ ATEC. ***FY 2013 Plans:*** Operational costs for HQ ATEC include civilian pay, support contracts, temporary duty, supplies and equipment for non-AMHA (Army Management Headquarters Activity) HQ ATEC.			
Accomplishments/Planned Programs Subtotals	64.035	63.224	55.342

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605716A: *Army Evaluation Center*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	62.845	62.765	65.274	-	65.274	65.734	64.762	64.999	56.150	Continuing	Continuing
302: *Army Evaluation Center*	-	62.845	62.765	65.274	-	65.274	65.734	64.762	64.999	56.150	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Reprogramming actions due to HQ Army Test and Evaluation Command (ATEC) aligning all requirements for the Army Evaluation Center (AEC), subordinate command to ATEC, under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

The Army Evaluation Center (AEC) provides independent and integrated technical and operational evaluations, and life-cycle Continuous Evaluation (CE) of assigned Major Defense Acquisition Programs (MDAP), Major Automated Information Systems, and In-Process Review (IPR) programs for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive, other Service Acquisition Executives, Joint Program Executive Officers, other governmental agencies, and force development. AEC is The Army's independent evaluator. AEC develops the evaluation strategy, designs tests, and evaluates the test results to address a system's combat effectiveness, suitability, and survivability factors pertinent to the decision process, such as: Critical Operational Issues and Criteria (COIC), system performance, soldier survivability, performance in countermeasures, system survivability, reliability, supportability, etc. AEC has the lead in planning and execution of Army Live Fire Tests and Continuous Evaluations through its evaluation and test design responsibilities. The evaluations produced by AEC are required by the Army Chief of Staff, the Army Acquisition Executive, other Army, Service, Joint, and agency senior leaders and the Department of Defense Director of Operational Test and Evaluation for acquisition decisions. In addition, Army leadership has recognized the numerous benefits of an early involvement initiative. Test management and safety verification is also supported by this program element.

This project funds the salaries of civilian employees conducting T&E early involvement, evaluation and test design missions and associated personnel support/ sustainment costs including: temporary duty, professional training, supplies, and equipment. This project does not finance test facility operations, test instrumentation or test equipment.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*		R-1 ITEM NOMENCLATURE PE 0605716A: *Army Evaluation Center*			
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	63.202	62.765	62.444	-	62.444
Current President's Budget	62.845	62.765	65.274	-	65.274
Total Adjustments	-0.357	0.000	2.830	-	2.830
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.357	-			
• Adjustments to Budget Years	-	-	2.830	-	2.830

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605716A: *Army Evaluation Center*	PROJECT 302: *Army Evaluation Center*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
302: *Army Evaluation Center*	-	62.845	62.765	65.274	-	65.274	65.734	64.762	64.999	56.150	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters, Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for the Army Evaluation Center (AEC), subordinate command to ATEC, under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

The Army Evaluation Center (AEC) provides independent and integrated technical and operational evaluations, and life-cycle Continuous Evaluation (CE) of assigned Major Defense Acquisition Programs (MDAP), Major Automated Information Systems, and In-Process Review (IPR) programs for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive, other Service Acquisition Executives, Joint Program Executive Officers, other governmental agencies, and force development. AEC is The Army's independent evaluator. AEC develops the evaluation strategy, designs tests, and evaluates the test results to address a system's combat effectiveness, suitability, and survivability factors pertinent to the decision process, such as: Critical Operational Issues and Criteria (COIC), system performance, soldier survivability, performance in countermeasures, system survivability, reliability, supportability, etc. AEC has the lead in planning and execution of Army Live Fire Tests and Continuous Evaluations through its evaluation and test design responsibilities. The evaluations produced by AEC are required by the Army Chief of Staff, the Army Acquisition Executive, other Army, Service, Joint, and agency senior leaders and the Department of Defense Director of Operational Test and Evaluation for acquisition decisions. In addition, Army leadership has recognized the numerous benefits of an early involvement initiative.

This project funds the salaries of civilian employees conducting T&E early involvement, evaluation and test design missions and associated personnel support/ sustainment costs including: temporary duty, professional training, supplies, and equipment. This project does not finance test facility operations, test instrumentation or test equipment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Army Evaluation Center	59.052	58.999	65.274
Articles:	0	0	
Description: Provide integrated technical and operational evaluations and continuous evaluation of assigned MDAPs and major automated information systems for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive and force development. Develop the evaluation strategy, design technical and operational tests, and evaluate the test results to address the combat effectiveness, suitability, and survivability factors pertinent to the decision process,			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605716A: *Army Evaluation Center*	PROJECT 302: *Army Evaluation Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014

for programs such as Mine resistant Ambush Protected Vehicle (MRAP), Global Command and Control System - Army (GCCS-A), Warfighter Information Network- Tactical (WIN-T), Stryker, High Mobility Artillery Rocket System (HIMARS), Land Warrior (LW), General Fund Enterprise Business System (GFEBS), Joint Tactical Radio System (JTRS), Patriot and Patriot Advanced Capability (PAC 3), Integrated Air and Missile Defense (IAMD), Family of Medium Tactical Vehicles (FMTV), Excalibur, Longbow Apache, and Distributed Common Ground System - Army (DCSG-A) (plus hundreds of other sytems/programs across The Army). Prepare integrated System Evaluation Plans and conduct integrated technical and operational evaluations for all Army weapon systems. In support of Overseas Contingency Operations (OCO), AEC has continued its workload focus towards the evaluation of Rapid Initiative (RI) systems, Counter Improvised Explosive Device (IED) systems, and Urgent Material Releases. Includes civilian pay costs for 371 authorizations for FY 11 and 411 civilian authorizations FY12 and beyond.

FY 2012 Accomplishments:

Provided integrated technical and operational evaluations and continuous evaluation of assigned MDAPs and major automated information systems for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive and force development. Continued to prepare integrated System Evaluation Plans and conduct integrated technical and operational evaluations for all Army weapon systems. Continued workload focus towards the evaluation of Rapid Initiative (RI) systems, Counter Improvised Explosive Device (IED) systems, and Urgent Material Releases. to include civilian pay costs for 411 authorizations for FY 12 (equates to approximately 93% of AEC's total budget). Additionally, provided Underbody Blast Modeling and Simulation support to provide early identification of vehicle improvements that directly impact Soldier survivability; improved test design; provided additional evaluation data to support acquisition. Endstate was to have a valid, accredited model to evalute crew survivability. Also, provided Center for Reliability and Growth in response to DUSD (ATL) and AAE policies mandating Reliability Growth programs and periodic assessments for major systems. These DOD and DA policies became Public Law 111-23 (The Weapon System Reform Act of 2009 - signed 22 May 2009). The Law emphasized that the service acquisition executive must ensure acquisition personnel had appropriate training and expertise to formulate robust RAM growth programs. The policies and Law were a result of a Defense Science Board report on Developmental Test and Evaluation (May 2008), showing that there had been a significant increase in the number of Department of Defense weapon system programs evaluated as not being operationally suitable. The report showed that about two thirds of Army systems from 1997 to 2006 failed to meet their realiability requirements during operational testing - primarily due to lack of material readiness due to poor system reliability and maintenance (RAM). Funding provided resources dedicated to developing critical tools, methodologies, policies, formal guidance, and educational materials required to implement new policies and improve weapon system reliability.

FY 2013 Plans:

Provides integrated technical and operational evaluations and continuous evaluation of assigned MDAPs and major automated information systems for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive and force development. Continues to prepare integrated System Evaluation Plans and conduct integrated technical

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605716A: *Army Evaluation Center*	PROJECT 302: *Army Evaluation Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
and operational evaluations for all Army weapon systems. To include civilian pay costs for 386 authorizations for FY 13 (equates to approximately 94% of AEC's total budget). Additionally, provide Underbody Blast Modeling and Simulation support to provide early identification of vehicle improvements that directly impact Soldier survivability; improves test design; provides additional evaluation data to support acquisition. Endstate is to have a valid, accredited model to evalute crew survivability. Also, provide Center for Reliability and Growth in response to DUSD (ATL) and AAE policies mandating Reliability Growth programs and periodic assessments for major systems. These DOD and DA policies became Public Law 111-23 (The Weapon System Reform Act of 2009 - signed 22 May 2009). The Law emphasizes that the service acquisition executive must ensure acquisition personnel have appropriate training and expertise to formulate robust RAM growth programs. The policies and Law are a result of a Defense Science Board report on Developmental Test and Evaluation (May 2008), showing that there has been a significant increase in the number of Department of Defense weapon system programs evaluated as not being operationally suitable. The report shows that about two thirds of Army systems from 1997 to 2006 failed to meet their realiability requirements during operational testing - primarily due to lack of material readiness due to poor system reliability and maintenance (RAM). Funding provides resources dedicated to developing critical tools, methodologies, policies, formal guidance, and educational materials required to implement new policies and improve weapon system reliability. ***FY 2014 Plans:*** Will provide integrated technical and operational evaluations and continuous evaluation of assigned MDAPs and major automated information systems for major milestone decisions, materiel changes, and materiel releases in support of the Army Acquisition Executive and force development. Will continue to prepare integrated System Evaluation Plans and conduct integrated technical and operational evaluations for all Army weapon systems. To include civilian pay costs for 439 authorizations for FY 14 (equates to approximately 94% of AEC's total budget). Additionally, will provide Underbody Blast Modeling and Simulation support to provide early identification of vehicle improvements that directly impact Soldier survivability; improves test design; provides additional evaluation data to support acquisition. Endstate is to have a valid, accredited model to evalute crew survivability. Also, will provide Center for Reliability and Growth in response to DUSD (ATL) and AAE policies mandating Reliability Growth programs and periodic assessments for major systems. These DOD and DA policies became Public Law 111-23 (The Weapon System Reform Act of 2009 - signed 22 May 2009). The Law emphasizes that the service acquisition executive will ensure acquisition personnel will have appropriate training and expertise to formulate robust RAM growth programs. The policies and Law will be the a result of a Defense Science Board report on Developmental Test and Evaluation (May 2008), showing that there will be a significant increase in the number of Department of Defense weapon system programs evaluated as not being operationally suitable. The report will show that about two thirds of Army systems from 1997 to 2006 failed to meet their realiability requirements during operational testing - primarily due to lack of material readiness due to poor system reliability and maintenance (RAM). Funding will provide resources dedicated to developing critical tools, methodologies, policies, formal			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605716A: *Army Evaluation Center*	PROJECT 302: *Army Evaluation Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
guidance, test management, safety vertification and educational materials required to implement new policies and improve weapon system reliability.			
Title: Early Involvement	3.793	3.766	0.000
Articles:	0	0	
Description: Supports the Commanding General's early involvement initiative which positions acquisition certified liaison officers at 2 Joint and 9 Army Program Executive Offices (PEO), TRADOC/ARCIC, REF, JIEDDO, and RDECOM. Assigned personnel provide continuous support to materiel and combat developers from the inception of their programs. The early involvement of LNOs supports the sections of the ATEC Mission Essential Task List (METL) that apply to ongoing contingency operations. ATEC performance continues to meet 120 day rapid equipping requirement set by the CSA. Liaison officers continue to enable ATEC to sustain rapid, flexible T&E support in the evaluation of Rapid Initiative Systems, Counter IED systems, and Urgent Material Releases. Effort results in cost savings, cost avoidance and critical design efficiencies being identified early in a system's development, thereby avoiding more expensive product improvement programs later in a system's life cycle. T&E efficiency gains continue to be realized through early identification of instrumentation, modeling and simulation tools, and other resources needed for testing, as well as making more efficient use of data from developmental testing and experiments.			
FY 2012 Accomplishments: Continued support of the Commanding General's early involvement initiative which positions acquisition certified liaison officers at 2 Joint and 9 Army Program Executive Offices (PEO), TRADOC/ARCIC, REF, JIEDDO, and RDECOM.			
FY 2013 Plans: Continues support of the Commanding General's early involvement initiative which positions acquisition certified liaison officers at 2 Joint and 9 Army Program Executive Offices (PEO), TRADOC/ARCIC, REF, JIEDDO, and RDECOM.			
Accomplishments/Planned Programs Subtotals	62.845	62.765	65.274

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.312	1.545	1.283	-	1.283	1.555	1.510	1.638	1.666	Continuing	Continuing
S03: *Analysis M&S Tools and Services*	-	1.891	1.424	1.283	-	1.283	1.555	1.510	1.638	1.666	Continuing	Continuing
S05: *SIMULATION TECHNOLOGY (SIMTECH) PROGRAM*	-	1.421	0.121	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

"Army Modeling and Simulation Cross-Command Collaboration and Integration (M&SC3I)" promotes the goal to achieve affordable, interoperable and networked Modeling and Simulation (M&S) capabilities. In support of Army operations, Generating-Force functions and institutional processes, M&SC3I addresses analytical efforts underlying decision making, capability development, and life-cycle costs by capitalizing on M&S technologies (accomplished through collaborative efforts of the training/operations and acquisition communities). The RDTE component of M&SC3I encompasses efforts that (1) develop/improve new/existing models and simulations to reduce time, resources and risks associated with operational/institutional decision making and the acquisition process and (2) advance the following disciplines: M&S research, analysis and experimentation; simulation technology; and M&S tools and services. M&SC3I addresses development of tactics and doctrine, experimentation and exercises, traditional weapon system development, and assessment and transition of advanced technologies to operational capabilities. The overarching goal of M&SC3I is to reduce time and cost of providing improved capabilities to the war fighter. Emerging information-age technologies continue to revolutionize the Army's ability to collaborate among all stakeholders using data descriptions, digital representations, and virtual prototypes to improve understanding of required capabilities, shorten procurement time, reduce procurement and sustainment costs, and, ultimately, reduce total life-cycle cost. M&SC3I advocates the use of advanced technologies to enable future capabilities through improved understanding of operational requirements, collaborative analyses of emerging technologies, and cross-community participation in experiments and exercises. The following are discussions of efforts under the two projects of PE 0605718. Under project S03, "Analysis M&S Tools and Services," the Army develops M&S tools and services (e.g., hardware, software, infrastructure) for the Army's analysis community. The primary users of these tools and services are the Training and Doctrine Command Analysis Center (TRAC), the Army Materiel Systems Analysis Activity (AMSAA), and the Center for Army Analysis (CAA). Efforts focus on (1) development of analysis tools that will enable assessment of emerging technologies during concept exploration and (2) development of infrastructure and enabling technologies to support the Current and Future Force. These critical efforts are required for (1) analysis-of-futures work to justify Army requirements, (2) assessment of alternative approaches to satisfy those requirements, (3) development of current and emerging war fighting doctrine from the tactical to the operational levels of warfare and (4) the closing of capability gaps in the areas of irregular warfare, M&S data and standards, cyberspace operations, army network modeling and non-lethal weapons. Under project S05, "Army Simulation Technology (SIMTECH)," the Army enhances force effectiveness by inducing research organizations on a short-term basis to conduct high-priority, promising simulation research initiatives that are outside the scope of Small Business Innovative Research (SBIR) and Army Science and Technology (S&T) programs. Beginning with FY14, SIMTECH activities fall under the project S03, "Analysis M&S Tools and Services." Project S05 ends with FY13 programs.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	3.415	1.545	1.283	-	1.283
Current President's Budget	3.312	1.545	1.283	-	1.283
Total Adjustments	-0.103	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.103	-			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S03: *Analysis M&S Tools and Services*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S03: *Analysis M&S Tools and Services*	-	1.891	1.424	1.283	-	1.283	1.555	1.510	1.638	1.666	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY14-18 funds include those reprogrammed from PE0605718A, Project S05 - SIMTECH: 124K, 116K, 117K, 117K, 118K. Reprogramming occurred during the POMBES14-18 cycle.

A. Mission Description and Budget Item Justification

Under the project "Analysis M&S Tools and Services" the Army develops Modeling and Simulation (M&S) tools and services (e.g., hardware, software, infrastructure) for the Army's analysis community. The primary users of these tools and services are the Training and Doctrine Command Analysis Center (TRAC); the Army Materiel Systems Analysis Activity (AMSAA); the Center for Army Analysis (CAA); the Army Materiel Command; the Program Executive Office for Simulation, Training and Instrumentation (PEO-STRI). Efforts focus on (1) development of analysis tools to enable assessment of emerging technologies during concept exploration, (2) development of infrastructure and enabling technologies to support the Current and Future Force and (3) application of M&S capabilities to One Semi-Automated Forces (OneSAF) that increase overall use of OneSAF software and hence reduce Army life-cycle costs. These critical efforts are required for four essential purposes: analysis-of-futures work to justify Army requirements; assessment of alternative approaches to satisfy those requirements; development of current and emerging war fighting doctrine from the tactical to the operational levels of warfare; and the closing of capability gaps in areas of irregular warfare, M&S data and standards, cyberspace operations, army network modeling, and non-lethal weapons. Project S03 also includes, beginning with FY14, the Army Simulation Technology (SIMTECH) program, which enhances force effectiveness by assisting Modeling and Simulation (M&S) research agencies and organizations in conducting low-cost, promising simulation technology research that is outside the scope of the Small Business Innovative Research (SBIR) and the Army science and technology programs. The SIMTECH program provides a source of competitive funds to Army research agencies and organizations to stimulate high quality, innovative M&S research with significant opportunity for payoff in Army war fighting capability. The SIMTECH program serves as a vehicle for major M&SC3I-relalted technology breakthroughs in war gaming, embedded simulation, collaboration cabability, rapid prototyping, commercial innovation and related simulation technology (M&SC3I = Modeling and Simulation Cross-Command Collaboration and Integration.) Performers of SIMTECH activities are the Army Materiel Command (AMC); the Army Corps of Engineers; the Army Research and Development Centers (ARDECs); the Army Research Institute; the Army Training and Doctrine Command Analysis Center (TRAC); the Program Executive Office for Simulation, Training and Instrumentation (PEO-STRI); White Sands Missile Range; the Space and Missile Defense Command (SMDC); Natick Soldier Research, Development and Engineering Center (NSRDEC), Edgewood Chemical and Biological Center (ECBC); and other Army agencies.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Irregular Warefare	0.641	0.200	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S03: *Analysis M&S Tools and Services*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	
Description: Modeling for irregular warfare will put the Army on the path toward achieving its strategic objectives through indirect means with the same degree of dominance it employs in major combat operations. Military operations associated with irregular warfare are foreign internal defense, stability operations, counterinsurgency, combating terrorism, unconventional warfare, and application of the dynamics of cultural and human behavior. ***FY 2012 Accomplishments:*** ..FY12 efforts are in the area of modeling for the following operations associated with irregular warfare: foreign internal defense, stability operations, counterinsurgency, combating terrorism, unconventional warefare, and application of the dynamics of cultural and human behavior. The goal is to ensure the Army will retain the ability to conduct major combat operations while expanding the capabilities for irregular warfare. ***FY 2013 Plans:*** :..FY13 efforts are in the area of modeling for one or more of the following operations associated with irregular warfare: foreign internal defense, stability operations, counterinsurgency, combating terrorism, unconventional warefare, and application of the dynamics of cultural and human behavior. The goal is to ensure the Army will retain the ability to conduct major combat operations while expanding the capabilities for irregular warfare.			
Title: M&S Data and Standards	0.682	0.500	0.000
Articles:	0	0	
Description: M&S data and standards allow the Army M&S community to acquire an improved, robust data collection process; a robust data mining process; and an accessible data repository to enable more responsive, credible modeling (especially for current operating and generating environments). These improvements will enable the Army to close current gaps in its ability to provide M&S support to the decision-making, concept development, operational assessment, and training processes. ***FY 2012 Accomplishments:*** ..FY12 efforts pertain to development of M&S data and standards to allow the Army M&S community to acquire an improved, robust data collection process; a robust data mining process; and an accessible data repository to enable more responsive, credible modeling (especially for current operating and generating environments). Specific projects are selected by way of a request for proposals to the Army M&S community. The request is issued by the Army Modeling and Simulation Office. ***FY 2013 Plans:*** :..FY13 efforts pertain to development of M&S data and standards to allow the Army M&S community to acquire an improved, robust data collection process; a robust data mining process; and an accessible data repository to enable more responsive,			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S03: *Analysis M&S Tools and Services*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
credible modeling (especially for current operating and generating environments). Specific projects are selected by way of a request for proposals to the Army M&S community. The request is issued by the Army Modeling and Simulation Office.			
Title: Cyberspace Operations ***Articles:*** ***Description:*** Cyberspace operations are defined as the employment of cyber capabilities for the purpose of achieving objectives in and through cyberspace. M&S cyberspace operations are directed toward computer network operations and operation/ defense of the Global Information Grid (GIG). Cyberspace is a global domain within the information environment consisting of the interdependent networks of information technology infrastructures. These include telecommunications networks, computer systems, and embedded processors and controllers. ***FY 2012 Accomplishments:*** ..:..FY12 efforts pertain to simulation enhancements for Extended Air Defense Simulation (EADSIM) cyber modeling and cyber operations.	0.176 0	0.000	0.000
Title: Army Network Modeling ***Articles:*** ***Description:*** The Army Network is an enhanced, interoperable communications network that assists leaders in making timely, informed decisions and promotes organizational agility, lethality and sustainability. The network links soldiers on the battlefield with space-based and aerial sensors, robots and command posts. These systems provide situational awareness and control by locating the enemy, friendly forces and civilian populations; by revealing weapon-system availability at any given time; and by enabling the application of precise lethal fires. ***FY 2012 Accomplishments:*** ..FY12 activities cover modeling for the Army Network to maximize the effectiveness and accuracy of systems (spaced-based and aerial sensors, robots, and command posts) that provide situational awareness and control. ***FY 2013 Plans:*** ...FY13 activities cover modeling for the Army Network to maximize the effectiveness and accuracy of systems (spaced-based and aerial sensors, robots, and command posts) that provide situational awareness and control.	0.292 0	0.200 0	0.000
Title: Non-Lethal Weapons ***Articles:*** ***Description:*** Current M&S activities in the field of non-lethal weapons focus on two areas -- development of methodologies for establishing priority non-lethal weapons and enhancement of non-lethal weapon simulations now in operation.	0.100 0	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S03: *Analysis M&S Tools and Services*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: ..FY12 activies pertain to development of methodologies for establishing priority non-lethal weapons and enhancement of non-lethal weapon simulations now in operation.			
Title: Application and Expansion of Modeling & Simulation (M&S) Capabilities to One Semi-Automated Forces (OneSAF) ***Articles:*** ***Description:*** Application and expansion of M&S capabilities to OneSAF increases overall use of the OneSAF software to reduce Army life-cycle costs. Increasing OneSAF capabilities leads to the goal of implementing ONE TIME (rather than through the use of multiple software products) updates and changes associated with transformation, modernization and operations across the simulation life cycle. The reduction of reduncies; i.e., multiple software products with similar or interchangable features, is an esstential outcome of the expanded OneSAF domain. Current efforts: threat-jamming precision-guided weapons in OneSAF; micro-satellite BF SIGINT capabilities; set of web-based XML services to support integrated initialization of simulation-based mission rehearsal, planning and training with C2 standards, C2 Core and JC3IEDM. XML = Extensible Markup Language. BF SIGINT = Blue-Force Signals Intelligence. C2 = Command and Control. JC3IEDM = Joint Command, Control and Consultation Information Exchange Data Model. ***FY 2013 Plans:*** ..FY13 efforts enhance the stability, interoperability and cross-community application of the OneSAF software. We do this through two efforts. First, we focus on the needs and capability gaps identified in the FY12 OneSAF functional review. This review consolidates the needs of the OneSAF user community and integrates findings of the OneSAF Roadmap project. Second, we focus on integration of emerging Army capabilities and needs into the simulation software to enable the analysis and training communities to run relevant simulation events.	0.000	0.524 0	0.000
Title: Improvement of various components of Modeling and Simulation (M&S) in accordance with M&S focus areas established within the domain of Analysis M&S Tools and Services. ***Description:*** Multiple projects under Analysis M&S Tools and Services are selected at the beginning of (and executed during) each fiscal year in accordance with the M&S focus areas of that year. Project selections reflect the critical needs of the Army. ***FY 2014 Plans:*** ..FY14 efforts will consist of multiple projects aimed at improving the many components of M&S. Projects will be selected in accordance with the focus areas of FY14. Projects will be requested by the Army M&S community [e.g., TRADOC Analysis	0.000	0.000	1.283

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S03: *Analysis M&S Tools and Services*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Center (TRAC); US Army Research Lab; Army Research, Development and Engineering Centers] via data calls issued by the Army Modeling and Simulation Office (AMSO).			
Accomplishments/Planned Programs Subtotals	1.891	1.424	1.283

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S05: *SIMULATION TECHNOLOGY (SIMTECH) PROGRAM*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
S05: *SIMULATION TECHNOLOGY (SIMTECH) PROGRAM*	-	1.421	0.121	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY14-18 funds were reprogrammed to PE 605718A, Project S03 - Analysis M&S Tools and Services. Reprogramming occurred during the POMBES14-18 cycle. Project S05 ends with FY13.

A. Mission Description and Budget Item Justification

The Army Simulation Technology (SIMTECH) program enhances force effectiveness by assisting Modeling and Simulation (M&S) research agencies and organizations in conducting low-cost, promising simulation technology research that is outside the scope of the Small Business Innovative Research (SBIR) and the Army science and technology programs. The SIMTECH program provides a source of competitive funds to Army research agencies and organizations to stimulate high quality, innovative M&S research with significant opportunity for payoff in Army war fighting capability. The SIMTECH program focuses simulation technology research initiatives on immediate short-term Army capability requirements by including a theme in the annual call for proposals. The SIMTECH program serves as a vehicle for major M&SC3I-relalted technology breakthroughs in war gaming, embedded simulation, collaboration cabability, rapid prototyping, commercial innovation and related simulation technology (M&SC3I = Modeling and Simulation Cross-Command Collaboration and Integration.) Performers of SIMTECH activities are the Army Materiel Command (AMC); the Army Corps of Engineers; the Army Research and Development Centers (ARDECs); the Army Research Institute; the Army Training and Doctrine Command Analysis Center (TRAC); the Program Executive Office for Simulation, Training and Instrumentation (PEO-STRI); White Sands Missile Range; the Space and Missile Defense Command (SMDC); Natick Soldier Research, Development and Engineering Center (NSRDEC), Edgewood Chemical and Biological Center (ECBC); and other Army agencies.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Improvement of the various components of Modeling and Simulation (M&S) in accordance with M&S focus areas established within the SIMTECH program.	0.836	0.121	0.000
Articles:	0	0	
Description: SIMTECH projects are selected at the beginning of (and executed during) each fiscal year in accordance with the M&S focus areas of that fiscal year. Project selections reflect the critical needs of the Army.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S05: *SIMULATION TECHNOLOGY (SIMTECH) PROGRAM*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
..:..FY12 efforts consist of a variety of projects aimed at improving the various components of M&S. Projects are selected in accordance with the M&S focus areas for FY12. Projects are requested by the Army M&S community; e.g., TRADOC Research and Acquisiton Center (TRAC); US Army Research Lab; Army Research, Development & Engineering Centers, via data calls and councils of colonels. ***FY 2013 Plans:*** ..FY13 efforts consist of a variety of projects aimed at improving the various components of M&S. Projects are selected in accordance with the M&S focus areas for FY13. Projects are requested by the Army M&S community; e.g., TRADOC Research and Acquisiton Center (TRAC); US Army Research Lab; Army Research, Development & Engineering Centers, via data calls and councils of colonels. OCO FY 2013 Description:			
Title: Simulation Technology Program (SIMTECH) in Support of Advanced Technologies ***Articles:*** ***Description:*** The SIMTECH program accelerates advanced technologies to ensure battlefield superiority by enhancing force effectiveness through research and development of innovative, low-cost Modeling and Simulation (M&S). The program provides funds to organizations for low-cost, promising simulation technology research initiatives that are outside the scope of the Small Business Innovative Research Program (SBIR) and Army Technology Objectives (ATOs). SIMTECH projects provide high payoff opportunities in warfighting simulation capabilities such as a portable COA/wargaming development and analysis tool, collaboration capability, embedded training, rapid prototyping, commercial innovation, and correlation of visual systems for simulators. (COA = Course of Action.) ***FY 2012 Accomplishments:*** ..FY12 efforts consist of a variety of SIMTECH projects selected by way of request for proposals to the Army M&S community and research agencies. The request for proposals is issued by the Army Modeling and Simulation Office (AMSO). AMSO selects SIMTECH projects that promise innovative M&S research with significant opportunity for payoff in Army war fighting capability. .	0.585 0	0.000	0.000
Accomplishments/Planned Programs Subtotals	1.421	0.121	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605718A: *Army Modeling & Sim X-Cmd Collaboration & Integ*	PROJECT S05: *SIMULATION TECHNOLOGY (SIMTECH) PROGRAM*

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	82.015	83.422	82.035	-	82.035	81.483	81.307	81.885	83.177	Continuing	Continuing
M02: *Med Cmd Spt (Non-AMHA)*	-	22.034	22.220	28.080	-	28.080	28.414	28.280	28.429	28.872	Continuing	Continuing
M15: *ARI Mgmt/ADM Act*	-	5.219	5.481	5.457	-	5.457	5.415	5.464	5.465	5.556	Continuing	Continuing
M16: *Standardization Groups*	-	4.135	4.385	4.336	-	4.336	4.329	4.418	4.345	4.343	Continuing	Continuing
M42: *ARDEC Cmd/Ctr Support*	-	8.161	8.488	8.437	-	8.437	8.380	8.350	8.390	8.566	Continuing	Continuing
M44: *CECOM Cmd/Ctr Spt*	-	5.581	5.830	5.705	-	5.705	5.692	5.648	5.733	5.827	Continuing	Continuing
M46: *AMCOM Cmd/Ctr Spt*	-	12.429	13.362	13.542	-	13.542	12.688	12.718	12.909	13.121	Continuing	Continuing
M47: *TACOM Cmd/Ctr Spt*	-	3.822	3.969	3.903	-	3.903	3.937	3.879	3.937	4.003	Continuing	Continuing
M53: *Developmental Test Command/Ctr Spt*	-	9.415	8.099	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
M55: *Edgewood Chemical Biological Center*	-	7.152	7.329	8.253	-	8.253	8.754	8.839	8.892	9.038	Continuing	Continuing
M58: *SECOM CMD/CTR Spt*	-	2.764	2.869	2.921	-	2.921	2.490	2.378	2.431	2.471	Continuing	Continuing
M76: *Armament Group Support*	-	1.303	1.390	1.401	-	1.401	1.384	1.333	1.354	1.380	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters, Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for HQ ATEC under one Program Element (0605898AM65). Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

This program funds the continued operation of non-Army Management Headquarters Activities (AMHA) management and administrative functions at U.S. Army Research, Development and Standardization Groups overseas, Army Research, Development, Test, and Evaluation (RDTE) commands, centers and activities required to accomplish overall assigned general research and development missions and international research and development not directly related to specific research and development projects. The Standardization Groups play an integral role in the U.S. Army efforts for international cooperative research, development and interoperability, and fulfill international memoranda of understanding requirements (especially the American, British, Canadian and Australian Armies' Standardization Programs).

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*		R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*			
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	82.923	83.422	84.600	-	84.600
Current President's Budget	82.015	83.422	82.035	-	82.035
Total Adjustments	-0.908	0.000	-2.565	-	-2.565
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.908	-			
• Adjustments to Budget Years	-	-	-2.565	-	-2.565

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M02: *Med Cmd Spt (Non-AMHA)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M02: *Med Cmd Spt (Non-AMHA)*	-	22.034	22.220	28.080	-	28.080	28.414	28.280	28.429	28.872	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project provides funding for Headquarters (HQ) activities that support the medical research, development, test, and evaluation (RDTE) program at the U.S. Army Medical Research and Materiel Command (USAMRMC), Fort Detrick, Maryland to: (1) perform planning, programming, and budgeting; (2) manage resources; and (3) ensure compliance with U.S. Food and Drug Administration (FDA) and other regulatory and safety requirements. It also provides for continued operations of contracting and acquisition management functions performed by the U.S. Army Medical Research Acquisition Activity (USAMRAA) in support of the USAMRMC Medical RDTE Program.

Additionally, the USAMRMC is implementing the Medical Research Information Technology System (MeRITS), an electronic data and document-handling system needed to standardize animal and human clinical trial documentation in support of FDA requirements. This system will create centralized storage and access between Headquarters and its five subordinate laboratories. MeRITS is an integral part of an overall USAMRMC effort to enhance its laboratories performance, efficiency, and accountability and will be integrated in FY11 with minor sustainment cost in FY 2012.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Medical Research Information Technology System (MeRITS)	0.980	0.000	0.000
Articles:	0		
Description: Funding was provided for the following effort			
FY 2012 Accomplishments: Provided for sustainment of MeRITS capabilities.			
Title: Civilian Authorized Salaries and other operational requirements	21.054	22.220	28.080
Articles:	0	0	
Description: Funding was provided for the following effort			
FY 2012 Accomplishments: Funded authorized civilian salaries assigned to HQ, USAMRMC and USAMRAA. Also, provided regulatory, clinical monitoring and data support for SIP. This program provided non-licensed vaccines and other biological products under FDA oversight to			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M02: *Med Cmd Spt (Non-AMHA)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
personnel at risk of exposure to selected infectious diseases; and partially funded other USAMRMC operational costs (e.g., supplies, equipment, and services) that support Medical RDTE. ***FY 2013 Plans:*** Funds authorized civilian salaries and associated expenses (supplies, equipment, travel, etc.) at HQ, USAMRMC, and USAMRAA. ***FY 2014 Plans:*** Will fund authorized civilian salaries and associated expenses (supplies, equipment, travel, etc.) at HQ, USAMRMC, and USAMRAA. Total civilian count will reflect increased authorizations added in FY12 due to an administrative change to add authorizations for Army acquisition positions.			
Accomplishments/Planned Programs Subtotals	22.034	22.220	28.080

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M15: *ARI Mgmt/ADM Act*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M15: *ARI Mgmt/ADM Act*	-	5.219	5.481	5.457	-	5.457	5.415	5.464	5.465	5.556	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project supports the non-Army Management Headquarters Activity (AMHA) management and administrative functions for the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences to accomplish its mission to conduct the Army's research and development (R&D) in personnel, training, and leader development issues that will ensure the future Army remains ready and relevant. Specifically, this project provides technical and administrative support to the headquarters element and to six field research units and three liaison units to include budget execution, procurement oversight, RDT&E program planning and evaluation, management control, security/safety, logistics, information technology, and personnel/manpower execution and oversight.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: ARI	5.219	5.481	5.457
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Continued to provide operation of management, administrative, personnel, budget, and support functions at a level consistent with Army and mission requirements to meet the needs of ARI as an Army Laboratory conducting the Army's personnel, training, leader development, and organizational performance R&D program.			
FY 2013 Plans: Continues to provide operation of management, administrative, personnel, budget, and support functions at a level consistent with Army and mission requirements to meet the needs of ARI as an Army Laboratory conducting the Army's personnel, training, leader development, and organizational performance R&D program.			
FY 2014 Plans: Will continue to provide operation of management, administrative, personnel, budget, and support functions at a level consistent with Army and mission requirements to meet the needs of ARI as an Army Laboratory conducting the Army's personnel, training, leader development, and organizational performance R&D program.			
Accomplishments/Planned Programs Subtotals	5.219	5.481	5.457

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M15: *ARI Mgmt/ADM Act*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M16: *Standardization Groups*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M16: *Standardization Groups*	-	4.135	4.385	4.336	-	4.336	4.329	4.418	4.345	4.343	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Project M16 supports nine International Technology Centers (formerly known as Standardization Groups) (Australia, United Kingdom, Canada, France, Germany, Japan, Chile, Argentina, and Singapore) for personnel, travel and overhead costs, leases on buildings, and mandatory permanent change of station.

The mission of the International Technology Centers is to represent the Army and serve as in-country/region focal point for all international armaments cooperation in their areas (countries) of responsibility to government agencies, academia, and defense industries.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: International Technology Centers Management	4.135	4.385	4.336
Articles:	0	0	
Description: Management / adminstrative support to International Technology Centers			
FY 2012 Accomplishments: Provided management and administrative functions at a level consistent with mission requirements and support needs at the nine International Technology Centers.			
FY 2013 Plans: Provide management and administrative functions at a level consistent with mission requirements and support needs at the nine International Technology Centers.			
FY 2014 Plans: Will continue to provide management and administrative functions at a level consistent with mission requirements and support needs at the nine International Technology Centers.			
Accomplishments/Planned Programs Subtotals	4.135	4.385	4.336

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M16: *Standardization Groups*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M42: *ARDEC Cmd/Ctr Support*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M42: *ARDEC Cmd/Ctr Support*	-	8.161	8.488	8.437	-	8.437	8.380	8.350	8.390	8.566	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Funding supports the Non-Army Management Headquarters Activity (AMHA) management and administrative functions at the U.S. Army Armament Research, Development and Engineering Center (ARDEC), Picatinny Arsenal, NJ.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	8.161	8.488	8.437
Articles:	0	0	
Description: ARDEC management / administrative efforts			
FY 2012 Accomplishments: Provided continued management and administrative functions at a level consistent with mission requirements and support needs at ARDEC.			
FY 2013 Plans: Provide continued management and administrative functions at a level consistent with mission requirements and support needs at ARDEC.			
FY 2014 Plans: Will continue to provide management and administrative functions at a level consistent with mission requirements and support needs at ARDEC.			
Accomplishments/Planned Programs Subtotals	8.161	8.488	8.437

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M42: *ARDEC Cmd/Ctr Support*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M44: *CECOM Cmd/Ctr Spt*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M44: *CECOM Cmd/Ctr Spt*	-	5.581	5.830	5.705	-	5.705	5.692	5.648	5.733	5.827	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Supports the Non-Army Management Headquarters Activity management and administrative functions at the U.S. Army Communications-Electronics Research Development and Engineering Center (CERDEC), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	5.581	5.830	5.705
Articles:	0	0	
Description: CERDEC management and administrative efforts			
FY 2012 Accomplishments: Provided management and administrative functions at a level consistent with mission requirements and support needs at CERDEC.			
FY 2013 Plans: Continue to provide management and administrative functions at a level consistent with mission requirements and support needs at CERDEC.			
FY 2014 Plans: Will continue to provide management and administrative functions at a level consistent with mission requirements and support needs at CERDEC.			
Accomplishments/Planned Programs Subtotals	5.581	5.830	5.705

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M44: *CECOM Cmd/Ctr Spt*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M46: *AMCOM Cmd/Ctr Spt*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M46: *AMCOM Cmd/Ctr Spt*	-	12.429	13.362	13.542	-	13.542	12.688	12.718	12.909	13.121	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Supports the Non-Army Management Headquarters Activity (AMHA) management and administrative functions at the U.S. Army Aviation and Missile Research and Development Center (AMRDEC), Redstone Arsenal, AL.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	7.818	8.498	8.652
Articles:	0	0	
Description: AMRDEC management and administrative efforts			
FY 2012 Accomplishments: Provided continued management and administrative functions at a level consistent with mission requirements and support needs at AMRDEC.			
FY 2013 Plans: Continue to provide management and administrative functions at a level consistent with mission requirements and support needs at AMRDEC.			
FY 2014 Plans: Will continue to provide management and administrative functions at a level consistent with mission requirements and support needs at AMRDEC.			
Title: Protection Technology (PT) Program (formerly Anti-Tamper (AT))	4.611	4.864	4.890
Articles:	0	0	
Description: The PT Program is a DoD program that encompasses the systems engineering activities intended to prevent and/or delay exploitation of critical technologies in U.S. weapon systems. These activities involve the entire life-cycle of systems acquisition, including research, development, implementation, and testing of PT measures.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M46: *AMCOM Cmd/Ctr Spt*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Maintained the core team of subject matter experts (SMEs) available for this mission and conducted technical assessments of micro-electronic parts used in the board designs of the Army's weapon systems including the FCS. ***FY 2013 Plans:*** Continue to maintain the core team of subject matter experts (SMEs) available for this mission and to conduct technical assessments of micro-electronic parts used in the board designs of the Army's weapon systems including the FCS ***FY 2014 Plans:*** Will continue to maintain the core team of subject matter experts (SMEs) available for this mission and will conduct technical assessments of micro-electronic parts used in the board designs of the Army's weapon systems including the FCS			
Accomplishments/Planned Programs Subtotals	12.429	13.362	13.542

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M47: *TACOM Cmd/Ctr Spt*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M47: *TACOM Cmd/Ctr Spt*	-	3.822	3.969	3.903	-	3.903	3.937	3.879	3.937	4.003	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Supports the Non-Army Management Headquarters Activity management and administrative functions at the U.S. Army Tank-Automotive Research Development Engineering Center (TARDEC), Warren, MI.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	3.822	3.969	3.903
Articles:	0	0	
Description: TARDEC management and administrative efforts			
FY 2012 Accomplishments: Provided continued management and administrative functions at a level consistent with mission requirements and support needs at TARDEC.			
FY 2013 Plans: Provide continued management and administrative functions at a level consistent with mission requirements and support needs at TARDEC.			
FY 2014 Plans: Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at TARDEC.			
Accomplishments/Planned Programs Subtotals	3.822	3.969	3.903

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M47: *TACOM Cmd/Ctr Spt*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M53: *Developmental Test Command/Ctr Spt*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M53: *Developmental Test Command/Ctr Spt*	-	9.415	8.099	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters, Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements for HQ ATEC under one Program Element (0605898AM65). Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

Project M53 funds civilian labor and support costs for the technical direction and administrative functions of the Headquarters, U.S. Army Developmental Test Command (DTC) located at Aberdeen Proving Ground, Maryland, and is required to support the accomplishment of assigned developmental test missions not directly related to specific test and evaluation projects. This project includes staff/management functions of resource management, safety, security, environmental, strategic planning and ADPE/information/technology support for command-wide databases in support of the developmental test mission with technical direction of seven Major Range and Test Facility Bases (MRTFBs) and one test center: White Sands Missile Range(WSMR), New Mexico; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Dugway Proving Ground (DPG), Utah; Electronic Proving Ground (EPG) Fort Huachuca, Arizona; and Yuma Proving Ground (YPG), Arizona; Cold Regions Test Center (CRTC), Fort Greeley, Alaska; and Tropic Regions Test Center (TRTC) at various locations, as well as for Redstone Test Center (RTC) Redstone Arsenal and Fort Rucker, Alabama. This is the operating budget for DTC Headquarters, which provides technical direction for the annual execution of over 3500 tests, 8801 workyears, and a $2.0 billion program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Civilian Labor and Other Support Costs	9.415	8.099	0.000
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Civilian labor and other support costs were needed to provide technical direction and to administer the assigned Army developmental test mission.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M53: *Developmental Test Command/Ctr Spt*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
DTC Civilian labor and other support costs are needed to provide technical direction and administer the assigned Army developmental test mission			
Accomplishments/Planned Programs Subtotals	9.415	8.099	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M55: *Edgewood Chemical Biological Center*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M55: *Edgewood Chemical Biological Center*	-	7.152	7.329	8.253	-	8.253	8.754	8.839	8.892	9.038	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Supports the Non-Army Management Headquarters Activity (AMHA)management and administrative functions at the U.S. Army Edgewood Chemical Biological Center (ECBC), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	7.152	7.329	8.253
Articles:	0	0	
Description: ECBC management and administrative efforts			
FY 2012 Accomplishments: Provided continued management and administrative functions at a level consistent with mission requirements and support needs at ECBC.			
FY 2013 Plans: Provide continued management and administrative functions at a level consistent with mission requirements and support needs at ECBC			
FY 2014 Plans: Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at ECBC.			
Accomplishments/Planned Programs Subtotals	7.152	7.329	8.253

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M55: *Edgewood Chemical Biological Center*

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M58: *SECOM CMD/CTR Spt*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M58: *SECOM CMD/CTR Spt*	-	2.764	2.869	2.921	-	2.921	2.490	2.378	2.431	2.471	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Supports the Non-Army Management Headquarters Activity (AMHA) management and administrative functions at the Natick Soldier Research, Development and Engineering Center (NSRDEC), Natick, MA.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Management Support	2.764	2.869	2.921
Articles:	0	0	
Description: NSRDEC management and administrative functions ***FY 2012 Accomplishments:*** Provided continued management and administrative functions at a level consistent with mission requirements and support needs at NSRDEC. ***FY 2013 Plans:*** Provide continued management and administrative functions at a level consistent with mission requirements and support needs at NSRDEC. ***FY 2014 Plans:*** Will provide continued management and administrative functions at a level consistent with mission requirements and support needs at NSRDEC.			
Accomplishments/Planned Programs Subtotals	2.764	2.869	2.921

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M58: *SECOM CMD/CTR Spt*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M76: *Armament Group Support*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M76: *Armament Group Support*	-	1.303	1.390	1.401	-	1.401	1.384	1.333	1.354	1.380	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The goal of this program is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per SECDEF guidance and especially in support of the U.S. Army. This program partially funds the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate in international fora, such as the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG), Defense Against Terrorism (DAT) and to pursue new cooperative R&D initiatives and international cooperative agreements such as memoranda of understanding. This program also includes: the United States' share of costs of the NATO Civil Budget, Chapter IX, which funds the NATO Industrial Advisory Group (NIAG) and the Special Fund for Cooperative Planning (U. S. Army is Executive Agent for this NATO bill); partially funds the Five Power Senior National Representatives, Army [SNR (A)], the Technical Cooperative Program, Bilateral SNR(A)s, and Army armaments working groups with many nations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Army scientific support	0.295	0.305	0.313
Articles:	0	0	
Description: Funds support Army subject matter experts to attend scientific and technological exchange, meetings, demonstrations, and/or simulations having military application and mutual benefits to the United States and its Allies.			
FY 2012 Accomplishments: Funds supported Army experts to attend scientific and technological exchange, meetings, demonstrations, and/or simulations having military application and mutual benefits to the United States and its Allies.			
FY 2013 Plans: Funds support Army experts to attend scientific and technological exchange, meetings, demonstrations, and/or simulations having military application and mutual benefits to the United States and its Allies.			
FY 2014 Plans: Funds will support Army experts to attend scientific and technological exchange, meetings, demonstrations, and/or simulations having military application and mutual benefits to the United States and its Allies.			
Title: Executive Agent	1.008	1.085	1.088
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605801A: *Programwide Activities*	PROJECT M76: *Armament Group Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Fund the United States' share of the NATO Civil Budget, Chapter IX (Defense Support Programs). U. S. Army is Executive Agent for this NATO bill. ***FY 2012 Accomplishments:*** Provided the United States' share of the NATO Civil Budget, Chapter IX (Defense Support Programs). U. S. Army is Executive Agent for this NATO bill. ***FY 2013 Plans:*** Provides the United States' share of the NATO Civil Budget, Chapter IX (Defense Support Programs). U. S. Army is Executive Agent for this NATO bill. ***FY 2014 Plans:*** Will provide the United States' share of the NATO Civil Budget, Chapter IX (Defense Support Programs). U. S. Army is Executive Agent for this NATO bill.			
Accomplishments/Planned Programs Subtotals	1.303	1.390	1.401

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	52.085	50.820	33.853	-	33.853	49.436	47.139	41.726	42.499	Continuing	Continuing
720: *Tech Info Func Actv*	-	8.107	8.692	6.696	-	6.696	9.891	9.121	8.568	8.717	Continuing	Continuing
727: *Tech Info Activities*	-	14.105	15.110	10.343	-	10.343	15.466	14.285	12.748	12.977	Continuing	Continuing
729: *Youth Science Activities*	-	2.250	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
730: *Pers & Trng Analys Act*	-	2.137	2.222	1.894	-	1.894	2.324	2.297	2.227	2.265	Continuing	Continuing
731: *Army High Performance Computing Centers*	-	7.552	7.074	5.234	-	5.234	6.921	6.808	8.152	8.294	Continuing	Continuing
733: *Acquisition Tech Act*	-	14.529	14.050	2.504	-	2.504	5.512	10.246	6.199	6.345	Continuing	Continuing
C16: *FAST*	-	2.698	2.365	1.369	-	1.369	2.829	2.672	2.518	2.563	Continuing	Continuing
C18: *BAST*	-	0.707	1.307	0.636	-	0.636	1.647	1.541	1.314	1.338	Continuing	Continuing
DW3: *Army Geospatial Enterprise Implementation*	-	0.000	0.000	5.177	-	5.177	4.846	0.169	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY14 reduction due to lower Army TOA.

A. Mission Description and Budget Item Justification

This program element (PE) supports upgrading the accuracy, timeliness, availability, and accessibility of scientific, technical, and management information at all levels of the Army Research and Development (R&D) community. Management of this information is critical to achieve the goals established by the Army's Senior Leadership. Use of accurate and timely technical information is essential to successfully meeting the milestones required on the path to the future force, allowing Army Science and Technology (S&T) leadership to refine investment strategy and quickly react to emerging opportunities and issues. This program includes initiatives to improve information derivation, storage, access, display, validation, transmission, distribution, and interpretation; to develop and enhance a single business model for Army S&T knowledge management information technology; to provide for Independent Review Team analysis of technology maturity as part of the Technology Area Readiness Assessment as required by DoDI 5000.2 dated May 12, 2003 as well as the Army Science Board (ASB) (projects 720 and 727). This program addresses the need to increase the competitiveness and availability of scientific, engineering, and technical skills in the DoD and National workforce through outreach programs aimed at middle school through college students and teachers. By providing direct working experience for these students in Army laboratories, the programs expose these students to the working world of science and engineering (project 729). The program includes funding for studies and analyses using behavioral science-based analytic tools to provide policy and decision makers with Soldier-oriented recommendations concerning manpower, personnel, and training issues (project 730). The

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*

program includes funding for support for Army high performance computing centers (project 731). The program includes funding for improvements to the Army's acquisition process (project 733). This program supports combatant commanders and major Army commands by providing science advisors to address scientific and technical issues and by providing engineering teams to solve field Army technical problems (project C16). Finally, this program funds studies by the Board on Army Science and Technology (BAST) (project C18). Coordination of this program with the other Services is achieved through inter-service working groups.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this PE is performed by the Research, Development, and Engineering Command (RDECOM), Aberdeen Proving Ground, MD, the Army Research Institute (ARI) for the Behavioral and Social Sciences, Arlington, VA, the Army Corps of Engineers' Engineer Research and Development Center (ERDC), Vicksburg, MS, Medical Research and Materiel Command (MRMC), Ft. Detrick, MD, Space and Missile Defense Command (SMDC), Huntsville, AL, and the Information Management Office, Arlington, VA.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	55.286	50.820	48.427	-	48.427
Current President's Budget	52.085	50.820	33.853	-	33.853
Total Adjustments	-3.201	0.000	-14.574	-	-14.574
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.201	-			
• Adjustments to Budget Years	-	-	-14.574	-	-14.574

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 720: *Tech Info Func Actv*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
720: *Tech Info Func Actv*	-	8.107	8.692	6.696	-	6.696	9.891	9.121	8.568	8.717	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This project provides funding for technology transfer activities to support acquisition, storage, and utilization of technical information for both military and domestic applications. Effective exploitation of science and technology (S&T) information is critical to achieving the goals established by senior Army leadership. Activities include Army support for Federal Laboratory Consortium (FLC) as required by Public Law; the Army Science Board; the Army Science Conference; S&T database management efforts; and administration of the Army's Small Business Innovation Research (SBIR) and Small Business Technology Transfer Program (STTR) in accordance with the Small Business Innovation Development Act of 1982, the Small Business Research and Development Enhancement Act of 1992 and subsequent reauthorizing legislation. Technology transfer activities make technical information available to both the public and private sectors to reduce duplication in Research and Development programs and to increase competitiveness in the US business community. Database management efforts support development of decision aids, databases, and automation support for the management and execution of the Army Research, Development, Test and Evaluation (RDTE) appropriation. In addition, this project provides funding for patent legal expenses and fees for all Research, Development, and Engineering Command (RDECOM) subordinate commands and laboratories, as required by the Omnibus Budget Reconciliation Act.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy

Work is performed by the Research Development and Engineering Command (RDECOM), Aberdeen Proving Ground, MD and the Army Research Laboratory (ARL), Adelphi, MD.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Title: Provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.		0.247	0.247	0.245
	Articles:	0	0	
Description: Funding is provided for the following effort				
FY 2012 Accomplishments:				

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 720: *Tech Info Func Actv*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provided Army funding support for Federal Laboratory Consortium as required by Public Law 104-113. ***FY 2013 Plans:*** Provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113. ***FY 2014 Plans:*** Will provide Army funding support for Federal Laboratory Consortium as required by Public Law 104-113.			
Title: Provide administrative and contractual support for the Army Science Board. ***Articles:*** ***Description:*** Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Provided administrative and contractual support for the Army Science Board. ***FY 2013 Plans:*** Provide administrative and contractual support for the Army Science Board. ***FY 2014 Plans:*** Will provide administrative and contractual support for the Army Science Board.	1.380 0	2.126 0	1.715
Title: Administrative support for the Army's SBIR and STTR programs. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Provided administrative support for the Army's SBIR and STTR programs. ***FY 2013 Plans:*** Provide administrative support for the Army's SBIR and STTR programs. ***FY 2014 Plans:*** Will provide administrative support for the Army's SBIR and STTR programs.	1.257 0	1.248 0	0.942
Title: Provide funding for patent fees and patent legal expenses for Army Materiel Command (AMC) commands and laboratories. ***Articles:*** ***Description:*** Funding is provided for the following effort	0.836 0	0.844 0	0.501

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 720: *Tech Info Func Actv*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Provided funding for patent fees and patent legal expenses for AMC commands and laboratories. ***FY 2013 Plans:*** Provide funding for patent fees and patent legal expenses for AMC commands and laboratories. ***FY 2014 Plans:*** Will provide funding for patent fees and patent legal expenses for AMC commands and laboratories.			
Title: Provide funding for S&T Strategic Planning and Support. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Provided funding for S&T Strategic Planning and Support. ***FY 2013 Plans:*** Provide funding for S&T Strategic Planning and Support. ***FY 2014 Plans:*** Will provide funding for S&T Strategic Planning and Support.	0.382 0	0.390 0	0.385
Title: Provide funding for the Army Science Conference. ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Provided funding for the Army Science Conference. ***FY 2013 Plans:*** Provide funding for the Army Science Conference. ***FY 2014 Plans:*** Will provide funding for the Army Science Conference.	0.491 0	0.545 0	0.483
Title: Administer S&T database computer engineering support contract and support RDECOM databases S&T management support. ***Articles:***	3.514 0	3.292 0	2.425

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 720: *Tech Info Func Actv*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Administered S&T database computer engineering support contract and supported RDECOM databases S&T management support. ***FY 2013 Plans:*** Administer S&T database computer engineering support contract and support RDECOM databases S&T management support. ***FY 2014 Plans:*** Will administer S&T database computer engineering support contract and support RDECOM databases S&T management support.			
Accomplishments/Planned Programs Subtotals	8.107	8.692	6.696

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 727: *Tech Info Activities*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
727: *Tech Info Activities*	-	14.105	15.110	10.343	-	10.343	15.466	14.285	12.748	12.977	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project funds the development of decision aids, databases, and automation support for the management and execution of the Army Research, Development, Test, and Evaluation (RDTE) Appropriation. It includes the hardware, software, and contractor support required to develop and implement a set of management decision aids, databases, and hardware/software tools to support technical and budgetary decisions at the Office of the Secretary of Defense (OSD) and Department of the Army (DA), including support of the Army Science and Technology (S&T) Master Plan. Most of the efforts in this project are on-going activities to support Army Research, Development, and Acquisition programs. Effective exploitation of S&T information is critical to achieving the goals established by Senior Army Leadership for the future force. Funding in this program supports Independent Review Team analysis of technology maturity as part of Technology Readiness Assessments as required by DoDI 5000.2 dated May 12, 2003.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the Office of the Assistant Secretary of the Army, Acquisition, Logistics and Technology, The Pentagon, Washington, DC.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Conduct and support S&T program portfolio assessments and analysis.	1.800	2.147	1.147
Articles:	0	0	
Description: Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Conducted and supported S&T program portfolio assessments and analysis. ***FY 2013 Plans:*** Conduct and support S&T program portfolio assessments and analysis. ***FY 2014 Plans:*** Will conduct and support S&T program portfolio assessments and analysis.			
Title: Support Army S&T strategic planning, analysis, and prioritization.	7.048	8.146	6.295

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 727: *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	
Description: Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Supported Army S&T strategic planning, analysis, and prioritization. ***FY 2013 Plans:*** Support Army S&T strategic planning, analysis, and prioritization. ***FY 2014 Plans:*** Will support Army S&T strategic planning, analysis, and prioritization.			
Title: Provide funding and support for Army Science and Technology Master Plan development and publication.	0.950	0.000	0.000
Articles:	0		
Description: Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Provided funding and support for Army Science and Technology Master Plan development and publication.			
Title: Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions.	3.327	3.836	2.005
Articles:	0	0	
Description: Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Provided funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. ***FY 2013 Plans:*** Provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions. ***FY 2014 Plans:*** Will provide funding and support for Army Acquisition Program Technology Readiness Assessments for Program Milestone Decisions.			
Title: Provide Army support to Director, Defense Research and Engineering Executive Staff for DoD-wide Science and Technology oversight.	0.980	0.981	0.896
	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 727: *Tech Info Activities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:			
Description: Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Provided Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight. ***FY 2013 Plans:*** Provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight. ***FY 2014 Plans:*** Will provide Army support to Assistant Secretary of Defense for Research and Engineering Executive Staff for DoD-wide Science and Technology oversight.			
Accomplishments/Planned Programs Subtotals	14.105	15.110	10.343

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 729: *Youth Science Activities*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
729: *Youth Science Activities*	-	2.250	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Beginning in FY13, efforts in this area are funded in 0601104A project J14 in order to consolidate and coordinate STEM education activities.

A. Mission Description and Budget Item Justification

This project supports science, technology, engineering, and mathematics (STEM) education activities that encourage elementary thru high school students to develop and interest in STEM and to further go on and pursues higher education and employment in the STEM fields. Activities are consolidated under the Army Educational Outreach Program (AEOP) which links and networks appropriate components to derive the best synergies to "present the Army" a larger pool of technical talent. Programs provide students with Army-unique practical experiences at Army laboratories, centers, and institutes; provide incentives for student competitions and support career development opportunities for students. AEOP increases interest and involvement of students and teachers across the nation in STEM at all proficiency levels and backgrounds to include under-represented and economically disadvantaged groups through exposure to Army sponsored research, education, competitions, internships, and practical experiences. This project enhances the national pool of science and engineering personnel that in turn supports defense industry and Army laboratory and research, development, and engineering center needs. Educating the nation's youth in STEM will help ensure a technologically literate citizenry that is required to promote the security and economic competitiveness of the United States.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work is performed by the Research, Development, and Engineering Command (RDECOM), Army Research Institute (ARI), the Army Corps of Engineers, Medical Research and Materiel Command (MRMC), and Space and Missile Defense Command (SMDC).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: STEM Competitions	0.779	0.000	0.000
Articles:	0		
Description: This effort will be rolled into 0601104 J14 in FY13 to consolidate and coordinate STEM education activities.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 729: *Youth Science Activities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provided competition incentives in STEM competitions that include scholarships, experiences, and mentorships as well as expose students to DoD career opportunities.			
Title: STEM Experiences ***Articles:*** ***Description:*** This effort will be rolled into 0601104 J14 in FY13 to consolidate and coordinate STEM education activities. ***FY 2012 Accomplishments:*** Increased Army Laboratory/Research, Development, and Engineering Center (RDEC) sponsorship of students and STEM education opportunities.	0.801 0	0.000	0.000
Title: West Point Cadet Research ***Articles:*** ***Description:*** This effort will be rolled into 0601104 J14 in FY13 to consolidate and coordinate STEM education activities. ***FY 2012 Accomplishments:*** Conducted West Point cadet research internship program to enhance cadet training through field experience within Army research labs and centers.	0.318 0	0.000	0.000
Title: Education Outreach and Development ***Articles:*** ***Description:*** This effort will be rolled into 0601104 J14 in FY13 to consolidate and coordinate STEM education activities. ***FY 2012 Accomplishments:*** Supported AEOP to enhance AEOP outreach to under-represented areas to enhance STEM education through student experiences in Army labs and academic partner institutions. Provided direct mentorship to students to broaden their interest in and their development of STEM education.	0.352 0	0.000	0.000
Accomplishments/Planned Programs Subtotals	2.250	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 729: *Youth Science Activities*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 730: *Pers & Trng Analys Act*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
730: *Pers & Trng Analys Act*	-	2.137	2.222	1.894	-	1.894	2.324	2.297	2.227	2.265	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project funds the Army's behavioral and social science research-based studies and analyses to address current and near term Soldier, training, and leader development issues. The research provides a unique capability to address a number of issues that directly or indirectly affect Soldier and unit performance and readiness, such as the effects of changes in training on individual and unit performance, the personnel costs of alternative programs and policies and the effects of program changes on retention of quality Soldiers. Requirements for these critical studies and analyses are solicited on an annual basis from the Chief of Staff of the Army (CSA), U.S. Army Training and Doctrine Command (TRADOC), the Assistant Secretary of the Army for Manpower and Reserve Affairs (ASA(M&RA)), the Army Deputy Chief of Staff(G-1), and the Human Resources Command (HRC).

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy

Work in this project is managed by the US Army Research Institute (ARI) for the Behavioral and Social Sciences, Arlington, VA.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: PERS & TRNG ANALYS ACT	2.137	2.222	1.894
Articles:	0	0	
Description: Funding is provided for the following effort.			
FY 2012 Accomplishments: Conducted studies and analyses based on critical issues identified by the CSA, TRADOC, ASA(M&RA), the G-1, and the HRC.			
FY 2013 Plans: Conduct studies and analyses based on critical issues identified by the CSA, TRADOC, ASA(M&RA), the G-1, and the HRC.			
FY 2014 Plans: Studies and analyses will be conducted based on critical issues identified by the CSA, TRADOC, ASA(M&RA), the G-1, and the HRC.			
Accomplishments/Planned Programs Subtotals	2.137	2.222	1.894

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 730: *Pers & Trng Analys Act*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 731: *Army High Performance Computing Centers*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
731: *Army High Performance Computing Centers*	-	7.552	7.074	5.234	-	5.234	6.921	6.808	8.152	8.294	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This project provides funding for research, education, outreach, and sustainment of the Army High Performance Computing Centers at the Army Research Laboratory (ARL), the Tank and Automotive Research, Development, and Engineering Center (TARDEC), and the Army High Performance Computing Research Center (AHPCRC) consortium. The Army High Performance Computing Centers provide high fidelity modeling, simulation, and analysis of materials, systems, and operational constructs. The Centers work with researchers at Army laboratories and research, development, and engineering centers to explore new algorithms in the computational sciences to address critical technology issues in computational research areas.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work is performed by the Army Research Laboratory (ARL), Aberdeen Proving Ground, MD and the Tank and Automotive Research, Development, and Engineering Center (TARDEC), Warren, MI.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Sustain the high performance computing environment and infrastructure in support of the US Army Research Laboratory	4.160	3.929	3.487
Articles:	0	0	
Description: Funding is provided for the following effort.			
FY 2012 Accomplishments: Sustained the high performance computing environment and infrastructure in support of the US Army Research Laboratory.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 731: *Army High Performance Computing Centers*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Sustain the high performance computing environment and infrastructure in support of the US Army Research Laboratory. ***FY 2014 Plans:*** Will develop software and software porting to new computing architectures; maintain Army specific applications to include data analysis support for petabytes of output, networking R&D, classified SAP scientific visualization, software maintenance for Army specific SAP projects, and research computer systems to support ARL fundamental and applied research.			
Title: Sustain the high performance computing environment and infrastructure in support of the US Army Tank and Automotive Research Development and Engineering Center (TARDEC). ***Articles:*** ***Description:*** Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Sustained the high performance computing environment and infrastructure in support of the US Army Tank and Automotive Research Development and Engineering Center (TARDEC). ***FY 2013 Plans:*** Sustain the high performance computing environment and infrastructure in support of the US Army Tank and Automotive Research Development and Engineering Center (TARDEC). ***FY 2014 Plans:*** Will sustain the high performance computing environment and infrastructure in support of the US Army Tank and Automotive Research Development and Engineering Center (TARDEC).	2.143 0	1.985 0	1.747
Title: Sustain the high performance computing environment and infrastructure in support of the Army High Performance Computing Research Center's (AHPCRC) research, education, and outreach activities. ***Articles:*** ***Description:*** Funding is provided for the following effort. ***FY 2012 Accomplishments:*** Sustained the high performance computing environment and infrastructure in support of the Army High Performance Computing Research Center's (AHPCRC) research, education, and outreach activities. ***FY 2013 Plans:***	1.249 0	1.160 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 731: *Army High Performance Computing Centers*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Support the Army High Performance Computing Research Center's (AHPCRC) research, computational sciences environment, education, and outreach activities.			
Accomplishments/Planned Programs Subtotals	7.552	7.074	5.234

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 733: *Acquisition Tech Act*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
733: *Acquisition Tech Act*	-	14.529	14.050	2.504	-	2.504	5.512	10.246	6.199	6.345	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project funds improvements to the Army's acquisition process by applying decision support and expert information systems, and by supporting analysis and evaluation of alternative acquisition strategies using techniques such as value-added analysis and analysis-of-alternatives. This project provides the environment for the analysis and evaluation of new information technologies, concepts, and applications for integrated management activities and support dynamic Army acquisition technology requirements. This program supports analysis efforts to conduct critical analyses for Army leadership in support of Army Transformation. These analyses are used by leadership in making acquisition, procurement, and logistics decisions in order to provide quality equipment and procedures to the Soldiers.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the Army Acquisition Support Center, Ft. Belvoir, VA.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: ACQUISITION TECH ACT	8.885	7.850	2.504
Articles:	0	0	
Description: Distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases. Analyze acquisition program financial programming and budgeting requirements. Continue development of Weapon Systems Handbook, long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.			
FY 2012 Accomplishments: Distributed and beta tested application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases; analyzed acquisition program financial programming and budgeting requirements; continued development of Weapon Systems Handbook, long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 733: *Acquisition Tech Act*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases; analyze acquisition program financial programming and budgeting requirements; continue development of Weapon Systems Handbook, long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis. ***FY 2014 Plans:*** Will distribute and beta test application programs and user interface utilities for executive level information systems that offer Standard Query Language services to Army Acquisition Corps corporate and global databases; will analyze acquisition program financial programming and budgeting requirements; will continue development of Weapon Systems Handbook, long-range planning and policy analysis, resource allocation analysis, cost tracking, and analysis.			
Title: Geospatial Acquisition Support Office (GASO). ***Articles:*** ***Description:*** These dollars will support the front end assessments of the PEO requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes. Moreover, they are tasked to provide a geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred. In FY14 these funds move to project DW3 in this Program Element. ***FY 2012 Accomplishments:*** Supported the front end assessments of the PEO requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes and provided a geospatial baseline system of systems in theater, which was a near-term requirement that cannot be deferred. ***FY 2013 Plans:*** Support the front end assessments of the PEO requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes and provide a geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred.	5.644 0	6.200 0	0.000
Accomplishments/Planned Programs Subtotals	14.529	14.050	2.504

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT 733: *Acquisition Tech Act*

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT C16: *FAST*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
C16: *FAST*	-	2.698	2.365	1.369	-	1.369	2.829	2.672	2.518	2.563	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project provides support for the Field Assistance in Science and Technology (FAST) program. The FAST program provides Science advisers, recruited from Army Materiel Command (AMC) headquarters and all AMC Major Subordinate Commands (MSC) to serve combatant commands and major commands worldwide. FAST tours of duty provide significant professional growth opportunities for the Army's scientists and engineers and enable them to focus AMC resources on rapidly identifying and solving field technical problems that enable the improvement of readiness, safety, training, and reduce operations and support (O&S) costs. The FAST activity is supported by Quick Reaction Coordinators within the engineering centers. The FAST program recoups many times its cost in O&S savings. FAST also provides emerging technology demonstration opportunities to the engineering centers and executes a biannual Technology Applications Conference (TAC) on a rotating basis between Forces Command, US Army Europe, US Forces Korea/Eighth Armyassists COCOMS with their annual Science and Technology Conferences. FAST also maintains close coordination with the Navy Science Advisor Program (Naval Fleet Forces Technology Integration Office).FAST supports warfighters in OEF with embedded Science and Technology Assistance Teams (STATs) as well as Science and Technology Acquisition Corps Advisors (STACAs).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the US Army Materiel Command (AMC), Ft. Belvoir, VAResearch, Development and Engineering Command (RDECOM), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Respond to combatant commanders worldwide with technological solutions.	2.698	2.365	1.369
Articles:	0	0	
Description: Funding is provided for the following effort.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT C16: *FAST*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Responded to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deployed science advisors with US Task Forces in support of combatant commanders; executed biannual Technology Applications Conference. ***FY 2013 Plans:*** Respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; deploy science advisors with US Task Forces in support of combatant commanders; execute biannual Technology Applications Conference. ***FY 2014 Plans:*** Will respond to combatant commanders worldwide with technological solutions to urgent materiel problems they identify; will deploy science advisors with US Task Forces in support of combatant commanders; will execute biannual Technology Applications Conference.			
Accomplishments/Planned Programs Subtotals	2.698	2.365	1.369

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT C18: *BAST*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
C18: *BAST*	-	0.707	1.307	0.636	-	0.636	1.647	1.541	1.314	1.338	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This project funds the Board on Army Science and Technology (BAST). The BAST functions under the auspices of the National Research Council (NRC) an organization within the National Academies of Sciences and provides an external, independent, and objective source of advice to the Army. The BAST serves as a convening authority for the discussion of science and technology issues of importance to the Army and oversees independent Army-related studies conducted by the National Academies. Working in close coordination with the Army, the BAST helps define problems, brings together experts to study these problems, and provides recommendations. Committees are assembled in accordance with established NRC procedures and BAST studies often take 12 months or more to conclude.

The cited work is consistent with the Assistant Secreatary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this project is executed extramurally by the Army Research Laboratory, Army Research Office (ARO), Research Triangle Park, NC.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Provide studies and conducts periodic meetings to help identify, assess, and recommend emerging opportunities in science and technology fields applicable to the US Army.	0.707	1.307	0.636
Articles:	0	0	
Description: Funding is provided for the following effort.			
FY 2012 Accomplishments: Studied emerging topics based on Army S&T strategy and senior leader initiatives.			
FY 2013 Plans: Study emerging topics based on Army S&T strategy and senior leader initiatives.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT C18: *BAST*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
These topics will again be selected according to Army S&T strategy and senior leader initiatives.			
Accomplishments/Planned Programs Subtotals	0.707	1.307	0.636

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605803A: *Technical Information Activities*	PROJECT DW3: *Army Geospatial Enterprise Implementation*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DW3: *Army Geospatial Enterprise Implementation*	-	0.000	0.000	5.177	-	5.177	4.846	0.169	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Support the front end assessments of the PEO requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes and provide a geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred. Previously funded in project 733 in this PE.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Geospatial Acquisition Support Office	0.000	0.000	5.177
Description: This effort supports the front end assessments of the PEO requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes and provide a geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred. ***FY 2014 Plans:*** Will support the front end assessments of the PEO requirements to ensure that system's acquisition processes address geospatial concepts, technology and standards early in their development processes and provide a geospatial baseline system of systems in theater, which is a near-term requirement that cannot be deferred.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	5.177

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	53.530	46.763	53.340	-	53.340	59.215	48.646	46.837	38.803	Continuing	Continuing
296: *Close Combat Technology*	-	2.643	2.248	4.219	-	4.219	6.305	2.786	2.728	2.796	Continuing	Continuing
297: *Mun Survivability & Log*	-	11.490	9.572	14.463	-	14.463	15.546	10.861	9.034	6.399	Continuing	Continuing
857: *DoD Explosives Safety Standards*	-	2.105	2.268	4.096	-	4.096	2.344	2.339	2.297	2.297	Continuing	Continuing
858: *Army Explosives Safety Management Program*	-	0.679	0.596	0.556	-	0.556	0.661	0.653	0.642	0.648	Continuing	Continuing
859: *Life Cycle Pilot Process*	-	4.865	3.562	4.561	-	4.561	5.148	5.128	5.080	5.465	Continuing	Continuing
862: *Indirect Fire And Fuze Technology*	-	5.467	2.554	8.625	-	8.625	9.540	9.830	9.475	4.224	Continuing	Continuing
F21: *Direct Fire Technology and NATO Ammo Eval*	-	10.787	9.782	7.032	-	7.032	8.749	6.259	5.351	3.367	Continuing	Continuing
F24: *Conventional Munitions Demil*	-	15.494	16.181	9.788	-	9.788	10.922	10.790	12.230	13.607	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY 2014: Funds realigned to other higher priority requirements.

A. Mission Description and Budget Item Justification

This Program Element supports continuing technology investigations. It provides a coordinated tri-service mechanism for the collection and free exchange of technical data on the performance and effectiveness of all non-nuclear conventional munitions and weapons systems in a realistic operational environment. It provides for NATO interchangeability testing (F21); Joint munition effectiveness manuals used by all services; development of standardization agreements (STANAGS) and associated Manuals of Proof and Inspection (MOPI); operation of the North American Regional Test Center (NARTC); evaluation of demilitarization methods for existing conventional ammunition (F24); evaluation of useful shelf life, safety, reliability and producibility of pyrotechnic munitions; and improvement of explosives safety criteria for DOD munitions via the DOD Explosives Safety Board (857). Pyrotechnic Reliability and Safety (296) supports pyrotechnic research, development and testing to identify, characterize and resolve reliability, safety, storage and manufacturing issues that impact production availability and field use of pyrotechnics. Project 296 will result in the development and demonstration of new, safe, reliable and environmentally acceptable munitions. Munitions Survivability and Logistics (297) will make Army units more survivable by applying technologies to reduce the sensitivity of munitions to unplanned stimuli (e.g. bullet impacts, fragment impacts, fast cook off,

slow cook off, sympathetic detonation, shaped charge jets) and by testing and demonstrating munitions logistics system solutions that prevent or minimize catastrophic explosive events and accelerate ammunition resupply. Project 297 also supports the Army Insensitive Munitions (IM) Board's reviews. The Army Explosives Safety Management Program (858) was established in FY01. The U.S. Army Technical Center for Explosives Safety uses the funds in this project to evaluate current explosives safety standards and develop new, scientific and risk-based standards to meet U. S. Army explosives requirements. The Life Cycle Pilot Program (LCPP) (859) will assess production base capabilities and needs over the acquisition life cycle of various munitions and will address the producibility of ammunition including the transition to type classification and production, and the ability of the production base to cost effectively produce quality products on schedule. The Fuze Technology Integration program (862) will improve performance and lower the costs of existing proximity fuzes and enable new applications in submunitions and medium caliber fuzes, addressing advanced proximity fuze sensor technology, Micro-electromechanical Systems (MEMS), Safety and Arming (S&A) technology, and Electronic S&A (ESA) technology for smart munitions.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	57.054	46.763	64.477	-	64.477
Current President's Budget	53.530	46.763	53.340	-	53.340
Total Adjustments	-3.524	0.000	-11.137	-	-11.137
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.524	-			
• Adjustments to Budget Years	-	-	-11.137	-	-11.137

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 296: *Close Combat Technology*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
296: *Close Combat Technology*	-	2.643	2.248	4.219	-	4.219	6.305	2.786	2.728	2.796	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project will support research, development and testing to identify, characterize and resolve reliability, safety, storage and manufacturing issues that impact production availability and field use of demolitions, grenades, shoulder launched munitions, mines and mine clearing charges and pyrotechnics, including training realism. Project will result in the development and demonstration of new, safe, reliable and environmentally acceptable munitions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Heavy Metal Mitigation in Illuminants ***Articles:*** ***Description:*** Heavy metals (barium and/or perchlorate) have toxic effects on soldiers as well as workers in the manufacturing process. This project is to replace toxic oxidizers in green signals and reduce potential health hazards. ***FY 2012 Accomplishments:*** Complete tests and type classify.	0.265 0	0.000	0.000
Title: Environmentally Benign Smoke HHS (Hand Held Signals) (M126A1) ***Description:*** This program will address the health concerns in the smoke HHS (Hand Held Signals) by leveraging smoke technology developed through Engineering Qualification Test (EQT) funding for the Battlefield Effect System (BES) and M18 smoke grenade. ***FY 2014 Plans:*** A smoke HHS (Hand Held Signals) that meets the current requirements while not having the hazardous chemical components. Conduct system verification testing. Safety - Reduce toxic effects on Soldiers. Safety & Efficiency - Reduce health hazards produced by industrial base, i.e.: mixing of Vat yellow 4 die, benzanthorne, and napthalene composition.	0.000	0.000	0.401
Title: Grenade Fuze Sychronization Effort	0.000	0.000	0.450

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 296: *Close Combat Technology*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Program effort to adapt a M201 Fuze body with an interchangable Pyrotechnic delay cartridge that can be utilized as an M228, M208 or M213 Fuze. Program is a product effeciency which would significantly reduce manufacturing cost of fuzes, logistic burden, and engineering support cost while reducing critical inspections and pull force requirements across all grenades. ***FY 2014 Plans:*** One Fuze across multiple grenades at a much lower cost. Preliminary design and drawings are available from the FTI (Fuze Technology Integration) and this would be a follow on effort to verify the production readiness and grenade integration impacts across multiple programs.			
Title: Discriminating Passive Infrared Sensor (PIR) for the M4A1 Selectable Lighweight Attack Munition (SLAM) ***Description:*** The M4A1 SLAM has four modes of operational engagement of its vehicle targets. One of the modes is a Side-Attack Mode which utilizes the SLAM's built-in passive infrared (PIR) sensor to detect the thermal signatures of passing vehicles to trigger and fire its explosively formed penetrator (EFP) warhead to defeat the target. If the current US Landmine Policy were to exceed to the Ottawa Convention Treaty, then the existing M4A1 SLAM's PIR feature will render the SLAM non-compliant to the Ottawa restrictions. The current PIR design does not have the ability to discriminate between vehicle and personnel when a potential target is detected. Without a replacement PIR design, the SLAM will lose one of its four operation modes to engage vehicle targets and unable to meet all of its intented missions. ***FY 2014 Plans:*** A successful new PIR sensor design with the ability to detect and discriminate between vehicles and personnel will provide the benefit for the system to meet the Ottawa Convention restrictions. This SLAM will be able to retain its Side-Attack Mode function for off-road side attack engagement of passing vehicles using its PIR sensor as the primary detection means of the potential target.	0.000	0.000	0.600
Title: Nano Technology for Small HHS (Hand Held Signals) ***Description:*** Leverage nano technology to reduce the ammunition logistical burden (reduce size and weight of current HHS (Hand Held Signals) while maintaining current performance). Reduce size and weight that soldier has to carry while maintaining capability. ***FY 2014 Plans:*** Reduces logistical burden and decreases weight load that soldier have to carry.	0.000	0.000	0.534
Title: Aircraft Countermeasure Improvements (LA14, LA15, MG62, L410) ***Articles:***	0.000	0.565 0	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 296: *Close Combat Technology*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: This program covers the upgrade of Army aircraft countermeasures to maintain effectiveness against the ever evolving threat. It covers the M206, M211/M212 series of flares, the M839 chaff cartridge, and the M796/BBU-35 impulse cartridge. Goals are to increase overall decoy effectiveness, decrease observability, and optimize performance for the various rotory and fixed wing Army aircraft. ***FY 2013 Plans:*** FY13 efforts is to increase overall decoy effectiveness, decrease observability, and optimize performance for the various rotory and fixed wing Army aircraft.			
Title: Dual Payload (M206) ***Description:*** Add an extended source (Infrared Cloud) material to the M206 Flare. Justification: Test data has shown single flare effectiveness can be increased with the addition of an extended IR (Infrared) source. Impact: increased number of countermeasure dispenses and reduce logistical burden. ***FY 2014 Plans:*** M206 countermeasure flare effectiveness will be improved by adding Special Material. Performance - Increased effectiveness by doubling the countermeasure engagements that can respond to missile threat. Performance & Efficiency - Increases mission flight profiles.	0.000	0.000	1.012
Title: Degradable Chaff & Low Frequency Chaff (M1/M839) ***Description:*** Develop chaff that will: 1) After dispense, lose its RF (Radio Frequency) component. 2) Disperse and bloom rapidly with minimal clumping and birdnesting even when used at low speeds from a hovering helicopter. 3) Enhance coverage in the low frequency range. 4) Type classify RR170 Chaff for Army use. Justification: the long persistence of Chaff causes interference with fire control and air traffic control radar. Impact: chaff will continue to interfere with control and tracking radar, limiting its use in the field and training. ***FY 2014 Plans:*** The operationally degradable chaff will address operational and training issues with chaff persistence. Performance - Increase frequency coverage where current Chaff lacks. Performance - Reduction of clumping and birdnesting will make the chaff more effective. Safety - Reduce interference with Traffic Control radars and aircraft radar systems. Environmental - Mitigates impact to farm animals that eat active dipoles after chaff deployment.	0.000	0.000	0.817
Title: Demolition Initiator Packaging - Skin Pack (MDI DODICS) ***Articles:***	0.133 0	0.000	0.055

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Current spool design is bulky, hard to conceal in urban environments and has potential for tangling. This project will develop a lighter, easily deployable and more reliable deployment method. It will have the added advantage of being compatible with Explosive Ordnance Disposal robotics. ***FY 2012 Accomplishments:*** Test and type classify new packaging. ***FY 2014 Plans:*** Shocktube Technical Data Package (TDP) validation. Solar Radiation Test & Storage Temperature. New TDP (MIL-DTL SPEC) will be created.			
Title: Chaff Performance Improvements ***Articles:*** ***Description:*** Increase effectiveness against advanced missile threats. ***FY 2012 Accomplishments:*** Develop chaff cuts to improve effectiveness against current and new threats.	1.113 0	0.000	0.000
Title: Low Observable Ignition for Counter Measure Flares (LA15) ***Articles:*** ***Description:*** Enhance aircraft survivability. ***FY 2012 Accomplishments:*** Use low visibility ignition composition for M212 Countermeasure Flare.	0.174 0	0.000	0.000
Title: Environmentally Benign Smoke Hand Held Signals (L306, L307, L311, L312, L314) ***Articles:*** ***Description:*** This program will address the health concerns in the smoke HHS (Hand Held Signals) by leveraging smoke technology developed through Environmental Quality Testing and M18 smoke grenade. Current configuration has hazardous components in the smoke composition and cannot be procured. ***FY 2013 Plans:***	0.000	0.395 0	0.000

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY13 efforts are to leverage smoke technology developed through Environmental Quality Testing and M18 smoke grenade. Current configuration has hazardous components in the smoke composition and cannot be procured.			
Title: Environmentally Benign Colored Smoke Formulations - M18 Red/Violet Smoke Grenades (G950/G955) ***Articles:*** ***Description:*** The project addresses Army Environmental Requirements and Technology Assessments requirement (AERTA) PP-3-02-4 and Environmentally Sustainable Energetics Workshop List of Concerns PGP-09-02 for the removal of sulfur and hazardous dyes from current formulations. New formulations will replace the sulfur based red and violet M18 formulations for all future production. Justification: AERTA requirement Impact: Without change to the formulation, User will continue to be exposed to potention inhalation hazard. ***FY 2013 Plans:*** FY13 efforts addresses AERTA requirement AERTA PP-3-02-4 and Environmentally Sustainable Energetics Workshop List of Concerns PGP-09-02 for the removal of sulfur and hazardous dyes from current formulations. New formulations will replace the sulfur based red and violet M18 formulations for all future production.	0.000	0.296 0	0.000
Title: M84EI,M240EI,M102EI Qualification and TC of Army Owned Stun Grenade Design (GG09, GG18, GG19) ***Articles:*** ***Description:*** Qualify already developed Government owned design which will reduce hardware unit cost and will provide additional benefits with an environmentally friendly and enhanced safety design for the Tactical and Reloadable Practice Stun Hand Grenade. Impact: Future competitive contracting strategy using a performance specification will be pursued incurring a high risk of delayed award and considerable expense to qualify a different contractor owned design. Potential exsists for environmental hazards to continue to affect manufacturing training sites and theater. ***FY 2012 Accomplishments:*** Qualify already developed Government owned design which will reduce hardware unit cost and will provide additional benefits with an environmentally friendly and enhanced safety design for the Tactical and Reloadable Practice Stun Hand Grenade. Impact: Future competitive contracting strategy using a performance specification will be pursued incurring a high risk of delayed award and considerable expense to qualify a different contractor owned design. Potential exsists for environmental hazards to continue to affect manufacturing training sites and theater.	0.162 0	0.000	0.000
Title: MK3A2 Replacement, Concussion Grenade Optimization Effort ***Articles:***	0.000	0.316 0	0.350

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: This effort incorporates modern materials and insensitive explosives to provide a safer, producible concussion grenade. Use of the MK3A2 Offensive grenade has been suspended due to age and safety issues. The current MK3A2 can expose the Soldier to toxic levels of asbestos. War fighters cannot safely employ the offensive grenade. Alternate munitions such as the M84 do not satisfy User needs for incapacitation of the enemy. ***FY 2013 Plans:*** Finalize the redesign of the MK3A2 grenade;perform residual tests to justify the ECPs required to update the TDPL (Technical Data Package List); update associated documents (SDZ (Surface Danger Zone), FHC (Final Hazard Classification) etc.); Justification: There is current funding to remove the existing safety hazard (asbestos) in the MK3A2. In addtion, the User has stated this capability is still required. Impact: If not funded, the MK3A2 redesign would not occur and the safety Hazard would still exist. In additon, no new MK3A2s would be allowed to be manufactured to the old TDP (Technical Data Package). ***FY 2014 Plans:*** 1) Fabrication of Multi Cavity Die and proveout. 2) Fuze and Packaging procurement. 3) Injection molding of 250 grenades. 4) LAP and Marking of grenades. 5) Engineering level testing.			
Title: Dual Payload M206 Aircraft Countermeasure Flare/ Pyro (L410) ***Articles:*** ***Description:*** M206 countermeasure flare effectiveness will be improved by adding extended source (Infrared Cloud) material. Benefit include increased effectiveness and doubling the countermeasure engagements that can respond to missile threat. ***FY 2013 Plans:*** Add a extended source (Infrared Cloud) material to the M206 Flare. Justification: Test data has shown single flare effectiveness can be increased with the addition of an extended IR source. Impact: contunued reduced number of countermeasure solutions.	0.000	0.676 0	0.000
Title: Radio Frequency (RF) Remote Activation Munitions (RAM) ***Articles:*** ***Description:*** A low cost Type B RF-RAMS receiver will be designed, prototyped, tested and be made available for production and fielding. The current RF-RAMS Type B receiver contract cost is approximately $5,700 in quantities above 930. The goal of this effort is to update the existing receiver design and implement improved manufacturing processes to reduce the cost. The low cost Type B receiver will integrate several manufacturing and producibility improvements to reduce production costs from approximately $5,700 to a production unit cost goal of less than $1,500. ***FY 2012 Accomplishments:***	0.796 0	0.000	0.000

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY12 efforts are to integrate several manufacturing and producibility improvements to reduce production costs from approximately $5,700 to a production unit cost goal of less than $1,500.			
Accomplishments/Planned Programs Subtotals	2.643	2.248	4.219

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
297: *Mun Survivability & Log*	-	11.490	9.572	14.463	-	14.463	15.546	10.861	9.034	6.399	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project supports the future force by making Army units more survivable through the investigation, testing and demonstration of munitions logistics system improvements that prevent or minimize catastrophic explosive events and accelerate ammunition resupply. Key thrusts are munitions storage area survivability, Insensitive Munitions (IM) technology integration and compliance, ammunition management and asset visibility, weapon system rearm, munitions configured load enablers and advanced packaging and distribution system enhancements. Within each thrust, a broad array of solutions will be identified, tested, and evaluated against developed system measures of effectiveness. Optimum, cost effective solutions that enable the rapid projection of lethal and survivable forces will be demonstrated. The early stages of force deployment are especially critical. Theater ammunition storage areas are vulnerable and present the enemy with lucrative targets. These areas and distribution nodes contain the only available munitions stocks in theater. Loss of these munitions could cripple the force, jeopardize the mission, and result in high loss of life. This project mitigates vulnerabilities and ensures a survivable fighting force.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Munitions Predictive Life	1.369	0.726	1.470
Articles:	0	0	
Description: This program will demonstrate technologies and algorithms that can help assess munitions serviceability based upon aggregate environmental exposures, system cycling and munition degradation models. This program will provide life cycle management tools for risk mitigation strategies, while reducing testing, inspection & surveillance required and improving weapon system reliability & and warfighter effectiveness.			
FY 2012 Accomplishments: Completed installation of environmental monitoring equipment that will collect data to determine the correlation between simulated and actual temperatures experienced by ammunition at the pallet, container, and item level in open storage, ISO containers, and earth covered magazines. Conducted testing of initial low cost, passive, credit card sized device prototypes that can record and display the temperature exposure history of an ammunition item at the packaging, or pallet level.			
FY 2013 Plans: Collect environmental data and develop algorithmic models that will relate temperature conditions seen at the container and item level to those seen at the pallet level for improved reliability forecasting and more cost effective sensor placement. Demonstrate a			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
shock/vibration sensor reliability device powered by vibration induced energy. Conduct analysis of reliability documentation for an initial two ammunition families in databases and identify reliability and risk threshold levels. Complete final testing of passive credit card sized temperature sensors and conduct demonstration. Down-select embedded propellant reliability sensor candidate and calibrate it to enable real-time monitoring of the effects of environmental exposure on ammunition propellant stability/reliability. ***FY 2014 Plans:*** Complete environmental data collection and validate algorithmic models that that can accurately estimate the temperature exposure of munitions based on location, storage area type, and munition type. Based on reliability and risk threshold levels developed from ammunition database analysis, develop algorithmic procedures that can be applied periodically to evaluate reliability and risk and determine functionality inspection requirements for two ammunition families. Conduct accelerated aging of propellant and calibrate and verify the embedded propellant reliability sensor.			
Title: Munitions Containerization Program ***Articles:*** ***Description:*** This program will demonstrate next generation packaging, with standardized dimensions/interfaces, that considers unit of issue, permits easy reconfiguration and that is reusable, nestable, automation friendly, and survivable. This new packaging (Ammoblocks) will permit the safe packing and shipping of more and different types of ammo together in user tailored loads; facilitate rapid, less labor intensive reconfiguration and resupply; and facilitate automation upgrades of load/assemble/pack and battlefield resupply operations. ***FY 2012 Accomplishments:*** Completed analysis of life cycle logistics system impact of Ammoblocks, completed prototype design of container integrated locking mechanism. ***FY 2013 Plans:*** Develop concepts and designs for flexible ammunition palletized load unitization techniques. ***FY 2014 Plans:*** Fabricate hardware and test designs for flexible ammunition palletized load unitization techniques.	0.303 0	0.785 0	0.500
Title: Improved Munitions Packaging ***Articles:*** ***Description:*** This program will demonstrate upgrades to existing packaging components and materials to improve legacy ammunition survivability. These upgrades will enhance ammunition survivability and reliability, improve field ammunition operations, and improve packaging producibility.	2.256 0	0.929 0	2.100

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Completed dynamic modeling analysis of prototype design of High Density Polyethylene (HDPE) cylindrical containers as replacements for current 120mm tank and 120mm/81mm mortar packaging. Completed prototype fabrication and conducted verification testing of an improved security seal for rectangular ammunition containers.. Conducted test and evaluation of pressure sensitive adhesive label samples and finalized standard specification and Technical Data Package for use on ammunition packaging. Completed concept development of low-cost ammunition bandoleers utilizing inexpensive synthetic non-woven materials. ***FY 2013 Plans:*** Fabricate prototypes and conduct engineering testing of HDPE cylindrical containers as replacements for current 120mm tank and 120mm/81mm mortar packaging. Complete design, fabricate prototypes, and complete engineering testing of low cost ammunition bandoleers. Complete user evaluation and transition of improved security seals for rectangular ammunition containers. Design, test, and evaluate plastic sealed pouches for 5.56mm ammunition that will reduce production costs and improve container volume usage efficiency. Conduct a market survey of and develop a test plan for non-copper based Environmental Protection Agency registered preservatives for wood packaging materials that if validated will increase the quantity and types of preservative available and reduce ammunition life-cycle costs. Define a data collection plan and review existing ammunition packaging test requirements and procedures to determine whether they are appropriate or they can be updated to provide potential cost savings for current and future packaging product improvement programs. Conduct an evaluation of the ability of solar reflective matte finish paint to reduce the impact of solar heating on ammunition and ammunition packaging. ***FY 2014 Plans:*** Finalize design and conduct field demonstration of HDPE cylindrical containers as replacements for current 120mm tank and 120mm/81mm mortar packaging and transition. Conduct an operational demonstration of improved prototype low cost ammunition bandoleers and transition. Conduct testing of non-copper based Environmental Protection Agency registered preservatives for wood packaging materials. Complete evaluation of packaging test requirements and develop recommendations for any potential changes identified. Complete life cycle testing of ammunition containers coated with a solar reflective matte finish paint and develop a performance specification. Develop the design of a plastic polymer container for 5.56mm ammunition containers to be used in conjunction with plastic sealed ammunition pouches to reduce packaging weight and production costs.			
Title: Insensitive Munitions (IM) Integration Program	5.935	5.371	8.632
Articles:	0	0	
Description: Demonstrate multiple IM technologies and integrate into end item(s) to improve munitions survivability and warfighter safety. IM Technologies, using State-of-the-Art materials, will be developed in the areas of warhead, propulsion and propellants, explosives, packaging, and barriers. In addition, modeling and simulation will be used to reduce development and testing costs. Efforts will increase the number of IM compliant ammunition items fielded to mitigate munitions reaction to			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014

unplanned stimuli such as fire, fragments, cook-off, bullets, adjacent munitions reaction (sympathetic detonation), and shape charge jet attacks.

FY 2012 Accomplishments:

An Insensitive Munitions (IM) explosive main fill to replace Composition H6 explosive in the 40 lb Cratering Charge was transitioned to Project Manager (PM)-Close Combat Systems (CCS), and final tests are being performed. Continued developing an IM Flexible Explosive formulation for demolition charges. The 40mm ammunition IM Multiple Technology Integration program integrated and conducted IM testing and sequential rough handling for the 40mm M430 Cartridge to include warhead, packaging, and cartridge case venting IM technologies. This will provide a system level IM solution for the 40mm High Explosive Dual Purpose (HEDP) Cartridge to be transitioned to PM-Maneuver Ammunition Systems (MAS) in Fiscal Year (FY) 13. Initiation testing was completed of pressed Insensitive Munitions eXplosive (IMX)-104 to replace Polymer Bonded eXplosive PBXW-14, an auxiliary charge that is currently being used in the 81mm, 120mm, and 60mm mortars. Propulsion and Warhead venting technology was tested and transitioned to the 120mm M934 High Energy Mortar round program. Performed modeling and simulation to validate IM container modification for the 120mm mortar to mitigate reaction to fast, or slow heating in the logistical configuration. IM warhead venting, packaging, and barrier technologies were developed for the 105mm Artillery ammunition and an IM logistic assessment was performed to determine affects of new technologies. Optimized the Sealed Seam (SS) container venting technology and performed IM testing for the PA161 and PA103A2 containers used in the Modular Artillery Charge Systems (MACS). IM testing was conducted to validate IM packaging modification for Hand Held Signals that will be transitioned to PM-CCS in FY13.

FY 2013 Plans:

Perform, for the 105mm Artillery Round, multiple IM integration tests to validate IM technologies: Cartridge Case, Packaging, and Projectile Venting, Barriers, and Explosive fill. Perform sequential rough handling testing and transition to the PM an IM enhanced Modular Artillery Charge Systems (MACS) container with Sealed Seam Venting Technology. Transition to PM an IM enhanced packaging solution for the family of Hand Held Signals. Transition to PM an IM enhanced 40mm HEDP Cartridge incorporating multiple IM venting technologies. Develop and demonstrate multiple IM explosives to replace the Composition B explosive in the M67 Grenade and N-5 explosive in the Light Weight (LW) 30mm Cartridge. In addition, packaging IM technology will be demonstrated for, M67 Grenade and LW 30mm ammunition.

FY 2014 Plans:

Transition to PM-Combat Ammunition Systems (CAS) an IM enhanced 105mm Artillery Round with IM technology for cartridge case, packaging, projectile, and barriers. Transition to PMs IM explosives, venting technologies, and packaging for the M67 grenade and 30mm M789 Cartridge. Develop IM high energy boosters for multiple applications. Develop multiple lab scale tests to predict IM system level responses for energetics. Develop novel IM venting mechanisms using preloaded springs, melt rings,

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
bi-metallic fastening, and eutectic materials for the active and passive venting of warheads and propulsion systems. Apply the Sealed Seam Technology to multiple ammunition containers.			
Title: Ammo Provider	1.627	1.761	1.761
Articles:	0	0	

Description: This program demonstrates technologies that will assure a survivable munitions logistics system by increasing distribution velocity and protecting ammo storage areas. Technologies areas to be investigated include ammunition asset visibility (including environmental sensors, marking technologies, and supply chain modeling), ammunition management (including improvements in stockpile surveillance and condition based management), sustainment (including pre-configured loads (soldier to unit size), field ammo reconfiguration capability, robotic handling, and improved load building capability), and force protection (including site planning software and field storage protection)

FY 2012 Accomplishments:
Completed integration of transportation asset load planning capability with the ammunition igloo storage optimization software tool. Completed testing of the Joint Modular Intermodal Container (JMIC) interface plate for Container Roll-on roll-Off Platforms (CROP) and the CROP with integrated JMIC restraint system. Completed design evaluation of a low-cost one-time use disposable air delivery pallet that will alleviate the problem of the loss of many Air Force 463L pallets during tactical logistics operations. Designed, fabricated, and tested a robust delivery speedbag that will permit the quick and efficient delivery of small, un-damaged, easily portable bundles of supplies down a rope from a hovering helicopter. Conducted testing and evaluation of a dunnage on demand system that will provide inner pack cushioning materials for the repack and retrograde of ammunition on the battlefield. Down-selected an ammunition compatible robotic manipulator, integrated with a robotic arm and demonstrated capability to robotically open and close containers in a tactical environment as part of a human augmentation system for field ammunition operations.

FY 2013 Plans:
Develop re-warehousing plan generation capability and integrate into the ammunition igloo storage optimization software tool and integrate the system with the Logistics Management Program (LMP) for data feed of inventory assets. Complete safety testing and user demonstration of the helicopter delivered robust supply speedbag. Complete testing and evaluation of the dunnage on demand system for improved battlefield retrograde. Complete system integration and conduct testing of a munitions environmental health monitoring system that monitors temperature, humidity, and shock experienced to provide instant ammunition readiness status to soldiers. Develop test load configurations and evaluation criteria for assessing the propagation potential and degree of violence expected when tactical ammunition configured loads are subjected to various unplanned combat stimuli.

FY 2014 Plans:

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Demonstrate stock rotation planning and scheduling capability of the ammunition igloo storage optimization software tool. Complete testing of a munitions environmental health monitoring system and transition. Develop requirements for integrating ammunition configured load building software into the Ammunition Logistics Management Accountability System to provide the soldier an automated capability to rapidly plan ammunition loads on conveyances. Complete modeling and simulation of the reaction of tactical ammunition configured loads to unplanned stimuli, use results to develop and integrate Configured Load Building Tool software sub-routine to modify load out configurations for improved safety and survivability. Complete market survey of commercial airbags for use as a replacement for wood dunnage in ammunition shipping containers and conduct performance testing of leading candidates.			
Accomplishments/Planned Programs Subtotals	11.490	9.572	14.463

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
857: *DoD Explosives Safety Standards*	-	2.105	2.268	4.096	-	4.096	2.344	2.339	2.297	2.297	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program supports the Research, Development, Test, and Evaluation efforts of the DoD Explosive Safety Standards Board. It supports explosive safety effects research and testing to quantify hazards and to develop techniques to mitigate those hazards in all DoD manufacturing, testing, transportation, maintenance, storage, disposal of ammunition and explosives operations, and also to develop risk based explosives safety standards. Results are essential to the development and improvement of quantity-distance standards, hazard classification procedures, cost effective explosion-resistant facility design procedures, and personnel hazard/ protection criteria.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: TM-51300	0.375	0.380	0.683
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Developed improved tri-service design procedures and improved computer codes for explosion-resistant structures. Initiate preparation of revised tri-service manual TM-51300.			
FY 2013 Plans: Develop improved tri-service design procedures and improve computer codes for explosion-resistant structures. Initiate preparation of revised tri-service manual TM-51300.			
FY 2014 Plans: Will develop improved tri-service design procedures and will improve computer codes for explosion-resistant structures. Initiate preparation of revised tri-service manual TM-51300.			
Title: Collect and analyze	0.275	0.279	0.682
Articles:	0	0	
Description: Funding is provided for the following effort			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 857: *DoD Explosives Safety Standards*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Collected and analyzed airblast/fragment/thermal data for revising DoD, NATO hazard classification. ***FY 2013 Plans:*** Collect and analyze airblast/fragment/thermal data for revising DoD, NATO hazard classification. ***FY 2014 Plans:*** Will collect and analyze airblast/fragment/thermal data for revising DoD, NATO hazard classification.			
Title: Explosive and Munitions Tests ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Developed improved explosives and munitions tests and characterization data. Specifically, developed improved gap tests for rocket motors. ***FY 2013 Plans:*** Develop improved explosives and munitions tests and characterization data. Specifically, develop improved gap tests for rocket motors. ***FY 2014 Plans:*** Wil develop improved explosives and munitions tests and characterization data. Specifically, will develop improved gap tests for rocket motors.	0.419 0	0.491 0	0.683
Title: Safety Guidelines ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2012 Accomplishments:*** Developed improved DoD and NATO explosives safety guidelines for munitions storage, explosives and field operation facilities. Prepared revised Dod 6055.9-STD and 4145.26M. ***FY 2013 Plans:*** Develop improved DoD and NATO explosives safety guidelines for munitions storage, explosives and field operation facilities. Prepare revised Dod 6055.9-STD and 4145.26M. ***FY 2014 Plans:***	0.275 0	0.279 0	0.682

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 857: *DoD Explosives Safety Standards*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Will develop improved DoD and NATO explosives safety guidelines for munitions storage, explosives and field operation facilities. Will prepare revised Dod 6055.9-STD and 4145.26M.			
Title: Explosive Safety Database	0.425	0.430	0.683
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Conducted other hazards analyses and expand/automate explosives safety databases. Developed improved Explosives Safety Mishap Analysis Module with links to accident reports. ***FY 2013 Plans:*** Conduct other hazards analyses and expand/automate explosives safety databases. Develop improved Explosives Safety Mishap Analysis Module with links to accident reports. ***FY 2014 Plans:*** Will conduct other hazards analyses and expand/automate explosives safety databases. Will develop improved Explosives Safety Mishap Analysis Module with links to accident reports.			
Title: Analysis Tools	0.336	0.409	0.683
Articles:	0	0	
Description: Funding is provided for the following effort ***FY 2012 Accomplishments:*** Developed and improved risk based analysis tools for explosives safety. Developed sequence of operations prototype. ***FY 2013 Plans:*** Develop and improve risk based analysis tools for explosives safety. Develop sequence of operations prototype. ***FY 2014 Plans:*** Will develop and improve risk based analysis tools for explosives safety. Will develop sequence of operations prototype.			
Accomplishments/Planned Programs Subtotals	2.105	2.268	4.096

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 858: *Army Explosives Safety Management Program*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
858: *Army Explosives Safety Management Program*	-	0.679	0.596	0.556	-	0.556	0.661	0.653	0.642	0.648	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project establishes, validates or modifies explosives technical safety requirements per Army Regulation 385-64, Ammunition and Explosives Safety Standards. Project activities promote RDT&E of new and innovative explosives safety technologies that improve the survivability of Army personnel, facilities, and equipment as well as improve the health, safety and welfare of the general public.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Risk based explosives safety criteria	0.164	0.142	0.141
Articles:	0	0	
Description: Development of risk based explosives safety criteria that will aid commanders and safety personnel in the transition from regulation to risk management.			
FY 2012 Accomplishments: Conducted critical explosives tests which provided additional development of risk based explosives safety criteria.			
FY 2013 Plans: Continue explosives testing and support of hazard research and exposure consequences.			
FY 2014 Plans: Continue explosives testing and support of hazard research and exposure consequences.			
Title: Development of enhanced protective structure designs	0.264	0.212	0.200
Articles:	0	0	
Description: Develop enhanced protective structure designs that improve the survivability of Army personnel, facilities and equipment.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Conducted critical explosives tests to improve protective structure designs to aid in survivability of Army assets. ***FY 2013 Plans:*** Continue explosives testing and support for improving protective construction designs. ***FY 2014 Plans:*** Continue explosives testing and support for improving protective construction designs.			
Title: Development of explosive safety tools	0.251	0.242	0.215
Articles:	0	0	
Description: Develop explosive safety tools for use by Army personnel. Explosive safety tools allow commanders and safety personnel to make explosive safety decisions using risk management methodologies. ***FY 2012 Accomplishments:*** Supported an improved risk management tool, which incorporates explosives test data to improve explosive safety risk management decisions. ***FY 2013 Plans:*** Continue development of new methods and tools for risk assessment to improve explosive safety risk management decisions. ***FY 2014 Plans:*** Continue development of new methods and tools for risk assessment to improve explosive safety risk management decisions. .			
Accomplishments/Planned Programs Subtotals	0.679	0.596	0.556

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
859: *Life Cycle Pilot Process*	-	4.865	3.562	4.561	-	4.561	5.148	5.128	5.080	5.465	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project supports the implementation of the Single Manager for Conventional Ammunition (SMCA) Industrial Base Strategic Plan through technology investigations, model based process controls, pilot prototyping, and industrial assessments. It will assess life cycle production capabilities required for all ammunition families, address design for manufacturability to facilitate economical production, identify industrial and technology requirements, and address the ability of the production base to rapidly and cost effectively produce quality products. Cost Reduction is an important part of the Life Cycle Pilot Process (LCPP). LCPP provides the resources to prototype critical technologies and develop the knowledge base to establish cost effective, environmentally safe and modern production processes in support of the Munitions Industrial Base transformation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Product Cost Thrust Area	0.810	1.050	1.181
Articles:	0	0	
Description: This thrust area seeks out new opportunities to reduce overall manufacturing costs of ammunition and ammunition components. RDTE efforts will review and analyze legacy manufacturing processing for opportunities to integrate new technology and lean manufacturing processes to reduce cost. ***FY 2012 Accomplishments:*** Projects include the following: develop a pilot scale process for purifying Ammonium Nitrate Solution (ANSOL) in the waste stream resulting from insensitive explosive manufacture. Initiate application of Advanced Cluster Energetics (ACE) Fluid Energy Mill (FEM) on High Melt Explosives (HMX) based Coated Explosive Material (CXM) formulations. Evaluate Environmentally Benign Colored Smoke. Completed ultrasound melt cast monitoring process for mortars and residual solvent reduction in propellants. ***FY 2013 Plans:*** Continue work on ANSOL purification, ACE FEM on HMX formulations and Environmentally Benign Colored Smoke. ***FY 2014 Plans:*** Evaluate new technology for legacy processes to reduce overall production costs for the Army.			
Title: Single Point Failures	3.219	1.469	1.458
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 859: *Life Cycle Pilot Process*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Project thrust area efforts will employ manufacturing technologies to address Single Point Failures (SPFs). These projects are part of the overall strategy to reduce the number of SPFs in the National Technology Industrial Base (NTIB). Additionally, thrust area efforts address ammunition manufacturing capability shortfalls. This area leverages RDTE accomplishments and product knowledgement to satisfy manufacturing requirements. ***FY 2012 Accomplishments:*** Projects include continued work on pilot scale production of energetic SPFs, transition of RD1333 lead azide process to industry, lab scale process for spherodial propellant and pilot scale process for manufacture of Tetra Nitro Carbazole (TNC). Investigated boron powder and Akardite SPFs and develop risk mitigation plans. ***FY 2013 Plans:*** Complete lab scale manufacturing process for single base spherodial propellant and start development of a process for double base spherodial propellant. Complete pilot process for TNC. ***FY 2014 Plans:*** Continue development of manufacturing technology and processes for SPFs. Efforts will address source of supply problems within the NTIB.			
Title: Manufacturing Technology for Industrial Base Transformation	0.836	1.043	1.922
Articles:	0	0	
Description: Project thrust area identifies and develops technologies that can be utilized at multiple government and private ammunition manufacturing locations to transform the NTIB. ***FY 2012 Accomplishments:*** Projects include completion of manufacturing technology for high precision components. Initiate projects on application of metal casting technology to improve explosive casting quality, use of ultrasound analyzer for process control in explosives manufacturing, Surface-Enhanced Raman Spectroscopy technology for sensing explosives in waste streams and bi-metal reactor for treating insensitive munitions waste streams. ***FY 2013 Plans:*** Continue work on application of metal casting technology to improve explosive casting quality, use of ultrasound analyzer for process control in explosives manufacturing, Surface-Enhanced Raman Spectroscopy technology for sensing explosives in waste streams and bi-metal reactor for treating insensitive munitions waste streams. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Investigate potential technologies to transform key manufacturing processes in the NTIB. Continue investigations, develop and document manufacturing technology for transition to the NTIB.			
Accomplishments/Planned Programs Subtotals	4.865	3.562	4.561

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT 862: *Indirect Fire And Fuze Technology*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
862: *Indirect Fire And Fuze Technology*	-	5.467	2.554	8.625	-	8.625	9.540	9.830	9.475	4.224	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program will identify, mature, and integrate new technologies into current fuzing and safe and arm devices. This program will implement these technologies into fuzing systems to preclude obsolescence, maximize standardization, enhance performance, and improve the safety and exportability of existing munitions. The program addresses two major areas: (1) risk mitigation and (2) block upgrades. Risk mitigation efforts will evaluate and demonstrate second sources for fuzing systems that may reduce cost by providing competition, and maintain production when sources or parts are no longer available. It will also allow for the performance enhancement of current ammunition items by conducting studies of major fuze components to detect and identify latent defects. The second major area is block upgrades, which will evaluate and perform studies on improvements to fuzes; increase commonality of fuze components and requirements. Block upgrades will enable the introduction of the latest technologies into fuzing, keep the fuzing design current to avoid obsolescence issues, and add capabilities.

This program will also identify, mature, and integrate new technologies for enhanced lethality, range extension and standardization to improve target engagement effectiveness; increase reliability, safety, and exportability; and reduce taxpayer costs including elimination of sole source supply of indirect fires ammunition materials as well as studies and evaluations of such technology solutions in comparison to current stock pile indirect fire conventional munitions and their associated production processes. Additionally, environmental impacts of legacy propellants, explosives and metal parts will be studied. Replacement of hazardous materials such as Ammonium Perchlorate, Diphenylamine, Lead, etc. and addition of propellant anti-tubewear additives will remain a focus. This program support the standardization and interoperability of legacy and new production ammunition to maximize munitions battlefield interchangeability/compatibility between 52 and 39 caliber guns under the auspices of the international Joint Ballistics Memorandum Of Understanding (JBMOU) as well as rifled and smooth-bore mortars. Maximizing standardization, interchangeability, and exportability will potentially increase FMS sales of US products to maintain domestic production and economies of scale.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Indirect Fire & Fuze ARDEC Support.	1.274	0.955	1.958
Articles:	0	0	
Description: Risk Mitigation: Evaluating second source for Digital Signal Processor for the M734A1 fuze, evaluating new battery and electronics sources for current inventory fuzes. Evaluate Micro Electro-mechanical Systems (MEMS) component alternatives to increase sources of supply and lower cost; affects 40mm HEPD grenade munitions. Block Upgrades: Successfully demonstrated Zig-Zag safety design for Common Mortar training fuze for 60, 81, and 120mm mortars, and forwarded the design to Office of the Project Manager for Combat Ammunition Systems (PM CAS) to qualify the design. Determined that Proximity			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Sensor can fit analytically in existing 30mm HEDP M789 round and continuing to fabricate fuze components. Successfully demonstrated increased sensitivity of 30mm M759 fuze, and performing engineering test. Investigate drop in proximity upgrades for current airburst fuzing for mortar, artillery and other munitions. Evaluate proximity sensor upgrades for M734A1. Prototyping a mortar common Safe and Arm device for M734A1 and M783 rounds. Performing a study on commonality of fuze components and requirements across all hand grenades (M67, M84, and M18). Tested several iterations of the Turbine Alternator (T/A) on the M734A1/M783 mortar fuze to survive high G gun launch environments, and provided a final design to PM CAS for final qualification testing. ***FY 2012 Accomplishments:*** Indirect Fire & Fuze ARDEC Support. ***FY 2013 Plans:*** Indirect Fire & Fuze ARDEC Support. ***FY 2014 Plans:*** Indirect Fire & Fuze ARDEC Support.			
Title: Indirect fire & Fuze PM CAS Support	1.742	0.000	6.667
Articles:	0		
Description: Indirect Fire: (FY12) Completed demonstration of IMX104 as Comp B explosive fill replacement for 81mm HE. Activities included ballistic testing including firing tables, safety, reliability and performance. Completed Replacement of Diphenylamine (DPA) Stabilizer by Akardite-2 in Ball Powder® Propellants. Activities included completion of long term stability study and transition to production qualification testing. (FY14-15) Maturation, Validation, and Risk Reduction of enhanced lethality technology to improve effectiveness and eliminate sole source HF-1 steel in indirect fires. Activities include studies, evaluations and demonstrations of alternative technologies, materials and processes. Maturation, Validation, and Risk Reduction of candidate nonlethal, nontoxic multispectral smoke technologies identified by the Techbase and SBIR programs to eliminate hazardous smoke in indirect fires screening missions. Activities include studies, evaluations and demonstrations of alternative technologies, materials and processes. Joint NATO/Allied Cannon Munitions Interchangeability Risk Reduction of battlefield interchangeability/compatibility of munitions and associated enabling technologies between 52 and 39 caliber 155mm guns. Activities include ballistic testing including firing tables, safety, reliability and performance. ***FY 2012 Accomplishments:*** Indirect fire & Fuze PM CAS Support ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Indirect fire & Fuze PM CAS Support			
Title: 155mm Extended Range Base Bleed Sys Maturation/Risk Reduction	2.451	1.599	0.000
Articles:	0	0	
Description: Indirect Fire: (FY12-13) Completed the Maturation & Risk Reduction of 155mm Extended Range Base Bleed System with a maximum range of 30km when fired from a 39 caliber 155mm cannon. The ignition of the base bleed system is critical to the performance of the system and maturation of the ignition system will improve the existing stockpile of extended range artillery projectiles. Activities included developing an engineering baseline of the currently fielded base bleed system, improvements to the base bleed grain formulation and boat tail shape, optimization of the igniter system with the improved grain formulation and the test and validation of completely modern, cost effective and producible base bleed system to validate improvements in reliability, accuracy and overall performance and corresponding integration planning to transition these improvements into 155mm programs of record. ***FY 2012 Accomplishments:*** 155mm Extended Range Base Bleed System Maturation & Risk Reduction ***FY 2013 Plans:*** 155mm Extended Range Base Bleed System Maturation & Risk Reduction			
Accomplishments/Planned Programs Subtotals	5.467	2.554	8.625

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
F21: *Direct Fire Technology and NATO Ammo Eval*	-	10.787	9.782	7.032	-	7.032	8.749	6.259	5.351	3.367	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program assures complete interchangeability of direct fire ammunition and weapons among all NATO countries with all of the associated logistic, strategic and tactical advantages. Project involves development and testing compliance of NATO standardization agreements (STANAGS) and staffing of the NATO North American Regional Test Center (NARTC). The program also includes warhead improvements and capability insertions to enhance lethality and effectiveness of existing cartridges.

FY 2014 funds will continue to maintain the NARTC and support NATO standardization of direct fire caliber ammunition for battlefield interchangeability. Additionally, this funding will be used to support direct fire ammunition ranging from small caliber ammunition, 40mm grenade, medium caliber cannon ammunition and large caliber ammunition enhancements to effectiveness, survivability, accuracy and general improvements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Lead Free Ammo - Propellant Optimization	0.863	2.000	0.750
Articles:	0	0	
Description: Develop optimized spherical propellant for reduced muzzle signature, fouling and chamber pressure. Cartridges containing alternate flash suppressants and deterrents will be manufactured and tested to determine optimum propellant composition.			
FY 2012 Accomplishments: Executed task order award with propellant manufacturer to investigate improvements in flash suppression technology, fouling, short barrel applications, temperature stability, and potential Diphenylamine replacements.			
FY 2013 Plans: Complete contractor and government analysis and optimized propellant testing of improved flash suppression technology. Initiate 5.56mm optimization study and testing of temperature stability technology.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Complete contractor and government analysis for optimized propellant testing of improved flash suppression and barrel wear technology. Evaluate improvements that reduce hazardous materials in manufacturing, small caliber propellant optimization studies and testing of temperature stability technology.			
Title: Low Observable Traced Projectiles ***Articles:*** ***Description:*** Tracers have a number of drawbacks; largely they give away the position of the shooter during firing. Advancement in technology has improved tracer technology which potentially eliminates, mitigates short falls of current tracers and improves safety and soldier survivability. ***FY 2012 Accomplishments:*** Initial investigations of multiple candidate technologies. Produce small samples of candidate materials. ***FY 2014 Plans:*** Continue engineering prototype manufacturing, development, and testing. Downselect to most promising candidates conducting engineering studies to improve manufacturing readiness.	2.050 0	0.000	1.772
Title: Lightweight Ammunition ***Articles:*** ***Description:*** Investigate alternate cartridge case materials for cost and weight savings over conventional brass cartridge cases. ***FY 2012 Accomplishments:*** Improve producibility of manufacturing equipment and test alternate designs and processes for lightweight cartridge cases and refine implementation cost. ***FY 2013 Plans:*** Down select alternative lightweight cartridge case technology. ***FY 2014 Plans:*** Continue to develop down selected technology candidates. Work jointly with other services towards common solutions.	3.020 0	1.000 0	0.275
Title: New Ammo Design Qualification & NATO Mission Support ***Articles:*** ***Description:*** This program assures complete interchangeability of small caliber and automated cannon-caliber ammunition and weapons among all NATO countries with all of the associated logistic, strategic and tactical advantages. ***FY 2012 Accomplishments:***	0.432 0	0.400 0	0.400

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Support NARTC Test operations. ***FY 2013 Plans:*** Support NARTC Test operations. ***FY 2014 Plans:*** Support NARTC Test operations			
Title: M433 Warhead Improvement ***Articles:*** ***Description:*** 40mm: Improve lethality (fragmentation) of the M433 grenade. ***FY 2012 Accomplishments:*** Completed optimization and testing of integrated M433 with new warhead design. Increase manufacturing readiness. ***FY 2013 Plans:*** Developmental test and validation of increased fragmentation warhead design and integrated ballistic testing. ***FY 2014 Plans:*** Qualification of improved M433 cartridge.	2.156 0	2.691 0	0.600
Title: Target Practice Spotter Technology Insertion ***Articles:*** ***Description:*** Training Cartridge with impact initiated spotting charge. Goal is visible signature upon impact under all conditions. ***FY 2012 Accomplishments:*** Integrated and optimized a design, and conducted a design evaluation test. ***FY 2013 Plans:*** Qualification testing and approval for use. ***FY 2014 Plans:*** Improve the design to facilitate high volume production, facilitize for and produce a design verification sample.	1.294 0	1.991 0	1.250
Title: Improved M789 Lethality, Warhead fragmentation improvement ***Articles:*** ***Description:*** Improve M789 warhead fragmentation for lethality by utilizing fragmentation sleeves, scoring or other technologies within the warhead to promote more efficient fragmentation.	0.216 0	1.000 0	0.350

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Improved M789 warhead for increased fragmentation lethality by utilizing fragmentation sleeves within the warhead to promote designed fragmentation. ***FY 2013 Plans:*** Integration of improved shear liner, increase in manufacturing readiness, and conduct integrated ballistic test. ***FY 2014 Plans:*** Incorporate the best design into the M789 warhead and perform testing to support an air worthiness release. Provide warheads with shear liners for a combined lethality demonstration with the Proximity sensor.			
Title: DBX-1 Lead free replacement for Lead Azide ***Articles:*** ***Description:*** Integrate environmentally friendly lead free primary explosives into M789. Demonstration in this form factor will enable transition to other munitions of larger size. ***FY 2012 Accomplishments:*** Evaluated DBX-1 performance through explosive train testing, explosive sensitivity testing and energetic output testing which leads to the go forward decision. ***FY 2013 Plans:*** Integrate environmentally friendly lead free primary explosives into M789.	0.324 0	0.600 0	0.000
Title: Metastable Intermolecular Composite (MIC) Primer, Lead free primer ***Articles:*** ***Description:*** Integrate environmentally friendly lead free primary explosives within the primer of the M789, remove lead Styphnate. ***FY 2012 Accomplishments:*** Explosive material qualification and primer functionality testing to ensure cartridge and propulsion functionality are ready for integration.	0.432 0	0.000	0.000
Title: Improved .300 caliber sniper ammunition ***Articles:*** ***Description:*** Improve .300 caliber sniper ammunition to provide increased capabilities.	0.000	0.100 0	0.500

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2013 Plans: Conduct market research, develop concepts and down select. ***FY 2014 Plans:*** Refine and evaluate cartridge design.			
Title: 120mm Fuze Safety Improvement ***Description:*** Initiate efforts to incorparate a second independant safety into the fuze for current 120mm high explosive ammunition. ***FY 2014 Plans:*** Focus will be on modifying fuze to meet current safety standards. Initiate design efforts to incorporate a pressure switch into the current fuze for the M830 and M830A1. Additional efforts will also be required to address obsolescence issues associated with the fuze.	0.000	0.000	0.400
Title: Extruded Propellant ***Description:*** Design, develop, and demonstrate a series of improved propellants for small caliber ammunition such as 5.56mm and 7.62mm using traditional extruded propellant processing technology. ***FY 2014 Plans:*** Model interior ballistics and develop new formulations for 7.62mm and 5.56mm, focusing on improved performance through lower variability, erosivity, and increased range via higher velocity at acceptable pressures. Develop pilot scale manufacturing process, produce samples, and demonstrate performance in subscale development testing.	0.000	0.000	0.510
Title: Small Caliber Ammunition Training Range Impact Reduction Engineering Study ***Description:*** Perform an engineering study on the feasibility of reducing the surface danger zone of small caliber training ammunition while maintaining a ballistic match to the combat ammunition out to maximum effective range of the combat ammunition. The results of the study will assist in establishing the baseline requirements for future training ammunition. ***FY 2014 Plans:*** Conduct literature search, develop and run models and simulations, perform material analysis, conduct market survey, prepare recommended requirements and prepare program proposals.	0.000	0.000	0.075
Title: Improved Door Breeching Engineering Study ***Description:*** Perform an engineering study on the feasibility reducing size and mass of current standoff door breeching capability.	0.000	0.000	0.150

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT F21: *Direct Fire Technology and NATO Ammo Eval*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2014 Plans: Conduct hardware search, purchase industry samples and test against standard target set.			
Accomplishments/Planned Programs Subtotals	10.787	9.782	7.032

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT F24: *Conventional Munitions Demil*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
F24: *Conventional Munitions Demil*	-	15.494	16.181	9.788	-	9.788	10.922	10.790	12.230	13.607	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Conventional Munitions Demilitarization technology program supports the Single Manager for Conventional Ammunition (SMCA) responsibility per Department of Defense Instruction (DoDI) 5160.68 to plan, program, budget and fund a Joint Service research and development (R&D) program for developing capability and capacity, technology and facilities to support the SMCA mission to demil and dispose of conventional ammunition stored in the SMCA Resource, Recovery and Disposition Account (B5A) for all the Military Services. The program goals include SMCA efforts to increase efficiencies and effectiveness to reduce the demil stockpile; reduce processing costs including packaging, handling and crating; and increase capacity through improved demil capabilities and processes. Project F24 includes activities: (1) to support a requirements process to focus investments, assess capabilities, analyze alternatives, and recommend and implement R&D projects; (2) to sustain product and process improvement and support for existing capabilities; (3) to develop or improve demil methods and processes related to advance the primary demilitarization dore thrust areas of destruction, disassembly, removal, resource recovery and recycling, and waste stream treatment; (4) to ensure safe and environmentally acceptable demil operations; (5) to transition or transfer activities of technologies/projects from the techbase centers or to United States Army depots or plants performing demil; and (6) to mitigate risk and close-out project activities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Advanced Destruction	6.629	8.422	4.411
Articles:	0	0	

Description: This effort focuses on destruction of munitions.

FY 2012 Accomplishments:

Completed munitions cryofracture demil facility support for Low Rate Initial Production (LRIP). Continued support of the ammonium perchlorate rocket motor destruction at Letterkenny Munitions Center with rocket motor segmenting design and rocket motor burns tests. Conducted a business case analysis for static detonation chamber. Installed mobile plasma treatment system upgrade components. Initiated the design and fabrication of cryofracture adaptation to demil of rockeye munitions at McAlester Army Ammunition Plant (MCAAP). Initiated the design of a prototype scale decineration process for cartridge actuated devices/

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT F24: *Conventional Munitions Demil*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
propellant actuated devices (CADS/PADS). Completed project closeout activities of cryo plasma project. Continued with the design, fabrication, and testing of bomb, live unit (BLU) rockeye cryofracture at MCAAP. ***FY 2013 Plans:*** Continue the ammonium perchlorate rocket motor destruction at Letterkenny Munitions Center with rocket motor segmenting design and complete the final facility design. Complete plasma ordnance disposal system layaway. Initiate study on universal closed disposal for shaped charges. Test and prove out the design of cryofracture adaptation to demil of rockeye munitions. Complete installation of components for rockeye demil at MCAAP and initiate testing. Conduct mobile plasma treatment system comprehensive performance test, demonstration/ validation. Continue evaluation of a decineration process for CADS/PADS. ***FY 2014 Plans:*** Conduct phase I integration testing for ammonium perchlorate rocket motor destruction and complete rocket motor segmenting. Evaluate results of universal closed disposal testing. Complete evaluation of decineration process at Tooele Army Depot (TEAD). Initiate study of double base grain rocket motor demil facility. Complete evaluation of rockeye demil process at MCAAP. Initiate phase II project on other-Service missile demil.			
Title: Resource Recovery and Recycling (R3) ***Articles:*** ***Description:*** This effort focuses on enhancing existing methods of munitions R3. ***FY 2012 Accomplishments:*** Completed facilitization of Improved Conventional Munitions (ICM) R3 and conducted demonstration/validation. Completed magnesium recovery LRIP. Completed design and fabricated improvements for autoclave Insensitive Munition Explosives (IMX). Completed high pressure water washout for press loaded ammunition. Initiated induction heating of ICM R3 line. Completed project closeout activities of nitroguanidine recovery project. ***FY 2013 Plans:*** Initiate magnesium recovery LRIP. Fabricate, install and test upgrades to high pressure water wash out line at Hawthorne Army Depot (HWAD). Complete test, fabrication and facilitization for ICM R3 line induction heating. Complete ICM R3 LRIP. ***FY 2014 Plans:*** Initiate design of automated transfer of grenades for ICM R3 line. Complete installation and proveout of high pressure water washout line at HWAD. Initiate recovery of usable large bomb bodies from meltout operations. Conduct LRIP on high pressure water washout.	2.712 0	2.920 0	0.500
Title: Advanced Removal ***Articles:***	0.230 0	0.000	0.480

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT F24: *Conventional Munitions Demil*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: This effort develops technology to remove propellant and energetics. ***FY 2012 Accomplishments:*** Initiated pilot phase of removal of cast-cured insensitive munitions (IM) explosives study. Initiated phase II equipment design for red phosphorous removal from smoke grenades project. Completed fabrication of process improvements for insensitive munitions explosive (IMX) 101 autoclave process. ***FY 2014 Plans:*** Fabricate components for red phosphorous demil line. Integrate red phosphorus demil line into phosphoric acid recovery plant at Crane Army Ammunition Activity (CAAA). Implement process changes from IMX-101 autoclave project to the MCAAP autoclave process.			
Title: Advanced Waste Stream Treatment	3.013	2.325	1.715
Articles:	0	0	
Description: This effort focuses on handling waste streams from munitions items. ***FY 2012 Accomplishments:*** Initiated study on energetics waste streams as dual use fuel cell feed stream. ***FY 2013 Plans:*** Initiate study for Rotary Kiln Productivity Improvement. Continue dual use evaluation of energetics wastes as a feed stream for fuel cells. ***FY 2014 Plans:*** Fabricate upgraded Pollution Abatement System for Rotary Kilns from Improvement program. Apply process efficiency changes to the environment permitting process for the Rotary Kiln Productivity Improvement Project.			
Title: Advanced Munitions Disassembly	2.910	2.514	2.682
Articles:	0	0	
Description: Funding is provided for the following efforts: ***FY 2012 Accomplishments:*** Continued to develop a disassembly process for family of scatterable mines (FASCAM) demil. Completed prototype detail design of BLU-97 disassembly process at HWAD. Continued system testing on demil by induction heating meltout system (DIHMES).			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605805A: *Munitions Standardization, Effectiveness and Safety*	PROJECT F24: *Conventional Munitions Demil*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Completed study for solvent based recovery of hexachloroethane from munitions. Developed kit for flexible munitions residue inspection system to add 120mm mortar cartridges. Completed closeout of ultrasonication of energetics project. ***FY 2013 Plans:*** Continue prototype detail design and complete subscale testing of BLU-97 disassembly process at HWAD. Initiated wash waterline improvements and completed DIHMES demonstration and validation. Closeout acid digestion project. ***FY 2014 Plans:*** Continue support of FASCAM demil. Continue fabrication and installation of BLU-97 disassembly process. Complete LRIP for DIHMES.			
Accomplishments/Planned Programs Subtotals	15.494	16.181	9.788

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	4.801	4.601	5.193	-	5.193	4.648	6.210	3.805	5.873	Continuing	Continuing
031: *Environmentally Sustainable Acquisition/Logistics*	-	3.591	3.441	4.279	-	4.279	3.294	4.920	2.632	4.679	Continuing	Continuing
06H: *Unexploded Ordnance Clearance Technology Support*	-	1.210	1.160	0.914	-	0.914	1.354	1.290	1.173	1.194	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Headquarters Army Environmental System (HQAES) increase to support network security worthiness.

A. Mission Description and Budget Item Justification

This program resources environmental quality technology (EQT) related management support functions including support of research, development, test and evaluation required for EQT technical integration efforts at demonstration/validation test sites, technical information and activities, test facilities and general test instrumentation, and EQT requirement assessments. Funds required to support the management of technology transfer associated with technology demonstrated and validated as part of Army EQT projects are included in this program element. In addition, support to the Army weapon system acquisition community to address generic pollution prevention related requirements are included under the Environmentally Sustainable Acquisition/Logistics Program.

The Environmentally Sustainable Acquisition/Logistics project includes program management for developing acquisition strategies that both achieve system key performance parameters and sustain the environment without permanent and unacceptable change in the natural environment or human health from system concept refinement through disposal. It includes systematic consideration of environmental impacts, energy use, natural resources, installation impacts, economics, and quality of life. It provides support to the system acquisition community, e.g., program and project managers, to integrate environmental quality analyses into the system acquisition process. The goal is to resolve environmental quality issues related to weapon systems that are identified during design, development, testing, operation, or support to reduce Army environmental liabilities and total ownership costs and includes efforts to eliminate the use of hazardous and ozone-depleting materials from weapon systems and facilities and to ensure the availability of Halon 1301 to support weapon system fire suppression requirements.

The Unexploded Ordnance Detection and Clearance project, beginning in FY 2004, is being overseen by the Army. The project had been overseen by Office of the Secretary of Defense in prior years. This project funds the Unexploded Ordnance Center of Excellence (UXOCOE) to provide for coordination of unexploded ordnance (UXO) technologies across the Department of Defense.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*			R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	4.953	4.601	4.037	-	4.037
Current President's Budget	4.801	4.601	5.193	-	5.193
Total Adjustments	-0.152	0.000	1.156	-	1.156
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.152	-			
• Adjustments to Budget Years	-	-	1.156	-	1.156

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 031: *Environmentally Sustainable Acquisition/Logistics*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
031: *Environmentally Sustainable Acquisition/Logistics*	-	3.591	3.441	4.279	-	4.279	3.294	4.920	2.632	4.679	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Environmentally Sustainable Acquisition/Logistics (ESAL) project provides support to the system acquisition community to integrate environmental quality (EQ) issues and concerns into the life cycle system acquisition process. To a much lesser extent, safety, occupational health (OH) and energy efficiency are also addressed. The focus of ESAL is on improving readiness, improving acquisition processes, reducing supportability burden, and minimizing total ownership cost. The Assistant Secretary of the Army for Installations, Energy and Environment [ASA(IE&E)] has defined the functions of the ESAL project in coordination with the Army Acquisition Executive and the Assistant Secretary of the Army (Acquisition, Logistics, and Technology). This project provides direct support to the Army acquisition community to pursue environmental sustainability and comply with legal statutes, policies and regulations during the life cycle of Army materiel. ESAL helps the Army achieve compliance with its weapon systems, industrial base, field and deployed activities directed by international treaties, Federal statutes, Executive Orders, Department of Defense (DoD) and Army policies and regulations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Environmental Quality Support	1.619	1.632	1.215
Articles:	0	0	
Description: Environmental Quality Support to Acquisition Programs			
FY 2012 Accomplishments: Provided support to Program Executive Officers and Program Managers (PEOs/PMs) to integrate EQ considerations and, to a much lesser extent, some safety and OH considerations into systems engineering activities. This included fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, participation in development of test plans and protocols, oversight of testing efforts, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Provided technology management and technical support to logistics initiatives including the EQ aspects of the Army Corrosion Program and the DoD Corrosion Program. Analyzed impending legal statutes impacting production, operation and support of weapon systems. Supported achievement of the Executive Order 13514 energy and greenhouse gas emission reduction goals, Pollution Prevention goals, and Army industrial base facility goals; Executive Order 13423 and associated Army goals for Toxic and Hazardous Chemical Reduction; and the			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 031: *Environmentally Sustainable Acquisition/Logistics*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Defense Federal Acquisition Regulation Supplement (DFARS) clause restricting the use of hexavalent chromium on all defense contracts. Assessed readiness impacts to weapon systems resulting from EQ impacts in capabilities of industrial base and garrisons to support production levels, training and operational tempo and maintenance activities. Provided Army acquisition community representation in Office of the Secretary of Defense (OSD) and Department of the Army (DA) committees addressing environmental legislation and rulemaking. ***FY 2013 Plans:*** Provide support to PEOs/PMs to integrate EQ considerations and, to a much lesser extent, some safety and OH considerations into systems engineering activities. This includes fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, participation in development of test plans and protocols, oversight of testing efforts, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Analyze impending legal statutes impacting production, operation and support of weapon systems. Support achievement of the Executive Order 13514 energy and greenhouse gas emission reduction goals, Pollution Prevention goals, and Army industrial base facility goals; Executive Order 13423 and associated Army goals for Toxic and Hazardous Chemical Reduction; and the DoD policy, DFARS clause and Army policy restricting the use of hexavalent chromium. Assess weapon system readiness impacts (e.g., production levels, training, operational tempo and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Provide Army acquisition community representation in OSD and DA committees addressing environmental legislation and rulemaking. ***FY 2014 Plans:*** Will provide support to PEOs/PMs to integrate EQ considerations into systems engineering activities. This will include fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Will analyze impending legal statutes impacting production, operation and support of weapon systems. Will assess weapon system readiness impacts (e.g., production levels, training, operational tempo and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Will provide Army acquisition community representation in select OSD and DA committees addressing environmental legislation and rulemaking.			
Title: Environmental Quality Technology (EQT) Program Management	1.338	1.228	1.028
Articles:	0	0	
Description: Provide EQT program management support to Army programs			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 031: *Environmentally Sustainable Acquisition/Logistics*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provided system acquisition support to the Army's Environmental Technology Technical Council (ETTC) and coordination of EQ-related systems' needs for expanded research, development, test and evaluation (RDT&E) efforts. Performed program management and oversight of technology integration efforts by Army Life Cycle Management Commands and PEO/PM environmental integrated process teams for new design, new procurement and fielded weapon systems. Provided technology management, technical support, and representation of the Army Materiel Command voting member of the Army EQT program. This included coordination of RDT&E Budget Activity 1 (BA-1) and BA-2 requirements among members of the EQT Pollution Prevention Technology Team, coordination of RDT&E BA-3 and BA-4 technology evaluations and operational requirements in support of weapon system platform integration, management and oversight for developing test plans, oversight of testing activities, and technical data analysis of test results to support weapon systems engineering decision making. Participated in performance and cost/risk assessments in support of ASA(IE&E) program objectives. Managed development and execution of plans for the following pollution prevention technology areas: reformulation of materials used in ammunition, rockets and missiles, and pyrotechnics to remove perchlorate and other hazardous constituents; Zero Footprint Camp to reduce the fuel and water logistics burden in Overseas Contingency Operations; Reductions in Toxic Metals Used in Surface Finishing on Army Weapon Systems; Alternative Battlefield Fuels; Airborne Lead Reduction in Army Weapon Systems; and other emerging pollution prevention technology areas as necessary.			
FY 2013 Plans: Provide system acquisition support to the Army's ETTC and coordination of EQ-related systems' needs for expanded RDT&E efforts. Manage and oversee technology integration efforts by Army Life Cycle Management Commands and PEO/PM environmental integrated process teams for weapon systems in all stages of design, procurement and operations/support. Coordinate RDT&E BA-1 and BA-2 requirements among members of the EQT Pollution Prevention Technology Team, coordinate RDT&E BA-3 and BA-4 technology evaluations and operational requirements in support of weapon system platform integration, manage and oversee test plan development, oversee testing activities, and analyze test results to support weapon systems engineering decision making. Participate in performance and cost/risk assessments in support of ASA(IE&E) program objectives. Manage development and execution of plans for the following pollution prevention technology areas: reformulation of materials used in ammunition and pyrotechnics to remove hazardous constituents; Zero Footprint Camp to reduce the fuel and water logistics burden in Overseas Contingency Operations; Reductions in Toxic Metals Used in Surface Finishing on Army Weapon Systems; Alternative Battlefield Fuels; and Airborne Lead Reduction in Army Weapon Systems.			
FY 2014 Plans: Will provide system acquisition support to the Army's ETTC and coordination of EQ-related systems' needs for expanded RDT&E efforts. Will manage and oversee technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Will coordinate RDT&E BA-2 requirements among members of the EQT Pollution Prevention Technology Team, coordinate RDT&E BA-3 and BA-4 technology evaluations and operational requirements in support of weapon system platform integration, manage and oversee test plan development, oversee testing			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 031: *Environmentally Sustainable Acquisition/Logistics*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
activities, and analyze test results to support weapon systems engineering decision making. Will manage development and execution of plans for the following pollution prevention technology areas: reformulation of materials used in ammunition and pyrotechnics to remove hazardous constituents; Zero Footprint Camp to reduce the fuel and water logistics burden in Overseas Contingency Operations; Reductions in Toxic Metals Used in Surface Finishing on Army Weapon Systems; and Airborne Lead Reduction in Army Weapon Systems.			
Title: Ozone Depleting Substance Management	0.634	0.581	0.337
Articles:	0	0	
Description: Oversee Army efforts to manage the use/elimination of ozone depleting substances on Army weapon systems.			
FY 2012 Accomplishments: Oversaw Army efforts to manage the use/elimination of ozone-depleting substances, greenhouse gases, and hazardous and toxic materials on Army weapon systems. Managed and oversaw the Army's reserve of ozone-depleting substances that contains the Army's strategic supplies of Halon used for explosion and fire suppression systems and R-22 used in fielded environmental control units. Coordinated with PEOs/PMs to affect system replacement and retrofit to eliminate ozone depleting substances while minimizing greenhouse gases, obtained approval to require use of Halon in new contracts, and assisted garrison commanders to assure recovery and deposit of excess Halon and R-22 into the reserve. Participated in Federal government and multi-national forums discussing use and replacement of ozone depleting substances and greenhouse gases, justifying mission critical applications, and addressing international importation and use regulations/restrictions. Significant effort supported Army warfighters in Operation Enduring Freedom and Operation New Dawn assuring adequate supplies of fire/explosion suppression and cooling agents in the theatre of operations.			
FY 2013 Plans: Oversee Army efforts to manage the use/elimination of ozone-depleting substances, greenhouse gases, and hazardous and toxic materials on Army weapon systems. Manage and oversee the Army's reserve of ozone-depleting substances that contains the Army's strategic supplies of Halon used for explosion and fire suppression systems and R-22 used in fielded environmental control units. Coordinate with PEOs/PMs to affect system replacement and retrofit to eliminate ozone depleting substances while minimizing greenhouse gases, obtain approval to require use of Halon in new contracts, and assist garrison commanders to assure recovery and deposit of excess Halon and R-22 into the reserve. Participate in Federal government and multi-national forums discussing use and replacement of ozone depleting substances and greenhouse gases, justifying mission critical applications, and addressing international importation and use regulations/restrictions.			
FY 2014 Plans: Will oversee Army efforts to manage the use/elimination of ozone-depleting substances on Army weapon systems. Will monitor the Army's reserve of ozone-depleting substances that contains the Army's strategic supplies of Halon used for explosion and			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 031: *Environmentally Sustainable Acquisition/Logistics*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
fire suppression systems and R-22 used in fielded environmental control units. Will coordinate with PEOs/PMs to affect system replacement and retrofit to eliminate ozone depleting substances while minimizing greenhouse gases and will obtain approval to require use of Halon in new contracts.			
Title: Headquarters Army Environmental System (HQAES) ***Description:*** Headquarters Army Environmental System (HQAES) support. ***FY 2014 Plans:*** Will support Headquarters Army Environmental System (HQAES) modifications recommended by Configuration Control Management Board in order to support network security worthiness.	0.000	0.000	1.699
Accomplishments/Planned Programs Subtotals	3.591	3.441	4.279

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 06H: *Unexploded Ordnance Clearance Technology Support*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
06H: *Unexploded Ordnance Clearance Technology Support*	-	1.210	1.160	0.914	-	0.914	1.354	1.290	1.173	1.194	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This effort was devolved to the Army from the office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)). This effort funds the Unexploded Ordnance Center of Excellence (UXOCOE), which provides the day-to-day management, coordination, and information clearinghouse functions, and serves as the Department of Defense's (DoD) center for coordinating Unexploded Ordnance (UXO) Research, Development, Test and Evaluation (RDT&E) requirements and programs across DoD; develops and promotes standards for testing, modeling, and evaluation; maintains information on technologies for UXO detection and clearance; publishes an annual report summarizing the activities and accomplishments of the UXOCOE in order to improve the effectiveness and economy of UXO detection and clearance RDT&E efforts throughout DoD; and gathers and maintains a database for the results of these efforts. The Army manages, oversees, and coordinates this effort on behalf of the office of the USD(AT&L).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Coordinate/collect/analyze UXO RDT&E information via conferences, seminars, and workshops.	0.481	0.389	0.503
Articles:	0	0	
Description: Coordinate/collect/analyze UXO RDT&E information via conferences, seminars, and workshops.			
FY 2012 Accomplishments: Identified $12 million in potential savings to the DoD in technology leveraging opportunities. Identified and catalogued over 300 separate counter explosive hazards detection and neutralization technologies. Established new partnerships with Joint Improvised Explosive Devices Defeat Organization and National Bomb Squad Commanders Advisory Board in order to better coordinate outreach and sharing of information as it pertains to Identified $140 million in explosive hazards technology investment by direct attendance and participation in DoD, industry and other meetings. Increased explosive hazards mission area awareness to senior DoD officials through participation in 14 separate technology integration groups.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 06H: *Unexploded Ordnance Clearance Technology Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Coordinate/collect/analyze UXO RDT&E information via conferences, seminars, and workshops. ***FY 2014 Plans:*** Will catalogue and conduct analysis of explosive hazards requirements and technologies across the detection and neutralization tenets to identify explosive hazards technology capability gaps and leveraging opportunities found across DoD and other research and engineering activities.			
Title: Generate an annual UXO Clearance Report focused on UXO RDT&E efforts for countermine, explosive ordnance disposal, UXO remediation, humanitarian demining, and active range clearance. ***Articles:*** ***Description:*** Generate an annual UXO Clearance Report focused on UXO RDT&E efforts for countermine, explosive ordnance disposal, UXO remediation, humanitarian demining, and active range clearance. ***FY 2012 Accomplishments:*** Produced and publish an Annual Report focused on the coordination of all DoD explosive hazards research and engineering efforts among five counter explosive hazards mission areas (Countermine, Explosive Ordnance Disposal, Humanitarian Demining, Munitions Response and Range Sustainment. The effort required in compiling and formatting report data aligns with the everyday work effort of assigned analysts. UXOCOE Annual Report is found and distributed entirely over unclassified and classified information networks. ***FY 2013 Plans:*** Generate an annual UXO Clearance Report focused on UXO RDT&E efforts for countermine, explosive ordnance disposal, UXO remediation, humanitarian demining, and active range clearance. ***FY 2014 Plans:*** Will generate an annual UXO Clearance Report focused on UXO RDT&E efforts for countermine, explosive ordnance disposal, UXO remediation, humanitarian demining, and active range clearance.	0.225 0	0.237 0	0.183
Title: Maintain and update the UXO clearance/detection databases and computer web site and analyze data from and programs in UXO RDT&E for potential solutions to UXO related needs. ***Articles:*** ***Description:*** Maintain and update the UXO clearance/detection databases and computer web site and analyze data from and programs in UXO RDT&E for potential solutions to UXO related needs. ***FY 2012 Accomplishments:***	0.311 0	0.329 0	0.174

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 06H: *Unexploded Ordnance Clearance Technology Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Maintained, updated, and modernized electronic reports, information products and UXOCOE databases and computer web site to promote broader interaction and sharing of information, concepts and technology within DoD, other US and international agencies, academia, and industry. ***FY 2013 Plans:*** Maintain and update the UXO clearance/detection databases and computer web site and analyze data from and programs in UXO RDT&E for potential solutions to UXO related needs. ***FY 2014 Plans:*** Will maintain and update the UXO clearance/detection databases and computer web site and analyze data from and programs in UXO RDT&E for potential solutions to UXO related needs.			
Title: Provide oversight of UXOCOE's Ft. A. P. Hill test site which is used for standardized scientific experiments to help gather data on and model the performance of potential UXO sensors. ***Articles:*** ***Description:*** Provide oversight of UXOCOE's Ft. A. P. Hill test site which is used for standardized scientific experiments to help gather data on and model the performance of potential UXO sensors. Data are needed for the acquisition of UXO sensor performance data versus a full system evaluation. Focus is on the sensor itself, not on full-scale operational system capability. Full-scale development would occur during engineering and manufacturing development and be aimed at meeting validated requirements prior to full-rate production. ***FY 2012 Accomplishments:*** Provided oversight of UXOCOE's Ft. A. P. Hill test site which was used for standardized scientific experiments to help gather data on and model the performance of potential UXO sensors. Data were needed for the acquisition of UXO sensor performance data versus a full system evaluation. Focus was on the sensor itself, not on full-scale operational system capability. Full-scale development would occur during engineering and manufacturing development and be aimed at meeting validated requirements prior to full-rate production. ***FY 2013 Plans:*** Provide oversight of UXOCOE's Ft. A. P. Hill test site which is used for standardized scientific experiments to help gather data on and model the performance of potential UXO sensors. Data are needed for the acquisition of UXO sensor performance data versus a full system evaluation. Focus is on the sensor itself, not on full-scale operational system capability. Full-scale development would occur during engineering and manufacturing development and be aimed at meeting validated requirements prior to full-rate production.	0.193 0	0.205 0	0.000
Title: Maintain awareness of UXO issues	0.000	0.000	0.054

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605857A: *Environmental Quality Technology Mgmt Support*	PROJECT 06H: *Unexploded Ordnance Clearance Technology Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Description: Conduct and attend requirements and technology conferences, seminars and workshops and meetings to coordinate and improve the awareness of explosive hazards technology research and engineering initiatives being developed. ***FY 2014 Plans:*** Will plan, organize and conduct an annual explosive hazards technology coordination meeting bring together the major Military Service and OSD technologists and program managers. Will identify and participate in DoD, industry and academia sponsored meetings and symposiums. Will update on a quarterly basis UXOCOE information products with information collected at various meetings and conferences. Will identify and disseminate technology leveraging opportunities within explosive hazards community.			
Accomplishments/Planned Programs Subtotals	1.210	1.160	0.914

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0605898A: *Management HQ - R&D*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	17.480	18.524	54.175	-	54.175	53.907	55.153	56.479	43.416	Continuing	Continuing
M65: *Army Test and Evaluation Command (ATEC)*	-	17.480	18.524	54.175	-	54.175	53.907	55.153	56.479	43.416	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters: Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements under one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

This project provides funding for the salaries and related personnel benefits for the authorized civilian personnel positions that provide for the management functions and the technical direction of the U.S. Army Test and Evaluation Command (ATEC) mission located at Aberdeen Proving Ground, Maryland. ATEC plans, conducts and integrates developmental testing, independent operational testing, independent evaluations, assessments and experiments to provide essential information to Soldiers and acquisition decision makers supporting the American Warfighter.

This project includes staff/management functions of resource management, safety, security, environmental, strategic planning and information/technology support for command-wide databases in support of the developmental, evaluation and operational test mission with technical direction to the Army Evaluation Center (AEC), Aberdeen Proving Ground, Maryland, to the Operational Test Command (OTC), Fort Hood, Texas and to the seven Major Range and Test Facility Base (MRTFBs) and one non-MRTFB test range: Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Dugway Proving Ground (DPG), Utah; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; White Sands Missile Range (WSMR), New Mexico; Yuma Proving Ground (YPG), Arizona; Cold Regions Test Center (CRTC), Fort Greely, Alaska; and Tropic Regions Test Center (TRTC) at various locations, as well as for Redstone Test Center (RTC) Redstone Arsenal, Alabama. This is the operating budget for ATEC Headquarters, which provides technical direction for the annual execution of over 3,300 developmental tests; more than 110 operational events; and more than 1,100 documents supporting acquisition programs. ATEC has an authorized workforce of more than 9,500 workyears, and a $2.0 billion program.

This project also funds the salaries of civilian employees conducting Test and Evaluation early involvement, evaluation and test design missions and associated personnel support/sustainment costs including: temporary duty, professional training, supplies, and equipment. This project does not finance test facility operations, test instrumentation or test equipment.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*			R-1 ITEM NOMENCLATURE PE 0605898A: *Management HQ - R&D*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	17.530	18.524	18.681	-	18.681
Current President's Budget	17.480	18.524	54.175	-	54.175
Total Adjustments	-0.050	0.000	35.494	-	35.494
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.050	-			
• Adjustments to Budget Years	-	-	35.494	-	35.494

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605898A: *Management HQ - R&D*	PROJECT M65: *Army Test and Evaluation Command (ATEC)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M65: *Army Test and Evaluation Command (ATEC)*	-	17.480	18.524	54.175	-	54.175	53.907	55.153	56.479	43.416	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Army consolidated three Test and Evaluation Command Headquarters: Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC), and Army Evaluation Center (AEC). As a result of this consolidation, ATEC aligned all requirements under this one Program Element. Funds reprogrammed effective FY2014.

A. Mission Description and Budget Item Justification

This project provides funding for the salaries and related personnel benefits for the authorized civilian personnel positions that provide for the management functions and the technical direction of the U.S. Army Test and Evaluation Command (ATEC) mission located at Aberdeen Proving Ground, Maryland. ATEC plans, conducts and integrates developmental testing, independent operational testing, independent evaluations, assessments and experiments to provide essential information to Soldiers and acquisition decision makers supporting the American Warfighter.

This project includes staff/management functions of resource management, safety, security, environmental, strategic planning and information/technology support for command-wide databases in support of the developmental, evaluation and operational test mission with technical direction to the Army Evaluation Center (AEC), Aberdeen Proving Ground, Maryland, to the Operational Test Command (OTC), Fort Hood, Texas and to the seven Major Range and Test Facility Base (MRTFBs) and one non-MRTFB test range: Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Dugway Proving Ground (DPG), Utah; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; White Sands Missile Range (WSMR), New Mexico; Yuma Proving Ground (YPG), Arizona; Cold Regions Test Center (CRTC), Fort Greely, Alaska; and Tropic Regions Test Center (TRTC) at various locations, as well as for Redstone Test Center (RTC) Redstone Arsenal, Alabama. This is the operating budget for ATEC Headquarters, which provides technical direction for the annual execution of over 3,300 developmental tests; more than 110 operational events; and more than 1,100 documents supporting acquisition programs. ATEC has an authorized workforce of more than 9,500 workyears, and a $2.0 billion program.

This project also funds the salaries of civilian employees conducting Test and Evaluation early involvement, evaluation and test design missions and associated personnel support/sustainment costs including: temporary duty, professional training, supplies, and equipment. This project does not finance test facility operations, test instrumentation or test equipment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Civilian labor and other support required to manage and administer the Army test and evaluation mission at ATEC.	17.480	18.524	47.993

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605898A: *Management HQ - R&D*	PROJECT M65: *Army Test and Evaluation Command (ATEC)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	
Description: Civilian labor and other support required to manage and administer the Army test and evaluation mission at ATEC. ***FY 2012 Accomplishments:*** Funded authorized civilian salaries, associated expenses (supplies, equipment, travel, etc.) and other support required to manage and administer the Army test and evaluation mission at ATEC. ***FY 2013 Plans:*** Funds authorized civilian salaries, associated expenses (supplies, equipment, travel, etc.) and other support required to manage and administer the Army test and evaluation mission at ATEC. ***FY 2014 Plans:*** Will Fund authorized civilian salaries, associated expenses (supplies, equipment, travel, etc.) and other support required to manage and administer the Army test and evaluation mission at ATEC.			
Title: Early Involvement	0.000	0.000	3.747
Description: Supports the Commanding General's early involvement initiative which positions acquisition certified liaison officers at 2 Joint and 9 Army Program Executive Offices (PEO), TRADOC/ARCIC, REF, JIEDDO, and RDECOM. Assigned personnel provide continuous support to materiel and combat developers from the inception of their programs. The early involvement of LNOs supports the sections of the ATEC Mission Essential Task List (METL) that apply to ongoing contingency operations. ATEC performance continues to meet 120 day rapid equipping requirement set by the CSA. Liaison officers continue to enable ATEC to sustain rapid, flexible T&E support in the evaluation of Rapid Initiative Systems, Counter IED systems, and Urgent Material Releases. Effort results in cost savings, cost avoidance and critical design efficiencies being identified early in a system's development, thereby avoiding more expensive product improvement programs later in a system's life cycle. T&E efficiency gains continue to be realized through early identification of instrumentation, modeling and simulation tools, and other resources needed for testing, as well as making more efficient use of data from developmental testing and experiments. ***FY 2014 Plans:*** Will continue support of the Commanding General's early involvement initiative which positions acquisition certified liaison officers at 2 Joint and 9 Army Program Executive Offices (PEO), TRADOC/ARCIC, REF, JIEDDO, and RDECOM. Prior to FY14, funds were programmed in Program Element 0605716A302.			
Title: Joint Operational Testing and Evaluation	0.000	0.000	2.435
Description: This project funds the Army's direct costs of planning and conducting Multi-service Tests and Evaluations (MOTE) for which there is no Army Project Manager (PM) and Army requirements for Joint Test and Evaluation (JT&E). These are			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605898A: *Management HQ - R&D*	PROJECT M65: *Army Test and Evaluation Command (ATEC)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
required to evaluate concepts and address needs and issues that occur in joint military environments and provides information required by Congress, Office of the Secretary of Defense, the Unified Commands, and the Department of Defense components relative to joint operations. This project also funds Follow-on Test and Evaluation (FOTE), as necessary. FOTE may be required after a full production decision to assess system training and logistics, to verify correction of deficiencies identified during earlier testing and evaluation, and to ensure that initial production items meet operational effectiveness, suitability and supportability thresholds. There has been a shift of focus for items funded by this project due to continuing operations in the US Central Command (CENTCOM). Traditional system workload has dropped off and has been replaced by rapid fielding initiatives. In response to this shift, the Army Test and Evaluation Command (ATEC) has established a forward operational assessment team in theater and a rapid response cell. These groups facilitate MOTE, JT&E, and FOTE events in the rapid environment. Traditional acquisition requirements are expected to return to normal when operations in Iraq and Afghanistan wind down. ***FY 2014 Plans:*** Will provide funding to support task force requirements (TDY, Civ Pay and associated overhead expenses), Multi-Service Operational Test and Evaluation/Follow-on testing and evaluations and will continue to Fund Integrated broadcasting service spiral enterprise T&E. Prior to FY14, funds were programmed in Program Element 0605712A001.			
Accomplishments/Planned Programs Subtotals	17.480	18.524	54.175

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*					R-1 ITEM NOMENCLATURE PE 0909999A: *Financing for Cancelled Account Adjustments*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.090	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
900: *CLOSED ACCT ADJMT-M*	-	0.090	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Financing for Cancelled Account Adjustments.

A. Mission Description and Budget Item Justification

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.090	0.000	0.000	-	0.000
Total Adjustments	0.090	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	0.090	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0909999A: *Financing for Cancelled Account Adjustments*	PROJECT 900: *CLOSED ACCT ADJMT-M*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
900: *CLOSED ACCT ADJMT-M*	-	0.090	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Financing for Cancelled Account Adjustments.

A. Mission Description and Budget Item Justification

this program accomplishes closed account adjustments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Closed Account Adjustments	0.090	0.000	0.000
Articles:	0		
Description: This program is for closed account adjustments			
FY 2012 Accomplishments: This program is for closed account adjustments			
Accomplishments/Planned Programs Subtotals	0.090	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.