Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0603627A: Smoke, Obscurant and Target Defeating Sys-Adv Dev

BA 4: Advanced Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.721	4.894	2.425	0.000	2.425	4.436	0.000	0.000	0.000	Continuing	Continuing
E79: SMOKE/OBSCURANT SYSTEM	3.721	4.894	2.425	0.000	2.425	4.436	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Project supports the development and improvement of an array of obscurant agents, munitions, and devices to improve survivability of the combined armed forces, support extended range capability, complement combined weapon systems, and enhance force effectiveness and combat power. This program element supports critical management studies and analyses that are conducted on a continuing basis to ensure that engineering and manufacturing development efforts are targeted against the emerging threat. US Forces must be able to effectively neutralize and degrade energy weapon systems and electro-optical systems/smart weapons that operate in the full range of the electromagnetic spectrum. Improvements are sought across the entire multi-spectral range from visual through infrared (IR) and millimeter wavelengths (MMW) radar for incorporation into self-protection large area and launched smoke systems.

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	3.826	4.920	2.438	0.000	2.438
Current President's Budget	3.721	4.894	2.425	0.000	2.425
Total Adjustments	-0.105	-0.026	-0.013	0.000	-0.013
 Congressional General Reductions 		0.000			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.000	0.000			
• SBIR/STTR Transfer	-0.105	0.000			
 Adjustments to Budget Years 	0.000	0.000	-0.013	0.000	-0.013
• Other Adjustments 1	0.000	-0.026	0.000	0.000	0.000

Change Summary Explanation

Change Summary Explanation: Funding - FY 10: Funds realigned to higher priority Army programs.

DATE: Fobruary 2010

Exhibit K-2A, KD1&E Project Justin	ication: PD 2	O11 Affily							DAIL: reor	uary 2010	
APPROPRIATION/BUDGET ACTIV	VITY			R-1 ITEM N	NOMENCLA	TURE		PROJECT			
2040: Research, Development, Test & E	040: Research, Development, Test & Evaluation, Army						Carget	E79: <i>SMOKI</i>			
BA 4: Advanced Component Developme	ent & Prototy	pes (ACD&P))	Defeating Sys-Adv Dev							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
E79: SMOKE/OBSCURANT SYSTEM	3.721	4.894	2.425	0.000	2.425	4.436	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Exhibit D 24 DDT&F Project Justification, DR 2011 Army

Project supports the development and improvement of an array of obscurant systems to improve survivability of the combined armed forces, complement combined weapon systems, and enhance force effectiveness and combat power. This program element supports development of the Projected/Generated Obscuration Capability (PGOC), including the Screening Obscuration Devices (SOD) and the Screening Obscuration Module (SOM) initiatives. This program element supports critical management studies and analyses that are conducted on a continuing basis to ensure that engineering and manufacturing development efforts are targeted against the emerging threat. US Forces must be able to effectively neutralize and degrade energy weapon systems and electro-optical systems/smart weapons that operate in the full range of the electromagnetic spectrum. Improvements are sought across the entire multi-spectral range from visual through infrared (IR) and millimeter wavelengths (MMW) radar for incorporation into self-protection smoke systems.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.115	0.937	0.450	0.000	0.450
Engineering, Modeling and Environmental Studies for SOD and SOM systems.					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febi	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603627A: Smoke, Obscurant and T Defeating Sys-Adv Dev	Target	PROJECT E79: SMOK	KE/OBSCURANT SYSTEM		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #2		1.605	0.000	0.000	0.000	0.000
SOD Development.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #3		1.513	2.972	1.575	0.000	1.57:
SOM Development.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: Febr	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	P	E-1 ITEM NO E 0603627A: Defeating Sys-	Smoke, Obs	TURE curant and To	arget	PROJECT E79: SMOK	T KE/OBSCURANT SYSTEM			
B. Accomplishments/Planned Program (\$ in Millions)										
					FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 Base Plans: FY 2011 Base										
FY 2011 OCO Plans: FY 2011 OCO										
Program #4					0.488	0.985	0.400	0.000	0.400	
Test and Evaluation of SOD and SOM systems.										
FY 2009 Accomplishments: FY 2009										
FY 2010 Plans: FY 2010										
FY 2011 Base Plans: FY 2011 Base										
FY 2011 OCO Plans: FY 2011 OCO										
	Accompl	ishments/Pla	nned Progran	ns Subtotals	3.721	4.894	2.425	0.000	2.425	
C. Other Program Funding Summary (\$ in Millions)										
FY	Y 2011	FY 2011	FY 2011					Cost To		
Line Item FY 2009 FY 2010 • Ord. #1: RDT&E, BA5, PE 0.000 0.973 0604609A, Project 200 Smoke, 0.000 0.973	<u>Base</u> 2.910	<u>OCO</u> 0.000	<u>Total</u> 2.910	FY 2012 0.000	FY 2013 0.000		FY 2015 0.000	Complete 0	3.883	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army]	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0603627A: Smoke, Obscurant and Target	E79: <i>SMOKE</i>	OBSCURANT SYSTEM
BA 4: Advanced Component Development & Prototypes (ACD&P)	Defeating Sys-Adv Dev		

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u> Obscurant and Target Defeating Sys -	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 <u>Total</u>	FY 2012	<u>FY 2013</u>	FY 2014	FY 2015	Cost To Complete	Total Cost
Eng Dev • Ord. #2: RDT&E, BA5, PE	5.428	0.000	2.425	0.000	2.425	0.000	0.000	0.000	0.000	0	7.853
0604609A. Project 198 Smoke.											

Obscurant and Target Defeating Sys -

Eng Dev

D. Acquisition Strategy

Acquisition Strategy: Development of SOD and SOM systems to include design, construction, modeling and testing of prototypes.

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-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603627A: Smoke, Obscurant and Target

Defeating Sys-Adv Dev

PROJECT

E79: SMOKE/OBSCURANT SYSTEM

Product Development (\$ in Millions)

				FY	FY 2010		FY 2011 Base		FY 2011 OCO				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development (SOM)	С	JPM NBCCA APG, MD	0.000	2.438		1.188		0.000		1.188	Continuing	Continuing	0
Hardware Development (SOD)	С	Various OGAs Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Hardware Development (SOM) - 2	C/TBD	C/CPFF Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
	•	Subtotal	0.000	2.438		1.188		0.000		1.188			0.000

Remarks

Support (\$ in Millions)

				FY :	FY 2010		FY 2011 Base		FY 2011 OCO				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
M&S Development/ Environmental Tox Studies	С	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.437		0.150		0.000		0.150	Continuing	Continuing	0
Engineering Studies	С	Nothing entered for Activity and Location.	0.000	0.500		0.300		0.000		0.300	Continuing	Continuing	0

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0603627A: Smoke, Obscurant and Target

E79: SMOKE/OBSCURANT SYSTEM

BA 4: Advanced Component Development & Prototypes (ACD&P)

Defeating Sys-Adv Dev

Support (\$ in Millions)

				FY 2	2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Location could not be determined.											
	•	Subtotal	0.000	0.937		0.450		0.000		0.450			0.000

Remarks

Test and Evaluation (\$ in Millions)

			_										,
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOD Test & Evaluation	С	OGA Various Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
SOM Test & Evaluation	С	OGA Various Location could not be determined.	0.000	0.985		0.400		0.000		0.400	Continuing	Continuing	0
		Subtotal	0.000	0.985		0.400		0.000		0.400			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0603627A: Smoke, Obscurant and Target Defeating Sys-Adv Dev

E79: SMOKE/OBSCURANT SYSTEM

BA 4: Advanced Component Development & Prototypes (ACD&P)

Management Services (\$ in Millions)

				FY	2010	FY :	2011 ase	FY:	2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Personnel	С	JPMNBCCA APG, MD	0.000	0.534		0.387		0.000		0.387	Continuing	Continuing	0
		Subtotal	0.000	0.534		0.387		0.000		0.387			0.000

Remarks

	Total Prior Years Cost	FY 2010		2011 ase		2011 CO	FY 2011 Total	Cost To	Total Cost	Target Value of Contract
	Tears Cost	F 1 2010	Di	ise	U	U	Total	Complete	Total Cost	Contract
Project Cost Totals	0.000	4.894	2.425		0.000		2.425			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603627A: Smoke, Obscurant and Target

Defeating Sys-Adv Dev

PROJECT

E79: SMOKE/OBSCURANT SYSTEM

]	FY	200	9]	Y i	201	0	I	Y 2	201	1	ı	F Y :	201	2]	FY 2	201	3]	FY	201	4	I	Y 2	201:	5
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SOM Schedule					#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#					
Design and Fabrication					#	#																						
Technology Feasibility Test #1						#	#																					
Redesign and Hardware Fabrication							#	#	#																			
Technology Feasibility Test #2									#	#																		
Milestone B											#																	
Contract Award												#																
Engineering and Design Test																	#											
Redesign																	#	#	#									
Fabrication																			#	#								
Developmental Testing																				#	#							
Operational Assessment																						#						
Milestone C																							#					

PROJECT

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army PE 0603627A: Smoke, Obscurant and Target E79: SMOKE/OBSCURANT SYSTEM

BA 4: Advanced Component Development & Prototypes (ACD&P)

Defeating Sys-Adv Dev

Schedule Details

	St	art	En	ıd
Event	Quarter	Year	Quarter	Year
SOM Schedule	1	2010	3	2014
Design and Fabrication	1	2010	2	2010
Technology Feasibility Test #1	2	2010	3	2010
Redesign and Hardware Fabrication	3	2010	1	2011
Technology Feasibility Test #2	1	2011	2	2011
Milestone B	3	2011	3	2011
Contract Award	4	2011	4	2011
Engineering and Design Test	1	2013	1	2013
Redesign	1	2013	3	2013
Fabrication	3	2013	4	2013
Developmental Testing	4	2013	1	2014
Operational Assessment	2	2014	2	2014
Milestone C	3	2014	3	2014