Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army DATE: April 2013

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)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	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	-	4.572	2.725	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
E79: SMOKE/OBSCURANT SYSTEM	-	4.572	2.725	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

#### **Note**

Change Summary Explanation: Funding - FY 13: Funds realigned to higher priority Army programs.

# A. Mission Description and Budget Item Justification

Project supports Screening Obscuration Module (SOM) in the development and improvement of an array of obscurant agents, 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.SOM will be man portable with plug and play technology to facilitate quick mounting and dismounted. This program element supports critical management studies, operational assessments, testing, prototyping, and analyses that are conducted on a continuing basis. To ensure that Technology 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 using generated and launched smoke systems.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	4.572	2.725	4.285	-	4.285
Current President's Budget	4.572	2.725	0.000	-	0.000
Total Adjustments	0.000	0.000	-4.285	-	-4.285
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
<ul> <li>Adjustments to Budget Years</li> </ul>	-	-	-4.285	-	-4.285

UNCLASSIFIED Page 1 of 8

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

Exhibit R-2A, RDT&E Project	Justification	: PB 2014 <i>A</i>	Army							DATE: April 2013					
APPROPRIATION/BUDGET AC 2040: Research, Development, BA 4: Advanced Component De	Test & Evalua				PE 060362	NOMENCL 27A: Smoke eating Sys-	e, Obscuran								
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost			
E79: SMOKE/OBSCURANT SYSTEM	-	4.572	2.725	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing			
Quantity of RDT&E Articles															

<sup>\*</sup>FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

#### **Note**

Not applicable for this item.

# A. Mission Description and Budget Item Justification

Project supports Screening Obscuration Module (SOM) in the development and improvement of an array of obscurant agents, 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.SOM will be man portable with plug and play technology to facilitate quick mounting and dismounted. This program element supports critical management studies, operational assessments, testing, prototyping, and analyses that are conducted on a continuing basis. To ensure that Technology 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 using generated and launched smoke systems.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: SOM Engineering and Modeling	0.374	0.000	0.000
Articles:	0		
Description: Engineering and Modeling for SOM systems.			
FY 2012 Accomplishments:			
Engineering and Modeling for SOM systems.			
Title: SOM Development.	1.485	1.303	0.000
Articles:	0	0	
Description: SOM Development.			
FY 2012 Accomplishments:			

UNCLASSIFIED
Page 2 of 8

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

Exhibit R-2A, RDT&E Project Justifi	cation: PB	2014 Army			<u> </u>				DATE:	April 2013				
<b>APPROPRIATION/BUDGET ACTIVIT</b> 2040: <i>Research, Development, Test</i> & BA 4: <i>Advanced Component Developr</i>	Evaluation,		D&P)	PE 06		ICLATURE noke, Obscur Sys-Adv Dev		PROJECT E79: SMOKE/OBSCURANT SYSTEM						
B. Accomplishments/Planned Progr	ams (\$ in N	/lillions, Art	ticle Quanti	ties in Each	)				FY 2012	FY 2013	FY 2014			
SOM Development.														
FY 2013 Plans: SOM Development.														
Title: Test and Evaluation of SOM sys	tems.						A	rticles:	1.241 0	0.450 0	0.000			
<b>Description:</b> Test and Evaluation of S	OM system	IS.												
FY 2012 Accomplishments: Test and Evaluation of SOM systems.														
FY 2013 Plans: Test and Evaluation of SOM systems.														
Title: SOM Project Management Pers	onnel							4: - !	1.472	0.972	0.00			
Description: Project Management							A	rticles:	0	U				
FY 2012 Accomplishments: Project Management														
FY 2013 Plans: Project Management														
				Accor	nplishment	s/Planned P	rograms Su	btotals	4.572	2.725	0.000			
C. Other Program Funding Summar	y (\$ in Milli	ons)												
	•	<del></del>	FY 2014	FY 2014	FY 2014					Cost To				
<u>Line Item</u> • SMOKE/OBSCURANT SYSTEM: Project 200 Smoke, Obscurant and Target Defeating Sys - Eng Dev	FY 2012	FY 2013	<u>Base</u>	<u>000</u>	<u>Total</u>	FY 2015	FY 2016	FY 201	<u>7 FY 2018</u>	0.000				
• Target Defeating System: Project 198 Smoke, Obscurant and Target Defeating Sys - Eng Dev										0.000	0.00			

PE 0603627A: Smoke, Obscurant and Target Defeating Sys-Adv Dev Army UNCLASSIFIED
Page 3 of 8

R-1 Line #57

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

AFFRORMATION BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

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

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

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

<u>FY 2014</u> <u>FY 2014</u> <u>FY 2014</u> <u>Cost To</u>

Line Item FY 2012 FY 2013 Base OCO Total FY 2015 FY 2016 FY 2017 FY 2018 Complete Total Cost

Remarks

# D. Acquisition Strategy

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

SOM acquisition strategy is to develop a small smoke generator that degrades the visual through near infrared portion of the Electro-Magnetic Spectrum. SOM program will focus on replacing current smoke pots to provide the Joint Land Forces with a medium area screening obscuration device. The initial increment, Increment 1, will focus on developing a SOM system capable of obscuring the Visual through Near IR wavelengths of the electromagnetic spectrum. Future SOM Increments 2 and 3 will incorporate bi-spectral and multi-spectral effects. The SOM has the capability to quickly produce (less than 15 seconds) medium duration (20 minutes), medium area (11 meters wide x 20 meters length x 5.25 meters height) screening obscuration effects, screening an area equivalent to three times the size of a large combat vehicle. The individual Soldier or team will employ the SOM devices on open and complex terrain; excluding enclosed areas. SOM will be deployed to accomplish the following mission types: avoid observation, defense of a battle position, and assault position.

### **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.

R-1 Line #57

DATE: April 2013 Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army **R-1 ITEM NOMENCLATURE PROJECT** APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army PE 0603627A: Smoke. Obscurant and E79: SMOKE/OBSCURANT SYSTEM BA 4: Advanced Component Development & Prototypes (ACD&P) Target Defeating Sys-Adv Dev FY 2014 FY 2014 FY 2014 Management Services (\$ in Millions) FY 2012 FY 2013 Base oco Total Contract Target Method Performing All Prior Award Award Award Award Cost To Total Value of **Cost Category Item** & Type **Activity & Location** Years Cost Date Date Cost Date Cost Date Complete Cost Contract Cost Cost **Project Management** MIPR JPM:NBCCA 3.538 1.472 Dec 2011 0.972 Continuing Continuing Continuing Personnel Subtotal 3.538 1.472 0.972 0.000 0.000 0.000 FY 2014 FY 2014 FY 2014 **Product Development (\$ in Millions)** FY 2012 FY 2013 Base oco Total Contract Target Method Performing All Prior Award Award Award Award Cost To Total Value of **Cost Category Item** & Type Activity & Location Years Cost Date Cost Date Cost Date Cost Date Cost Complete Cost Contract SOM Hardware JPM NBCCA, APG C/CPFF 18.870 1.485 Dec 2011 1.303 Continuing Continuing Continuing Development MD:Edgewood, MD Subtotal 18.870 1.485 1.303 0.000 0.000 0.000 FY 2014 FY 2014 FY 2014 Support (\$ in Millions) FY 2012 FY 2013 Base oco Total Contract Target Method Performing All Prior Award Award Award Award Cost To Total Value of **Activity & Location Cost Category Item** & Type Years Cost Date Cost Date Cost Date Cost Date Cost Complete Cost Contract Edgewood Engineering Modeling and Chemical Biological **MIPR** 1.964 0.374 Dec 2011 - Continuing Continuing Continuing Studies SOM Center:Edgewood, Md Subtotal 1 964 0.374 0.000 0.000 0.000 0.000 FY 2014 FY 2014 FY 2014 Test and Evaluation (\$ in Millions) FY 2012 FY 2013 Base oco Total Contract Target Method Performing All Prior Award Award **Cost To** Total Value of Award Award **Cost Category Item** Activity & Location Years Cost Date Cost Date Cost Date Cost Date Cost Complete Cost Contract & Type **OGA** SOM Test & Evaluation **MIPR** 0.000 1 241 Dec 2011 0.450 Continuing Continuing Continuing Various:Various Subtotal 0.000 1.241 0.450 0.000 0.000 0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	2014 Army		,			DATE	: April 20	13			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, BA 4: Advanced Component Development & Proto		D& <i>P</i> )		<b>ENCLATURE</b> Smoke, Obscurant g Sys-Adv Dev	PROJECT E79: SMOKE/OBSCURANT SYSTEM						
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2		Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	24.372	4.572	2.725	0.000	0.000	0.000					

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army

DATE: April 2013

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

E79: SMOKE/OBSCURANT SYSTEM

**PROJECT** 

		FY 2012		FY 2013			FY 2014			FY 2015			FY 2016			6	FY 2017				FY 2018							
	1	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 Developmental Testing #1														,					,				,					
SOM Operational Assessment #1																												_
SOM Corrective Actions/Redesign																												
SOM IPR																												

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

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

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

Target Defeating Sys-Adv Dev

# Schedule Details

	St	art	End			
Events	Quarter	Year	Quarter	Year		
SOM Developmental Testing #1	2	2012	3	2012		
SOM Operational Assessment #1	4	2012	4	2012		
SOM Corrective Actions/Redesign	1	2013	4	2013		
SOM IPR	4	2013	4	2013		