Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army											Date: May 2017	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603627A *I Smoke, Obscurant and Target Defeating Sys-Adv Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
Total Program Element	-	12.894	44.264	7.135	-	7.135	6.166	0.000	0.000	0.000	0.000	70.459
E79: *SMOKE/OBSCURANT SYSTEM*	-	12.894	44.264	7.135	-	7.135	6.166	0.000	0.000	0.000	0.000	70.459

Note

Nuclear Biological Chemical Radiological Vehicle Sensor Suite (NBCRVSS) funding moves to a separate Program Element starting in FY18. It will be reflected under PE 655038, Project Code EQ7.

A. Mission Description and Budget Item Justification

Screening Obscuration Module (SOM): 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 to improve platform survivability and soldier protection levels of maneuver forces on the battlefield. 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 sustained generated obscuration technology. SOM will be man portable and modular to facilitate quick mounting on manned/unmanned platforms and dismounted operations.

NBCRV: This program upgrades the Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite (NBCRVSS). The NBCRVSS is the Mission Equipment Package for the Stryker Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) and consists of chemical point detectors, a standoff chemical vapor detector, a biological point detector, a Chemical Vapor Sampling System, and a Sensor Processing Group. The NBCRVSS provides the Stryker NBCRV the ability to detect, identify, collect, report, and mark Nuclear Biological Chemical (NBC) Hazards. Starting in FY16, a Chemical Surface Detector will be developed to replace the Dual Wheel Sampling System to increase maneuverability of the Stryker NBCRV and increase reliability. Starting in FY17, a Chemical Mass Spectrometer will be developed to replace the Chemical Biological Mass Spectrometer Block II to increase reliability, sensitivity, and the number of chemicals detected. Also in FY17 an update to the Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) will be developed to increase range and probability of detection by reducing its field of view. FY18 funds and program details are reflected under PE 655038, Project Code EQ7.

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army					Date: May 2017
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*		**R-1 Program Element (Number/Name)** PE 0603627A *I Smoke, Obscurant and Target Defeating Sys-Adv Dev*			
B. Program Change Summary ($ in Millions)	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**
Previous President's Budget	13.426	28.244	7.137	-	7.137
Current President's Budget	12.894	44.264	7.135	-	7.135
Total Adjustments	-0.532	16.020	-0.002	-	-0.002
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.532	-			
• Adjustments to Budget Years	0.000	16.020	-0.002	-	-0.002

Change Summary Explanation

FY 2017 increase ($16.020M) is attributable to various program efforts, primarily in NBCRV: Sensor Suite Upgrade Development and SOM: Product Development.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army			Date: May 2017
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	Project (Number/Name) E79 / *SMOKE/OBSCURANT SYSTEM*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
E79: *SMOKE/OBSCURANT SYSTEM*	-	12.894	44.264	7.135	-	7.135	6.166	0.000	0.000	0.000	0.000	70.459
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Screening Obscuration Module (SOM): 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 to improve platform survivability and soldier protection levels of maneuver forces on the battlefield. 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 sustained generated obscuration technology. SOM will be man portable and modular to facilitate quick mounting on manned/unmanned platforms and dismounted operations.

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: SOM: Product Development	1.210	21.120	4.400
Description: Provide SOM Development ***FY 2016 Accomplishments:*** SOM: Initiated design and development of the SOM system. ***FY 2017 Plans:*** SOM: Continue design and development of the SOM system. ***FY 2018 Plans:*** SOM: Continue design and development of the SOM system.			
Title: SOM: Test, Evaluation & OGA's	0.251	0.800	1.612

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	**Project (Number/Name)** E79 / *SMOKE/OBSCURANT SYSTEM*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Description: Provide Test and Evaluation of SOM systems ***FY 2016 Accomplishments:*** SOM: Initiated test and evaluation planning and fund other government agencies (OGA's) ***FY 2017 Plans:*** SOM: Continue test and evaluation planning. ***FY 2018 Plans:*** SOM: Continue test and evaluation planning and fund other government agencies (OGA's)			
Title: SOM: Project Management ***Description:*** Provide Project Management ***FY 2016 Accomplishments:*** SOM: Initiated Government program management, systems engineering, and Integrated Product Team (IPT) support. ***FY 2017 Plans:*** SOM: Continue Government program management, systems engineering, and Integrated Product Team (IPT) support. ***FY 2018 Plans:*** SOM: Continue Government program management, systems engineering, and Integrated Product Team (IPT) support.	1.125	1.125	1.123
Title: NBCRV: Sensor Suite Upgrade Development ***Description:*** Provide Sensor suite upgrade development ***FY 2016 Accomplishments:*** NBCRV: Initiated task orders for sensor suite development. ***FY 2017 Plans:*** NBCRV: Continue sensor suite upgrade development	7.861	17.019	-
Title: NBCRV Integration Support ***Description:*** Provide ILS and Integration support to the sensor suite upgrades ***FY 2017 Plans:***	-	0.700	-

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	**Project (Number/Name)** E79 / *SMOKE/OBSCURANT SYSTEM*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
NBCRV: Continue ILS and Integration support to the sensor suite upgrades			
Title: NBCRV: Test & Evaluation ***Description:*** Provide NBCRV testing of prototypes ***FY 2016 Accomplishments:*** NBCRV: Initiated test and evaluation planning and support for sensor suite upgrade prototypes. ***FY 2017 Plans:*** NBCRV: Continue test and evaluation planning and support for sensor suite upgrade prototypes	0.571	1.500	-
Title: NBCRV: Project Management ***Description:*** Provide NBCRV Project Management Labor ***FY 2016 Accomplishments:*** NBCRV: Initiated government program management, systems engineering, and Integrated Product Team (IPT) support. ***FY 2017 Plans:*** NBCRV: Continue government program management, systems engineering, and Integrated Product Team (IPT) support.	1.876	1.800	-
Title: CRESS: Engineering Studies ***Description:*** Chemical Reconnaissance and Explosives Screening Set (CRESS) ***FY 2017 Plans:*** CRESS: Initiate engineering studies	-	0.200	-
Accomplishments/Planned Programs Subtotals	12.894	44.264	7.135

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Acquisition Strategy:

Screening Obscuration Module (SOM): The SOM acquisition strategy is a single-step System Integration and Development (SID) phase leading to a Milestone C production decision. A Full and Open Cost Plus Incentive Fee competitive contract will be used to develop the SOM during the SID phase. Fixed Price Incentive

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603627A / *Smoke, Obscurant and Target Defeating Sys-Adv Dev*	**Project (Number/Name)** E79 / *SMOKE/OBSCURANT SYSTEM*

(Successive Targets) options for production will be included in the contract. The acquisition strategy includes system development and demonstration, full system integration, design for producibility and demonstration of interoperability, safety, military utility and reliability.

Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite (NBCRVSS) Upgrade is a single-step in the evolutionary acquisition strategy for the Stryker Nuclear Biological Chemical Reconnaissance Vehicle. The contract approach of the Chemical Surface Detector (CSD) will be a Full and Open Cost Plus Fixed Fee competitive prototyping contract. The contract approach of the Chemical Mass Spectrometer (CMS) will be a Full and Open Cost Plus Fixed Fee competitive prototyping contract. The contract approach for the update of the Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) will be a Sole Source Cost Plus Fixed Fee Indefinite Delivery Indefinite Quantity with Firm Fixed Price production task orders.

E. Performance Metrics

N/A