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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605038A I NBC Reconnaissance Veh (NBCRV) Sensor Suite							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	16.125	17.154	-	17.154	5.985	4.942	0.931	0.000	0.000	45.137
EQ7: NBC Reconnaissance Vehicle (NBCRV) Sensor Suite	-	0.000	16.125	17.154	-	17.154	5.985	4.942	0.931	0.000	0.000	45.137

Note

FY2016-17 Funding is reflected under PE0603627, Project Code E79

A. Mission Description and Budget Item Justification

This program provides a Sensor Suite Upgrade (SSU) for the Stryker Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). The NBCRV Sensor Suite is the Mission Equipment Package for the Stryker NBCRV and consists of chemical point detectors, a standoff chemical vapor detector, a biological point detector, a chemical vapor sampling system, radiological detectors, and the Sensor Processing Group. NBCRV SS provides the Stryker NBCRV the ability to detect, identify, collect, report, and mark NBC Hazards. The Stryker NBCRV SSU will improve chemical, biological and radiological and nuclear detection and identification capabilities, and reduce sustainment costs over the current system. A Chemical Surface Detector (CSD) will be developed to replace the Dual Wheel Sampling System to increase maneuver speed when conducting NBC missions and increase reliability. In FY18 the CSD program will deliver final prototypes and complete chemical, environmental and on-the-move testing.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	16.125	17.174	-	17.174
Current President's Budget	0.000	16.125	17.154	-	17.154
Total Adjustments	0.000	0.000	-0.020	-	-0.020
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.020	-	-0.020

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605038A / NBC Reconnaissance Veh (NBCRV) Sensor Suite				Project (Number/Name) EQ7 / NBC Reconnaissance Vehicle (NBCRV) Sensor Suite			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EQ7: NBC Reconnaissance Vehicle (NBCRV) Sensor Suite	-	0.000	16.125	17.154	-	17.154	5.985	4.942	0.931	0.000	0.000	45.137
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY2016 and FY2017 Funding is reflected under PE0603627A, Project Code E79

A. Mission Description and Budget Item Justification

This program provides a Sensor Suite Upgrade (SSU) for the Stryker Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). The NBCRV Sensor Suite is the Mission Equipment Package for the Stryker NBCRV and consists of chemical point detectors, a standoff chemical vapor detector, a biological point detector, a chemical vapor sampling system, radiological detectors, and the Sensor Processing Group. NBCRV SS provides the Stryker NBCRV the ability to detect, identify, collect, report, and mark NBC Hazards. The Stryker NBCRV SSU will improve chemical, biological and radiological and nuclear detection and identification capabilities, and reduce sustainment costs over the current system. A Chemical Surface Detector (CSD) will be developed to replace the Dual Wheel Sampling System to increase maneuver speed when conducting NBC missions and increase reliability. In FY18 the CSD program will deliver final prototypes and complete chemical, environmental and on-the-move testing.

Note: FY16-FY17 funded under 0603627A E79, Smoke, Obscurant and Target Defeating Sys-Adv Dev

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

	FY 2017	FY 2018	FY 2019
Title: Product Development TMRR	-	9.975	3.803
FY 2018 Plans: Continue CSD TMRR sensor suite upgrade development.			
FY 2019 Plans: Continue CSD TMRR sensor suite upgrade development, and initiate CSD EMD phase.			
FY 2018 to FY 2019 Increase/Decrease Statement: Increase contracting funding in FY18 accelerated the completion and reduced the funding requirements of TMRR in FY19.			
Title: Product Development EMD	-	-	6.610
FY 2019 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2017	FY 2018	FY 2019
Initiate a Sensor Integration EMD phase					
FY 2018 to FY 2019 Increase/Decrease Statement: Funding reduced due to contracts moving from three (3) TMRR contracts to the start of Sensor Integration EMD efforts.					
Title: Test and Evaluation			-	4.100	4.500
FY 2018 Plans: Continue test and evaluation planning and support for sensor suite upgrade prototypes.					
FY 2019 Plans: Continue test and evaluation planning and support for sensor suite upgrade prototypes.					
FY 2018 to FY 2019 Increase/Decrease Statement: Testing will ramp up from FY18 to FY19.					
Title: Integrated Logistics Support			-	0.250	0.250
FY 2018 Plans: Continue Integrated Logistics Support (ILS) and integration support to the sensor suite upgrades.					
FY 2019 Plans: Continue Integrated Logistics Support (ILS) and integration support to the sensor suite upgrades.					
Title: Project Management Personnel			-	1.800	1.991
FY 2018 Plans: Continue Government program management, system engineering, and Integrated Product Team (IPT) support.					
FY 2019 Plans: Continue Government program management, system engineering, and Integrated Product Team (IPT) support.					
FY 2018 to FY 2019 Increase/Decrease Statement: Increase to account for inflation and potential salary/team shifts.					
Accomplishments/Planned Programs Subtotals			-	16.125	17.154
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					

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<p><u>D. Acquisition Strategy</u></p> <p>Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite (NBCRVSS) Upgrade is an upgrade 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. After the TMRR phase, the contract approach for CSD will be a Full and Open Cost Plus Incentive Fee Engineering Manufacturing Development contract with Fixed Price Incentive Fee options for Low Rate Initial Production and Full Rate Production.</p> <p><u>E. Performance Metrics</u></p> <p>N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0605038A / NBC Reconnaissance Veh (NBCRV) Sensor Suite						Project (Number/Name) EQ7 / NBC Reconnaissance Vehicle (NBCRV) Sensor Suite			
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Personnel	MIPR	JPM NBC CA : Edgewood, MD	-	-		1.800	Nov 2017	1.991	Nov 2018	-		1.991	Continuing	Continuing	Continuing
Subtotal			-	-		1.800		1.991		-		1.991	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development Sensor Integration EMD Phase	C/CPIF	TBD : TBD	-	-		6.666	Jun 2018	6.610	Jun 2019	-		6.610	Continuing	Continuing	Continuing
Product Development (NGCD 3M)	C/CPIF	TBD : TBD	-	-		3.309		-		-		-	0.000	3.309	-
Product Development (CSD) FLIR (TMRR)	Option/ CPIF	FLIR : Elkridge, MD	-	-		-		0.743	Nov 2018	-		0.743	0.000	0.743	-
Product Development (CSD) L3 (TMRR)	Option/ CPIF	L3 : Sonoma, CA	-	-		-		1.666	Nov 2018	-		1.666	0.000	1.666	-
Product Development (CSD) UTC (TMRR)	Option/ CPIF	UTC Areospace : Pomona, CA	-	-		-		1.394	Nov 2018	-		1.394	0.000	1.394	-
Subtotal			-	-		9.975		10.413		-		10.413	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support (ILS)	MIPR	ECBC : Edgewood, MD	-	-		0.250	Nov 2017	0.250	Nov 2018	-		0.250	Continuing	Continuing	Continuing
Subtotal			-	-		0.250		0.250		-		0.250	Continuing	Continuing	N/A

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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	ECBC : Edgewood, MD	-	-		4.100	Oct 2017	4.500	Oct 2018	-		4.500	Continuing	Continuing	Continuing
Subtotal			-	-		4.100		4.500		-		4.500	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		16.125		17.154		-		17.154	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
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Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
Design and Fabrication (Continued from PE0603627 E79)																												
Chemical Testing																												
Environmental On-the-move Testing																												
Milestone B																												
Design and Fabrication																												
Production Qualification Test (PQT)																												
Platform PQT																												
Milestone C																												
Low Rate Initial Production (LRIP)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605038A / NBC Reconnaissance Veh (NBCRV) Sensor Suite	Project (Number/Name) EQ7 / NBC Reconnaissance Vehicle (NBCRV) Sensor Suite	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design and Fabrication (Continued from PE0603627 E79)	2	2017	3	2019
Chemical Testing	1	2018	3	2019
Environmental On-the-move Testing	4	2018	3	2019
Milestone B	3	2019	3	2019
Design and Fabrication	3	2019	1	2021
Production Qualification Test (PQT)	2	2021	1	2022
Platform PQT	2	2022	1	2023
Milestone C	4	2023	4	2023
Low Rate Initial Production (LRIP)	4	2023	4	2024