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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0301112F I Nuclear Planning and Execution System (NPES)							
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	0.000	0.000	4.060	4.371	0.000	4.371	17.043	26.573	30.719	31.348	6.060	120.174
673768: Nuclear Planning and Execution System (NPES)	0.000	0.000	4.060	4.371	0.000	4.371	17.043	26.573	30.719	31.348	6.060	120.174
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Program MDAP/MAIS Code: 523

A. Mission Description and Budget Item Justification

In FY17 Nuclear Planning and Execution System (NPES) PE 0301112F was a new start.

United States Strategic Command (USSTRATCOM) conducts global operations in partnership with other combatant commands, services and U.S. government agencies to deter and detect strategic attacks against the United States. USSTRATCOM is responsible for command of U.S. nuclear capabilities, space operations, global surveillance and reconnaissance, intelligence, communications, computers, global missile defense and combatting weapons of mass destruction. To enable completion of these missions, it is recapitalizing the Nuclear Planning and Execution System (NPES). NPES is a Chairman, Joint Chiefs of Staff system for nuclear operations and fulfillment of Nuclear Command and Control (NC2) responsibilities. NPES supports national strategic deterrence by providing a host of NC2 execution activities as well as contingency and crisis action planning capabilities to selected joint and combatant command staffs. NPES is operated by USSTRATCOM and other specified users performing missions to deter and dissuade threats, and, when directed, defeat adversaries.

The NPES system has evolved from several single-purpose command and control systems over the past 30 years and has reached a point where it requires recapitalization to meet national and strategic objectives and to comply with future concepts of operation. Additionally, recapitalization is needed to improve cybersecurity, system effectiveness, and supportability. Recapitalization will also seek to lower the total cost of ownership and sustainment. The modernization program will use proven/mature software engineering, technologies, and design tenets to provide a modern, secure, interoperable and reliable Nuclear Command and Control(NC2) software capability.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
Previous President's Budget		0.000	4.060	4.358	0.000	4.358	
Current President's Budget		0.000	4.060	4.371	0.000	4.371	
Total Adjustments		0.000	0.000	0.013	0.000	0.013	
• Congressional General Reductions		0.000	0.000				
• Congressional Directed Reductions		0.000	0.000				
• Congressional Rescissions		0.000	0.000				
• Congressional Adds		0.000	0.000				
• Congressional Directed Transfers		0.000	0.000				
• Reprogrammings		0.000	0.000				
• SBIR/STTR Transfer		0.000	0.000				
• Other Adjustments		0.000	0.000	0.013	0.000	0.013	
C. Accomplishments/Planned Programs (\$ in Millions)					FY 2016	FY 2017	FY 2018
Title: Nuclear Planning and Execution System (NPES) Modernization					0.000	4.060	4.371
Description: The NPES program will use proven and mature software engineering, technologies, and design tenets to provide a modern, secure, interoperable and reliable Nuclear Command and Control (NC2) capability for USSTRATCOM and other users as appropriate. It will update and/or replace existing system software and improve reliability and sustainability. It will also seek to reduce total ownership cost.							
FY 2016 Accomplishments: N/A							
FY 2017 Plans: Risk Reduction Activities will outline the software architecture for development activities and identify the software build and evaluation approach for NPES modernization. - Refine System / Subsystem Design Description (SSDD) draft - Conduct software reuse analysis - Evaluate user interface and data integration prototypes - Generate program milestone decision products and artifacts - Complete Preliminary Design Review preparation - Support RFP development - Conduct technical studies and analyses in support of software development							
FY 2018 Plans: Risk reduction activities will evaluate interface prototypes and source selection.							

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Evaluate graphical user interface prototype - Generate program milestone decision products and artifacts - Support source selection process - Complete RFP development - Conduct technical studies and analyses in support of software development 												
Accomplishments/Planned Programs Subtotals										0.000	4.060	4.371
D. Other Program Funding Summary (\$ in Millions)												
Line Item	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	
• OPAF: BA03: Line Item #833140: <i>Strategic Command and Control</i>	0.000	0.000	2.330	0.000	2.330	2.294	2.334	2.376	2.419	Continuing	Continuing	
Remarks												
In FY18, PE 0303255F, Service Support to STRATCOM-C4, Project 833140, partial funding was transferred to PE 0301112F, Nuclear Planning and Execution (NPES), for better transparency.												
E. Acquisition Strategy												
NPES will develop, test, and field a renewed Nuclear Command and Control (NC2) capability for combatant commanders using an evolutionary (Spirals) acquisition approach with development contracts that are negotiated and awarded in a competitive environment. Additionally, select government agencies will be used to conduct relevant analyses and provide other required support.												
The Air Force Life Cycle Management Center at Hanscom AFB, (AFLCMC/HB) and the 55th CONS at Offutt AFB will be the contracting authorities for NPES and provide necessary program management, contracts, legal, and financial management support.												
F. Performance Metrics												
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.												

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force												Date: May 2017			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0301112F / <i>Nuclear Planning and Execution System (NPES)</i>						Project (Number/Name) 673768 / <i>Nuclear Planning and Execution System (NPES)</i>			
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Pre Milestone B Risk Reduction	TBD	Various : Offutt AFB, NE	0.000	0.000		1.502	Jun 2017	1.361	Jan 2018	0.000		1.361	0.000	2.863	-
Primary Development	C/TBD	Various : Offutt AFB, NE	0.000	0.000		0.000		0.000		0.000		0.000	94.706	94.706	-
Development Suites & Infrastructure	TBD	Various : Offutt AFB, NE	0.000	0.000		0.000		0.687	Feb 2018	0.000		0.687	3.908	4.595	-
Subtotal			0.000	0.000		1.502		2.048		0.000		2.048	98.614	102.164	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Technical Engineering Services	Various	Various : Offutt AFB, NE	0.000	0.000		1.285	Jan 2017	1.038	Jan 2018	0.000		1.038	5.067	7.390	-
Subtotal			0.000	0.000		1.285		1.038		0.000		1.038	5.067	7.390	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Certification and Accreditation	TBD	Various : Offutt AFB, NE	0.000	0.000		0.000		0.000		0.000		0.000	1.170	1.170	-
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	1.170	1.170	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Program Management Administration	Various	Various : Offutt AFB, NE	0.000	0.000		1.273	Jan 2017	1.285	Jan 2018	0.000		1.285	6.791	9.349	-
Subtotal			0.000	0.000		1.273		1.285		0.000		1.285	6.791	9.349	-

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		Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		0.000	0.000		4.060		4.371		0.000		4.371	111.642	120.073	-
Remarks														

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force										Date: May 2017	
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0301112F / Nuclear Planning and Execution System (NPES)				Project (Number/Name) 673768 / Nuclear Planning and Execution System (NPES)			

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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
Pre Milestone B Risk Reduction Analyses																												
Development RFP Release Decision Point																												
Milestone B Decision (Dec 2019)																												
Spiral 1 Development and Test																												
Spiral 2 Development and Test																												
Spiral 3 Development and Test																												
Spiral 4 Development and Test																												
Post IOC Enhancements																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force			Date: May 2017
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Pre Milestone B Risk Reduction Analyses	1	2017	4	2018
Development RFP Release Decision Point	1	2018	1	2018
Milestone B Decision (Dec 2019)	2	2017	2	2017
Spiral 1 Development and Test	2	2019	4	2020
Spiral 2 Development and Test	4	2020	2	2021
Spiral 3 Development and Test	2	2021	1	2022
Spiral 4 Development and Test	4	2021	4	2022
Post IOC Enhancements	2	2022	4	2022