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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Office of Secretary Of Defense **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
0400: Research, Development, Test & Evaluation, Defense-Wide BA 5: Development & Demonstration (SDD)				PE 0604161D8Z: Nuclear and Conventional Physical Security/Countering Nuclear Threats							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	7.786	7.009	6.817	-	6.817	6.724	6.410	6.611	6.732	Continuing	Continuing
P163: Nuclear and Conventional Physical Security/Countering Nuclear Threats	7.786	7.009	6.817	-	6.817	6.724	6.410	6.611	6.732	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) addresses the need to defend and deter against weapons of mass destruction (WMD) threats and to safeguard personnel; prevent unauthorized access to equipment, installations, material, and documents; and to safeguard the foregoing against espionage, sabotage, damage, and theft. This program oversees advanced engineering development throughout DoD for an integrated and systemic RDT&E approach for countering nuclear threats and nuclear and conventional physical security equipment (PSE) technology and systems. The funding has been centralized in this Defense-wide PE since the early 1990s and represents a substantial portion of all DoD PSE RDT&E funding. Priorities for this PE RDT&E efforts are driven by inputs from Quadrennial Defense Review guidance, Combatant Command and Service requirements, analysis reports such as "Protecting the Force: Lessons from Fort Hood, January 2010, the Integrated Unit, Base, and Installation Protection Cost Benefits Analysis, Multi-national Work Plans established through the Nuclear Security Summit process, and DoD Directive 5210.41, Security Policy for Protecting Nuclear Weapons-directed requirements and associated security deviation reports.

Under this integrated approach, funds are used to provide PSE system development and demonstration for the Department in seven capability areas: (1) Detection and Assessment; (2) Access Controls; (3) Installation and Transport Security; (4) Storage and Safeguards; (5) Prevention; (6) Decision Support Systems; and (7) Analytical Support. The projects under the PE become technology insertions into existing programs or advance to being a certified Commercial/Government off-the-shelf product. The PE initiatives are coordinated by the Security Policy Verification Committee and the Physical Security Equipment Action Group. These groups work together to avoid duplication of effort and when applicable ensure systems integration and promote interoperability and sustainability.

This PE can fund travel to support the requirements of this program.

This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied), development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604161D8Z: <i>Nuclear and Conventional Physical Security/Countering Nuclear Threats</i>
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B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	7.973	7.220	7.232	-	7.232
Current President's Budget	7.786	7.009	6.817	-	6.817
Total Adjustments	-0.187	-0.211	-0.415	-	-0.415
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-0.163			
• Economic adjustments	-0.187	-0.048	-0.415	-	-0.415

Change Summary Explanation

Defense Efficiency – Report, Studies, Boards and Commissions. As part of the Department of Defense reform agenda, reflects a reduction in the number and cost of reports, studies, DoD Boards and DoD Commissions below the aggregate level reported in previous budget submission.

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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
0400: Research, Development, Test & Evaluation, Defense-Wide BA 5: Development & Demonstration (SDD)				PE 0604161D8Z: Nuclear and Conventional Physical Security/Countering Nuclear Threats				P163: Nuclear and Conventional Physical Security/Countering Nuclear Threats			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
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Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

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

	FY 2011	FY 2012	FY 2013
Title: Detection and Assessment	2.092	1.169	1.492

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<p>Description: The ability to detect an adversary and assess their intentions is a basic physical security tenant. This capability area will design equipment to identify and warn of unauthorized access to a specified area or installation as well as equipment related to the notification and identification of explosive threats or hazards.</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> • Installed full suite of Diebold Predator Elite with Correlation of Radars for Identify Friend or Foe project. • Used comparative infrared and Raman tests to determine which explosive detection systems performed the best. • Investigated signals generated by target and confusant materials in order to develop protocols to reduce false alarms in explosive detection equipment. <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> • Design Long-range imaging sensor to operate with a sonar system to identify divers at significant ranges in the underwater environment. • Design optimal active sonar functionality in ultra-shallow water environments. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> • Transition Long-range imaging sensor to operate with a sonar system to identify divers at significant ranges in the underwater environment to low-rate production. • Transition optimal active sonar functionality in ultra-shallow water environments to low-rate production. 				
<p>Title: Access Controls</p> <p>Description: Controlling access to safeguard personnel and their families and to prevent unauthorized access to critical infrastructure and materials is paramount. This capability area will focus on programs and processes related to the validity and verification of individuals entering or already within, a facility.</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> • Completed Defense Installation Access Control Demonstration II. • Conducted independent review of Continuous Vetting for Defense Installation Access Control project. • Completed Biometrics Feasibility Study. • Developed plan for Enterprises Services Architecture for Defense Installation Access Control project. • Completed the Behavioral Analysis Study that addressed the DoD's Independent Review 's report, Protecting the Force: Lessons Learned from Ft Hood. <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> • Conduct Behavioral Analysis table top exercise. 		0.407	0.386	1.551

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> Continue Defense Installation Access Control spiral demonstrations in operational environments. FY 2013 Plans: <ul style="list-style-type: none"> Transition Defense Installation Access Control project from system development and demonstration to procurement activities. 					
Title: Installation and Transport Security Description: Robust installation and transport security are vital to preventing a weapon of mass destruction attack or the unauthorized access to key assets such as nuclear weapons and special nuclear material. This capability area will focus on programs and equipment intended to improve the physical security profile of fixed sites and facilities, as well as critical items while in-transit. FY 2011 Accomplishments: <ul style="list-style-type: none"> Identified detection options and a range of flexible response capabilities, to include the full spectrum of non-lethal to lethal tactical weapon systems, to protect personnel and assets against the terrorist threat in a waterside security environment. Evaluated persistent surveillance, intrusion detection, explosive detection, entry denial, acoustic hailing, autonomous unmanned systems, chemical, biological, radiological, nuclear, and high-explosive and associated functions. FY 2012 Plans: <ul style="list-style-type: none"> Evaluate detection options and response capabilities, to include the full spectrum of non-lethal to lethal tactical weapon systems, to protect personnel and assets against the terrorist threat in a waterside security environment. Develop persistent surveillance, intrusion detection, explosive detection, entry denial, acoustic hailing, autonomous unmanned systems, chemical, biological, radiological, nuclear, and high-explosive and associated functions. FY 2013 Plans: <ul style="list-style-type: none"> Proof of concept for detection options and response capabilities previously identified, to include the full spectrum of non-lethal to lethal tactical weapon systems, to protect personnel and assets against the terrorist threat in a waterside security environment. Proof of concept for persistent surveillance, intrusion detection, explosive detection, entry denial, acoustic hailing, autonomous unmanned systems, chemical, biological, radiological, nuclear, and high-explosive and associated functions. 			2.828	1.549	0.167
Title: Storage and Safeguards Description: Properly securing critical assets to prevent access by unauthorized persons and implementing control measures that ensure access is limited to authorized persons is the foundation of physical security. This capability area will focus on equipment (e.g., locks, doors, etc.) designed to delay or stop unauthorized entry / access to a specified / localized area. FY 2011 Accomplishments:			0.602	1.170	0.351

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> Standardized an economical magazine construction that comprehensively satisfies physical security criteria, explosive safety, operational and seismic safety standards. Developed a Government Services Administration-approved shipboard security solution. <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> Proof of concept for an economical magazine construction that comprehensively satisfies physical security criteria, explosive safety, operational and seismic safety standards. Proof of concept of a Government Services Administration-approved shipboard security solution. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> Transition economical magazine construction that comprehensively satisfies physical security criteria, explosive safety, operational and seismic safety standards to low-rate production. Transition a Government Services Administration-approved shipboard security solution to low-rate production. 				
<p>Title: Prevention</p> <p>Description: The security procedures taken to discourage an adversary from accessing weapons of mass destruction or gaining unauthorized access to critical assets are at the heart of prevention. This capability area will focus on broad spectrum, generic efforts which have the ability to influence multiple areas.</p> <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> Integrate security system components via wireless communications with high security over long ranges, without repeaters. Plan for the Force Protection Equipment Demonstration IX. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> Integrate security system components via wireless communications with high security over long ranges, without repeaters. 		-	1.470	0.301
<p>Title: Decision Support Systems</p> <p>Description: Decision support systems serve the management, operations, and planning levels of the DoD physical security enterprise to help to make decisions, which may be rapidly changing and not easily specified in advance. This capability area will focus on command and control equipment and projects related to the creation and enhancement of common operating pictures, and the establishment of common architectures / interface standards.</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> Provided DoD and industry the means to achieve Physical Security Equipment interoperability through standards and interface specifications. <p>FY 2012 Plans:</p>		1.197	0.720	2.012

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> Integrate sensors, sensor systems and unmanned systems with automated fusion capabilities to populate available Common Operating Pictures (COP) with in-depth security, surveillance, and response data for fixed and semi-fixed/expeditionary elements. Provide DoD and industry the means to achieve Physical Security Equipment interoperability through standards and interface specifications. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> Advance Integration of sensors, sensor systems and unmanned systems with automated fusion capabilities to populate available Common Operating Pictures (COP) with in-depth security, surveillance, and response data for fixed and semi-fixed/expeditionary elements. Provide DoD and industry the means to achieve Physical Security Equipment interoperability through standards and interface specifications. 					
<p>Title: Analytical Support</p> <p>Description: This capability area will focus on studies related to physical security topics and operational and management efforts related to day-to-day activities of the DoD Physical Security Equipment/Countering Nuclear Threats RDT&E Program.</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> Stood up physical security equipment test and evaluation capability with the Marine Corps set to lead this effort. <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> Conduct test and evaluation efforts for physical security equipment. <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> Conduct test and evaluation efforts for physical security equipment. 			0.660	0.545	0.943
Accomplishments/Planned Programs Subtotals			7.786	7.009	6.817
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy N/A					
<p>E. Performance Metrics</p> <p>The program performance metrics are established/approved through the DoD Physical Security Equipment Action Group (PSEAG) and the Security Policy Verification Committee (SPVC). The cost, schedule and technical progress of each project is reviewed at quarterly PSEAG and SPVC meetings. Performance variances are addressed and corrective action is implemented as necessary.</p>					

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Office of Secretary Of Defense **DATE:** February 2012

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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Integrated Base Defense	Sub Allot	PM-FPS:Ft Belvoir, VA	2.130	1.066	Nov 2011	1.516		-		1.516	0.000	4.712	4.712
Intermodal Security Devices	MIPR	NAVFACESC:Port Hueneme, CA	-	0.243	Dec 2011	0.500		-		0.500	0.000	0.743	0.743
Defense Installation Access Control	Various	Various performers:Various locations	6.000	1.742	Dec 2011	1.500		-		1.500	0.000	9.242	9.242
Identify Friend or Foe	MIPR	Force Protection Branch ESC/HSS:Hanscom AFB, MA	3.000	0.394	Nov 2011	-		-		-	0.000	3.394	3.394
Countering Nuclear & Biological Threats	Various	Various Performers:Various Locations	0.900	0.864	Mar 2012	0.861		-		0.861	0.000	2.625	2.625
Ordnance Handling Facility	MIPR	SPAWAR Atlantic:Charleston, SC	-	-		0.300		-		0.300	0.000	0.300	0.300
Long Range Threat Identification Sonar	MIPR	TBD:TBD	-	-		0.640		-		0.640	0.000	0.640	0.640
Subtotal			12.030	4.309		5.317		-		5.317	0.000	21.656	21.656

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Security Equipment Integration Working Group	MIPR	SPAWAR Atlantic:Charleston, SC	-	0.500	Mar 2012	0.500		-		0.500	0.000	1.000	1.000
Subtotal			-	0.500		0.500		-		0.500	0.000	1.000	1.000

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Performance Maintainability Kit	MIPR	NAVEOD Tech Div:Indian Head, MD	0.560	0.340		-		-		-	0.000	0.900	0.900
PSE Test and Evaluation	MIPR	Various Performers:Various Locations	0.260	0.610	Mar 2012	1.000		-		1.000	0.000	1.870	1.870
Test & Evaluation of Active Protection Systems	MIPR	SPAWAR Atlantic:Charleston, SC	-	0.750	Mar 2012	-		-		-	0.000	0.750	0.750
Maritime Environment Applicability Testing	MIPR	NAVEOD Tech Division:Indian Head, MD	-	0.500	Mar 2012	-		-		-	0.000	0.500	0.500
Subtotal			0.820	2.200		1.000		-		1.000	0.000	4.020	4.020
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			12.850	7.009		6.817		-		6.817	0.000	26.676	26.676

Remarks