Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity R-1

0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 Program Element (Number/Name)
PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats

**Date:** February 2015

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COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	93.320	46.889	41.014	31.710	-	31.710	32.244	38.426	41.257	41.843	Continuing	Continuing
P162: Nuclear and Conventional Physical Security	93.320	23.534	28.545	28.359	-	28.359	28.676	31.449	34.065	34.506	Continuing	Continuing
P041: CNT Rad/Nuc Passive Defense ADC&P	0.000	1.927	-	-	-	-	-	-	-	-	Continuing	Continuing
P040: National Technical Nuclear Forensics Systems	0.000	21.428	12.469	3.351	-	3.351	3.568	6.977	7.192	7.337	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 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 physical security 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 advanced component development and prototypes 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. This program will evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment. The projects under the Program Element either (a) lead to Programs of Record which can transition to Program Element 0604161D8Z for systems development and demonstration (SDD); (b) become technology insertions into existing programs; or (c) advance to being a certified Commercial/Government off-the-shelf product. The PE initiatives are coordinated by the Physical Security Enterprise and Analysis Group. This group is responsible for avoiding 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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats

Date: February 2015

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	48.302	41.072	41.762	-	41.762
Current President's Budget	46.889	41.014	31.710	-	31.710
Total Adjustments	-1.413	-0.058	-10.052	-	-10.052
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
Congressional Adds	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-1.413	-			
<ul> <li>Internal realignment</li> </ul>	-	-	-9.962	-	-9.962
• FFRDC	-	-0.058	-	<del>-</del>	-
<ul> <li>Economic Assumptions</li> </ul>	-	-	-0.090	-	-0.090

# **Change Summary Explanation**

Realign RDT&E funding under CWMD Procurement line for the National Technical Nuclear Forensics mission. Also moved \$900K from this Program Element to PE 0605161D8Z in order to align all contract support requirements under this Management Support RDT&E line.

Exhibit R-2A, RDT&E Project Ju	xhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense												
Appropriation/Budget Activity 0400 / 4		PE 060316	31D8Z I Nuc nal Physical	t (Number/ clear and Security/Co	•	Project (Number/Name) P162 I Nuclear and Conventional Physical Security							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost	
P162: Nuclear and Conventional Physical Security	93.320	23.534	28.545	28.359	-	28.359	28.676	31.449	34.065	34.506	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

# 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 advanced component development and prototypes 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 Program Element either (a) lead to Programs of Record – which can transition to Program Element 0604161D8Z for systems development and demonstration (SDD); (b) become technology insertions into existing programs; or (c) 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.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Title: Detection and Assessment	3.903	8.554	9.787

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the	e Secretary Of Defense		Date: F	ebruary 2015	5		
Appropriation/Budget Activity 0400 / 4	PE 0603161D8Z I Nuclear and P162 I Conventional Physical Security/Countering Nuclear Threats						
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2014	FY 2015	FY 2016		
<b>Description:</b> The ability to detect an adversary and assess their in will design equipment to identify and warn of unauthorized access to the notification and identification of explosive threats or hazards.	to a specified area or installation as well as equipment rel						
FY 2014 Accomplishments:  Conducted Explosive Detection Equipment testing (Sensor Fusion X-ray technology)  Developed wide-area, long-range, foliage, seismic and radiological Developed waterside detection & tracking capability (underwater Conducted fence sensors & cold weather testing	al detection capability (both fixed & mobile)	n of					
<ul> <li>FY 2015 Plans:</li> <li>Conduct Explosive Detection Equipment testing</li> <li>Develop wide-area, long-range, foliage, seismic and radiological of Develop waterside detection &amp; tracking capability (underwater &amp; I Develop standoff detection, assessment and defeat capability</li> </ul>							
FY 2016 Plans:  • Develop a Joint detection and assessment capability  • Develop a multi-sensor detection and discrimination capability to  • Compare dual energy X-Ray vehicle imaging systems  • Develop a radar processing dynamic structure filter to reduce nuis  • Finalize development of the Joint Radiological Detection System  • SPAM Transition to Operational Initial Capability (STOIC)  • Stand-Off Weapon Defeat IPT  • Thermal Imaging Dual-use for Aerosol Monitoring Alarms and Ser	sance and false alarms						
Title: Access Controls	•		2.060	-			
<b>Description:</b> Controlling access to safeguard personnel and their infrastructure and materials is paramount. This capability area will verification of individuals entering or already within a facility.		and					
FY 2014 Accomplishments:							

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the	ne Secretary Of Defense	Date: F	ebruary 2015			
Appropriation/Budget Activity 0400 / 4	00 / 4 PE 0603161D8Z / Nuclear and P162 Conventional Physical Security/Countering Nuclear Threats					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016		
<ul> <li>Conducted Defense Installation Access control Joint Capability 7 requirements.</li> <li>Advanced technology and procedures to minimize an insider threacess to nuclear materials or weapons.</li> </ul>						
Title: Installation and Transport Security		3.364	4.570	9.32		
<b>Description:</b> Robust installation and transport security are vital to unauthorized access to key assets such as nuclear weapons and programs and equipment intended to improve the physical securit in-transit.	special nuclear material. This capability area will focus on	vhile				
FY 2014 Accomplishments:  • Developed an Integrated Waterside Security capability and conditions.  • Developed a near-shore unified tactical response capability.	luct a concept demonstration					
<ul> <li>FY 2015 Plans:</li> <li>Address technology gaps after Integrated Waterside Security co</li> <li>Continue to develop a near-shore unified tactical response capa</li> </ul>						
FY 2016 Plans:  • Determine the Operational suitability of an Automated Harbor Ba • develop an enterprise Installation Decision Support Initiative appropriation in a secure, web-enabled architecture to be hosted on the	lication providing risk analysis and risk mitigation decision					
Title: Storage and Safeguards		1.576	4.291	-		
<b>Description:</b> Properly securing critical assets to prevent access be ensure access is limited to authorized persons is the foundation o (e.g., locks, doors, etc.) designed to delay or stop unauthorized en	f physical security. This capability area will focus on equipm					
FY 2014 Accomplishments:  • Developed specifications for Ordnance Storage and Operating F design requirements  • Designed a Semi-Hardened Prime Nuclear Air Force Secure Tra		rity				

	UNCLASSIFIED						
Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the S	Secretary Of Defense	Date: F	ebruary 2015	j			
Appropriation/Budget Activity 0400 / 4	0 / 4 PE 0603161D8Z / Nuclear and P162 / Conventional Physical Security/Countering Nuclear Threats						
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016			
<ul> <li>Designed a RFID Tagging for Items in Extreme Cold Storage (CON)</li> </ul>	US)						
<ul> <li>FY 2015 Plans:</li> <li>Finalize design of a Semi-Hardened Prime Nuclear Air Force Secure</li> <li>Design an internal delay capability for the Secure Transportable Ma</li> </ul>							
Title: Prevention		5.503	1.275	-			
<b>Description:</b> The security procedures taken to discourage an advers unauthorized access to critical assets are at the heart of prevention. efforts which have the ability to influence multiple areas.							
<ul> <li>FY 2014 Accomplishments:</li> <li>Expanded engagement opportunities with international partners in Note that the Developed nuclear threat-related scenarios &amp; use cases to frame Complex to the Complex Properties of the</li></ul>		oment					
FY 2015 Plans:							
• Expand engagement opportunities with international partners in Nuc	clear Security						
Title: Decision Support Systems		4.049	5.254	4.83			
<b>Description:</b> Decision support systems serve the management, oper enterprise to help to make decisions, which may be rapidly changing focus on command and control equipment and projects related to the and the establishment of common architectures / interface standards	and not easily specified in advance. This capability area creation and enhancement of common operating picture	a will					
<ul> <li>FY 2014 Accomplishments:</li> <li>Developed capability to ensure threat alert and response systems a aid partners in the local communities</li> </ul>	re interoperable with equipment used by the DoD and n	nutual					
<ul> <li>Provided a backbone extending command and control and situation missile launch facility complex</li> </ul>	nal awareness within, between, and out to the edges of	the					
<ul> <li>Developed a shared and automated content across the security dor accurate personnel vetting, access controls, insider threat prevention</li> </ul>							
FY 2015 Plans:							
<ul> <li>Continue to develop capability to ensure threat alert and response s and mutual aid partners in the local communities (focus on USEUCO</li> </ul>		OoD					

	UNCLASSIFIED						
Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the	Secretary Of Defense	Date: F	ebruary 2015				
Appropriation/Budget Activity 0400 / 4	PE 0603161D8Z I Nuclear and	Project (Number/I 162 / Nuclear and Security	oject (Number/Name) 62 I Nuclear and Conventional Physic curity				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016			
<ul> <li>Finalize the development of a risk analysis tool to help commande</li> <li>Continue to develop a shared and automated content across the sand accurate personnel vetting, access controls, insider threat prev</li> <li>Analyze the DoD Nuclear Weapons Complex Critical Infrastructure</li> </ul>	security domains and functional areas, enabling more efficiented and enhanced security operating environments	nt					
FY 2016 Plans:  • Finalize the development of a shared and automated content acroefficient and accurate personnel vetting, access controls, insider the Finalize the DoD Nuclear Weapons Complex Critical Infrastructure	reat prevention and enhanced security operating environme						
Title: Analytical Support		3.079	4.601	4.41			
<b>Description:</b> This capability area will focus on studies related to phrelated to day-to-day activities of the DoD Physical Security Equipment		orts					
FY 2014 Accomplishments:  • Provided DOD and industry the means to achieve PSE interopera and interface control devices  • Conducted analyses and review of requirements, evaluates proposintegrated investment portfolio		s					
FY 2015 Plans:  • Provide DOD and industry the means to achieve PSE interoperable and interface control devices  • Develop a comprehensive Physical Security Enterprise Test & Ev.  • Conducts analyses and review of requirements, evaluates proposintegrated investment portfolio  • Analyze alternatives for integrated waterside security for an integrated investment portfolio  • Enhance global nuclear security and support the US Government	aluation Program ed RDT&E solutions and recommends priorities for the						
FY 2016 Plans:							
<ul> <li>Conduct a waterside security stakeholder Table Top Exercise to c</li> <li>Continue to support global nuclear security and support the US G</li> </ul>		e					
	Accomplishments/Planned Programs Subto	tals 23.534	28.545	28.35			

	ONOLAGON ILD	
Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of th	e Secretary Of Defense	Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) P162 I Nuclear and Conventional Physical Security
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics		
The program performance metrics are established/approved throutechnical progress is reviewed at quarterly PSEAG meetings. Per		

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity R-1 Prog

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z I Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Project (Number/Name)

P162 I Nuclear and Conventional Physical

Date: February 2015

Security

Product Developmen	nt (\$ in M	illions)	FY 2014		2014	FY 2	2015	FY 2 Ba	2016 ise		2016 CO	FY 2016 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	Total Cost	Target Value of Contract
Defense Security Enterprise Architecture	Various	Multiple performers : Multiple locations	-	1.324		1.700		1.450		-		1.450	-	-	-
Mission Assurance, Threat Alert, Disaster Resiliency and Response	Various	Multiple performers : Multiple locations	-	1.480		-		-		-		-	-	-	-
Continuous Evaluation Concept Demonstration	MIPR	Army Research Laboratory : Adelphi, MD	-	0.430		-		-		-		-	-	-	-
Keystone EUCOM Project	Various	Multiple Performers : Multiple Locations	-	1.104		1.700		1.900		-		1.900	-	-	-
Joint Risk Decision Support Tool	MIPR	AF Civil Enginnering Center : Tyndall AFB, FL	-	1.019		1.052		1.800		-		1.800	-	-	-
Intregrated Ground Security, Surveillance and Response Capability	MIPR	Naval Surface Warfare Center Dahlgren Division : Dahlgren, VA	-	0.612		-		-		-		-	-	-	-
Ground-Based Operational Surveillance System	MIPR	NSWC Crane : Crane, IN	-	2.102		3.250		-		-		-	-	-	-
Physical Security Enterprise Program	Various	Multiple Performers : Multiple Locations	93.320	-		1.813		8.441		-		8.441	-	-	-
US Navy Spike Weapon System, Improve EO Seeker	MIPR	NAVAIRWARCENWP China Lake, CA	NDIV :	0.450		-		-		-		-	-	-	-
Near-shore Unified Tactical Response	MIPR	SPAWAR Pacific : San Diego, CA	-	0.554		-		-		-		-	-	-	-
Integrated Waterside Security Concept Demonstration	MIPR	Multiple Performers : Multiple Locations	-	3.204		-		-		-		-	-	-	-
Foliage Penetrating Technology Evaluation	MIPR	Naval Surface Warfare Crane : Crane, Indiana	-	0.504		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering

Nuclear Threats

Project (Number/Name)

P162 I Nuclear and Conventional Physical

Date: February 2015

Security

Product Developmen	nt (\$ in Mi	illions)		FY 2	014	FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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	Total Cost	Target Value of Contrac
Radar Assisted Area Protection	MIPR	US Army ARDEC : Picatinny Arsenal, NJ	-	1.105		2.874		2.500		-		2.500	-	-	-
Marine Mammal - Vigilant Localization	MIPR	SPAWAR Pacific : San Diego, CA	-	0.708		-		-		-		-	-	-	-
Marine Mammal - Enhanced Interdiction	MIPR	SPAWAR Pacific : San Diego, CA	-	0.450		-		-		-		-	-	-	-
End of Land-water Interface Sensor Project	MIPR	Applied Research Lab: University of Texas: Austin, TX	-	1.004		1.500		-		-		-	-	-	-
Missile Field Defense C3SA	MIPR	SPAWAR Atlantic : Charleston, SC	-	1.089		-		-		-		-	-	-	-
Semi-Hardened PNAF Secure Transportation Container	IA	Sandia National Labs : Albuquerque, NM	-	0.751		0.324		-		-		-	-	-	-
Secure Transporation Maintenance System Internal Delay	IA	Sandia National Labs : Albuquerque, NM	-	0.741		1.362		-		-		-	-	-	-
Radiological Detection System	Sub Allot	Joint Product Manager - Rad/Nuc Defense : Aberdeen, MD	-	2.965		4.615		-		-		-	-	-	-
Automated Harbor Barrier Gate - Operational Suitability	TBD	TBD : TBD	-	-		1.000		1.250		-		1.250	-	-	-
Detection & Assessment Follow-on	TBD	TBD : TBD	-	-		1.500		2.500		-		2.500	-	-	-
Maritime Expeditionary & Transit Security	TBD	TBD : TBD	-	-		0.760		1.255		-		1.255	-	-	-
US Navy Spike Weapon System, Common Launch Tube	MIPR	NAVAIRWARCENWPI China Lake, CA	NDIV :	-		1.000		1.555		-		1.555	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering

Nuclear Threats

Project (Number/Name)

P162 I Nuclear and Conventional Physical

Date: February 2015

Security

Product Developmen	t (\$ in Mi	illions)		FY 2	2014	FY 2	2015	FY 2 Ba		FY 2	2016 CO	FY 2016 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
Thermal Imaging Dualuse for Aerosol Monitoring Alarms and Security	TBD	TBD : TBD	-	-		0.700		1.678		-		1.678	-	-	-
Multi-sensor Detection and Discrimination	MIPR	TBD : TBD	-	-		0.590		0.650		-		0.650	-	-	-
		Subtotal	93.320	21.596		25.740		24.979		-		24.979	-	-	-

Support (\$ in Millions	s)			FY 2	014	FY 2	015	FY 2 Ba			2016 CO	FY 2016 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
World Institute for Nuclear Security	MIPR	Defense Threat Reduction Agency : Ft Belvoir, VA	-	0.300		0.350		0.350		-		0.350	-	-	-
International Atomic Energy Agency Suppoirt	IA	Department of State : Washington, DC	-	0.200		0.300		0.300		-		0.300	-	-	-
PSEAG Website and ePSEAG Program Management Tool	MIPR	AF Civil Engineering Center : Tyndall AFB, FL	-	0.265		-		-		-		-	-	-	-
Defense Installation Access Control Support	MIPR	AF Civil Engineering Center : Tyndall AFB, FL	-	0.345		-		-		-		-	-	-	-
Physical Security Subject Matter Experts	MIPR	Naval Sea Systems Command : Washington Navy Yard, DC	-	0.120		0.200		0.250		-		0.250	-	-	-
		Subtotal	-	1.230		0.850		0.900		-		0.900	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity
0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security

Management Service	es (\$ in M	illions)		FY 2	2014	FY 2	2015	FY 2 Ba			2016 CO	FY 2016 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	Total Cost	Target Value of Contract
Detection & Assessment IPT	MIPR	AF Securiy Forces Center : Lackland AFB, TX	-	0.200		0.250		0.350		-		0.350	-	-	-
PSEAG Top 5 Technical Review	MIPR	Naval Surface Warfare Center Dahlgren Division : Dahlgren, VA	-	0.508		-		-		-		-	-	-	-
DoD Nuclear Weapons Complex Critical Infrastructure Analysis	MIPR	Naval Sea Systems Command : Washington Navy Yard, DC	-	-		0.255		0.455		-		0.455	-	-	-
Explosive Detection Equipment Guide	MIPR	NAVEODTECH : Indian Head, MD	-	-		0.700		0.850		-		0.850	-	-	-
JASON Study	MIPR	Defense Threat Reduction Agency : Ft Belvoir, VA	-	-		0.500		0.525		-		0.525	-	-	-
Monterey Institute of International Studies	MIPR	Defense Threat Reduction Agency : Ft Belvoir, VA	-	-		0.250		0.300		-		0.300	-	-	-
		Subtotal	-	0.708		1.955		2.480		-		2.480	-	-	-
															Target

	Prior Years	FY 201	4 FY 2			2016 FY 2016 CO Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	93.320	23.534	28.545	28.359	-	28.359	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense R-1 Program Element (Number/Name)

**Appropriation/Budget Activity** 0400 / 4

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats

Security

Date: February 2015 Project (Number/Name)

P162 I Nuclear and Conventional Physical

LEGEND Planned Actions In-Progress Actions Completed Actions

# Radiological Detection System (RDS) Milestones

			~				9	FY	13					Г				1	Y	14						I	FY	15	(co	nt'	d o	n n	ext	cha	art)	
Milestones	Baseline Date	Current Date	Completed Date	Q	)1		Q2		C	23		Q	4		Q1			Q2		(	23	T	Q	4	T	Q	1	T	Q	2	T	Q	3		Q4	
				0	N D	J	F	м	A	vI J	J J	A	S	0	N	D	J	F	м.	A I	M.	J.	J A	1	s c	0	N I	) J	T E	N	1 A	M	IJ	J	A	s
Project Initiation / Kick- off Meeting			Jan 2013			×																														
IMS/IMP	July 2013	July 2013	July 2013						Т	Τ	4	X		Г	Г						Τ	Τ			Τ	Τ	Т	Τ		Τ	Т				Г	Г
Market Survey	July 2013	July 2013	July 2013						$\top$	T	4	X		T		П			1	Ť	Ť	Ť	Ť	T	1	Ť	Ť		Ť	T	Ť	T			Т	Г
RMA Report	Sept 2013	Nov 2013	Nov 2013						$\top$	1	T	T	T	T	4				1	1	Ť	Ť	Ť	Ť	Ť	Ť	Ť	Ť	Ť	Ť	Ť	Ť	T		Т	Г
Acquisition Decision Memorandum	Sept 2013	Nov 2013	Nov 2013						T	T	T				۵						T	Ť	T			Ť	Ť	T	T	T	T	T			T	
Phase 1 Close-out	Oct 2013	Oct 2013	Oct 2013									T	-	×											T	T	T								Г	
Performance Specification and RFP release	Nov 2013	Aug 2014	Aug 2014																		Ī		4	×		T	Ī	T			Ī	T				
Contract Award	Mar 2014	Dec 2014																								1	Δ									
Final Requirements Review	Nov 2013	Dec 2014							T	Ť	1	T		T					1	1	Ť	Ť	1	Ť	Ť	Ť	1	1		T	T	T			T	Г

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity
0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security

LEGEND

△ Planned Actions

△ In-Progress Actions

✓ Completed Actions

# Radiological Detection System (RDS) Milestones

							FY	15							I	Y	16								FY	17				
Milestones	Baseline Date	Current Date	Completed Date	Q		Q	2	Q	3	3	Q4	(	21		Q2	Т	Q3		Ç	24		QI		Q	2	П	Q3	Т	Q4	
				O N	D	J I	M	AN	ı j	J	A S	0 1	N D	J	F	м.	A M	J	J	A S	s o	N	D	J F	М	Α	м	J J	A	s
Phase 2 Close-out	Jun 2014	Nov 2014		1	4										П															
Contractor development + Ctr testing	Jun 2014	Jan 2015 (start)			1	1	+	H	_				T		П							T		217	T					
Critical Design Reviews	Jan 2015	Aug 2015			П						Δ	П			П							Т	П		Т					
Test Article Deliveries	Feb 2015	Nov 2015			П	T	T		Т	П			Δ		П	T		П	T	T	T	T	П		T	П		T		
Phase 3 Close-out	Mar 2015	Dec 2015			П	T				П		П	4		П			П		T	T	T	П		Т	П		T		- 11.11
Developmental Testing and OA conducted	Mar 2015	Jan 2016 (start)			П	1								_	H	+		H	1	1	Ŧ	^			T	П				
Test Report	Mar 2016	Feb 2017																				Т		1	7					
Phase 4 Close-out	Mar 2016	Feb 2017			Ħ	T	1						1	T	П	1		П			T	T	П		_	П		1		
LRIP Option Award and build	May 2016	Apr 2017 (start)				1							T		П	1						T			T	1	_	1	4	

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

- Schedule metrics will be based off of the "Current" Date
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Date: February 2015 Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) 0400 / 4 PE 0603161D8Z I Nuclear and P162 I Nuclear and Conventional Physical Conventional Physical Security/Countering Security Nuclear Threats



# Radiological Detection System (RDS) Milestones

							FY 1	7						FY	18							FY	19			
Milestones	Baseline Date	Current Date	Completed Date	Q	1	Q2		Q3		Q4	Q1		Q2		Q3		Q	14	(	21		Q2	(	Q3		Q4
				O N	D	J F	мА	M	J J	A S	O N	D.	J F	M.	A M	J	J A	A S	0	N D	J	F M	A	M J	J	A
LRIP Units delivered	Mar 2017	Aug 2017								Δ																
Phase 5 Close-out	Apr 2017	Aug 2017								Δ		П									П			T		
First Article Test Planning and Test	May 2017	Jul 2017 (start)			П	Т			Z		Ħ	Ħ		Ħ	Ŧ	-	Δ				П			T	П	T
Log Demo (including training) conducted	Jul 2017	Sep 2018 (start)																1		Δ						
MOT&E (including training) conducted	Oct 2017	Aug 2018 (start)															1	1								
FRP OTA Evaluation report	May 2018	Oct 2018 (start)																4	^	-2	1					
JILA Report	Feb 2018	Nov 2018 (start)																		4	4	7				
FRP Decision	Jun 2018	Feb 2019																			1	Δ				

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 

0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering

Nuclear Threats

Project (Number/Name)

P162 I Nuclear and Conventional Physical

**Date:** February 2015

Security



# Integrated Waterside Security - Concept Demonstration: **Project Milestones**

	Baseline		C1-1				F	FY 1	3								FY	7 14						F	Y 1:	5			
Milestones	Date	Current Date	Completed Date	C	Q1	3	Q2		Q3		(	24		Q1		Q	2	- 3	Q3	Q	)4	Q1		Q2		Q3	1	Q4	
				0	N D	J	F	MA	M	J.	J.	A S	0	N	D	J F	M	Α	MJ	J A	AS	ON	DJ	FA	4 A	M J	J	A	S
Initiate project coordination with CNIC	05/01/13	07/19/13	05/30/13						4	-	1	00	% (	Co	mp	let	e												
Receive final project approval from NWDC	01/31/2013	07/19/13	01/15/14									2	×		100	)%	Со	mp	lete					П		П			
Finalize list of technology inserts	06/15/13	07/19/13	03/30/14										×		1	00	% (	Cor	mple	ete						П			
Conduct IWS concept development conference	08/31/13	07/19/13	11/21/13										-	W			100	%	Con	nple	te					П			Г
Conduct initial planning conference (IPC)	12/31/13	07/19/13	03/27/14												П		4	•	10	0 %	Со	mple	te	П	Т	П		Г	
Conduct mid-planning conference (MPC)	03/30/14	07/19/13	06/05/14								T		Γ		П		П	П	4	1	100	9% C	om	olete	2	П		Г	
Conduct final planning conference (FPC)	05/30/14	07/19/13	08/14/14												П					4		100	% (	om	ple	te			
Conduct final systems integration testing	06/30/14	07/19/13	08/31/14																	4		100	% (	Com	ple	te			
Conduct IWS Concept Demonstration	08/31/14	07/19/13	09/26/14															П			4	100	% (	com	ple	te			

#### PSEP Milestones:

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
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Nuclear Threats

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z I Nuclear and
Conventional Physical Security/Countering

Project (Number/Name)

P162 I Nuclear and Conventional Physical

**Date:** February 2015

Security



# G-BOSS(E) Milestones

	Baseline	C	Committee				F	Y 1	3							- 8	FY	14								F	Y 1	5			
Milestones	Date	Current Date	Completed Date	Q	21		Q2	Т	Q3	,	Q	24	(	Q1	Т	Q2	2	Ç	23		Q4		Q	1	(	<b>Q</b> 2	Т	Q3		(	Q4
				O	N D	J	F	M A	M	J	3 1	A S	0	N	D.	F	М	Αl	4 3	3	Α	S	O	V D	J	F I	M A	M	J	J.	Α
SRR/SFR	November 2013	November 2013	December 2013	550																											
TRADOCCDD Approval	Aug 2013	Aug 2013	Aug 2013								4	×																			
CDD 3-Star Approval	Jan 2014	Jan 2014	May 2014															4	X												
MDD	October 2014	October 2014	October 2014																			4	X								
PDR	October 2015																														
CDR	October 2016			80-3																											
					_			_	1		_	_		_	4			1	1	L	Ц		1	1	Ш	4	1			4	_
																									Ш						

### PSEP Milestones:

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense **Date:** February 2015 Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) 0400 / 4 PE 0603161D8Z I Nuclear and P162 I Nuclear and Conventional Physical Conventional Physical Security/Countering Security Nuclear Threats

LEGEND Planned Actions In-Progress Actions Completed Actions



	D						1	FY	13							F	Y 1	4								FY	15				
Milestones	Baseline Date	Current Date	Completed Date	(	Q1	Т	Q2		Q3	3	Q	14	Ç	21	- 3	Q2		Q3		Q	14	- 4	Q1		Q2	2	(	<b>Q</b> 3	FR.	Q4	
				0	N D	J	F	M	АМ	IJ	J A	A S	0 1	N D	J	FA	1 A	M	J	J A	S	0	NI	D J	F	м	A I	M:	ı	A	s
Integrated Base Defense Software Synch Meetings	Quarterly				<b>Q</b>		W.	4	×	X				∆ TBD	)																
Fusion Software Comparison Study	03/29/2013	03/29/3013	03/29/3013					×		alysi nple		and	Rep	ort																	
Fusion Software Baseline Validation and Test.	08/30/2013	08/30/2013	09/30/2013									4	Ţε	est a	anc	l Re	роі	rt co	m	plet	e.										
CDD Joint and Army Staffing	06/15/2013	06/15/2013	06/15/2013				s	Staf	ffing	Co	mpl	lete		DD A	App	rov	ed	(09/	30/	201	3).										
Revised Technology Development Strategy	10/31/2013	Unfunded											U	nfunc	ded																
Revised MDD Package for staffing and approval	11/22/2013	Unfunded												Unfo	unde	d															
Projected MDD and Milestone B	01/31/2014	Unfunded													- Alies	MDE funde										Δ	MS	в			

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security



# Vigilance Localization Milestones

									FY	13											FY	14					
Milestones	Baseline Date	Current Date	Completed Date		Q1			Q2		3	Q3			Q4		18	Q1			Q2			Q3		(	24	
				0	N	D	J	F	м	Α	м	J	J	Α	S	0	N	D	J	F	м	Α	М	J	J	A	s
Kickoff Meeting Completed	11/30/2012	11/5/2012	11/5/2012		4																						
Integrated Master Plan Submitted	11/30/2012	11/30/2012	11/30/2012	Г	<b>₩</b>														П	П		П	П			T	
Planning and prepComplete	12/28/2012	12/28/2012	12/28/2012		×																						
Design Complete	6/15/2013	6/15/2013	5/31/2013								4												П			T	
Build Complete	7/19/2013	12/9/2013	12/2013															0									
Tech Demo	10/15/2013	12/11/2013	12/20013															0	•							T	
Ops Demo	7/15/2014	7/15/2014	01/2014	T																					W		
Transition	9/30/2014	9/30/2014	9/30/2014													2 10											Ø.
Final Report Submitted	9/30/2014	9/30/2014	9/30/2014													_						П					2

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security



# Enhanced Interdiction Milestones

			_			FY	13								FY	14									FY	15			
Milestones	Baseline Date	Current Date	Completed Date		QЗ			Q4		- 20	Q1			Q2			QЗ			Q4			Q1			Q2		Q	3
				А	M	J	1	А	s	0	N	D	1	F	M	А	M	J	J	А	s	О	N	D	J	F	M	А	M
Kickoff Meeting Completed	5/15/2013	5/15/2013	5/15/2013		4																								
Integrated Master Plan Submitted	5/31/2013	5/31/2013	5/31/2013	П	4	200																						T	
Planning and prep Complete	5/15/2013	5/15/2013	5/15/2013		0																								
Design Complete	12/31/2013	12/31/2013	12/31/2013									4				5 - 51 5												T	- 21
Build Complete	2/21/2014	4/15/2014	4/15/2014	Т		П						П				X												T	- 41
Tech Demo	5/14/2014	5/22/2014															W.	Ва	ngo	ro	n 7	Ma	у, к	Во	n 22	Ma	ay	$\Box$	
Ops Demo	1/5/2015	1/5/2015																						- 53	Δ				
Transition	3/30/2015	3/30/2015																									Δ		
Final Report Submitted	5/25/2015	5/25/2015											$\Box$															$\forall$	1

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity
0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical Security



# Foliage Penetration Technology Evaluation Milestones

									F	14											FY	15					
Milestones	Baseline Date	Current Date	Completed Date		Q1			Q2			Q3			Q4			Q1		Г	Q2			Q3			Q4	
				0	N	D	1	F	М	А	М	J	J	А	s	0	N	D	J	F	М	А	M	J	J	А	s
Kickoff Meeting	1/14/2014	1/14/2014	1/14/2014				<b>₩</b>	Jan	14th																		
Visit Test Site	2/11/2014	2/11/2014	2/11/2014					4																			
Submit Draft Test Plan	3/21/2014	3/21/2014	3/21/2014						4																		
Finalize Test Site and Vendor Requirements	4/4/2014	4/4/2014	4/16/2014							- 00	/																
Submit Final Test Plan	5/9/2014	5/16/2014	6/5/2014								4	X															
Demonstration	6/16- 26/2014	6/16- 26/2014	6/16- 26/2014									2															
Project Update Meeting	7/18/2014	7/31/2014	7/31/2014										4	×													
Submit Draft Test Report	10/01/2014	10/01/2014	10/01/2014													W			П								
Submit Final Test Report	11/12/2014	11/12/2014	11/12/2014														W.										
																			П								

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

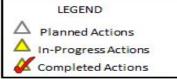
Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security



# Standoff Weapons Defeat IPT Milestones

	Baseline	Current	Complete				F	Y 14								F	Y 1	5										FY	16				
Milestones	Date	Date	d Date	Q	1	C	12		Q3		Q4		Q	1	0	Q2	П	Q	3	Г	Q	4		QI			Q2		(	23	I	Q	1
				0 1	I D	1	F N	1 A	м	1 1	A	s	0 1	I D	J	F	VI A	A N	A J	J	А	s	0	N	D	J	F	М	А	VI.	j	Α	
Identify IPT Principals and supporting members	31 July 14									4																							
Develop POAM	15 Nov 14 (Final)											Draft	2	Z/																			
Develop Charter	15 Nov 14 (Final)								Dr	A aft			4	X				Ι		I		Γ	Γ									I	I
Identify past and ongoing efforts	15 Sep 14											2	-						T			Γ											Ī
Hold first IPT principals meeting	8 Aug 14	6: 									W.																						
First IPT meeting	15 Sep 14												•	K																			I
Ongoing IPT meetings	Every 2 months												1	Λ	Δ		Δ	1	Λ	1	\	Δ				Г	П			T			Ī
Technology Roadmap	15 Mar 15 (Draft)		ĺ													D	Δ		Z.	\													
Requirements Document	15 Mar 15 (Draft)																Δ			Δ.													
Architecture Description	15 May 15 (Draft)																	Dr	A aft		Z.		Г		П								I
Project Proposals	1 May 15 (Start)																1	Á		Ongo	oing								П				Ī

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 

0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats

Security

Project (Number/Name)

P162 I Nuclear and Conventional Physical

Date: February 2015

LEGEND

Planned Actions In-Progress Actions Completed Actions

# Mission Assurance, Threat Alert, Disaster Resiliency and Response (MATADRR) Milestones

	2000				F	Y	12							FY	13										F	Y	14				
Milestones	Baseline Date	Current	Completed Date		Q3		(	Q4	П	Q	1	Т	Q:	2		Q3			Q4			Q1			Q2	П	Q	3	Т	Q4	
				А	м	J	J	A i	S	0 1	I I	) ]	F	M	A	M	J	J	А	s	0	N	D	J	F	M.	A A	4 J	J	A	S
Kick off			08/28/12					2																							
Tech Demo - Baseline	09/19/12	09/19/12	09/19/12					1	0	1																					
Project Management Plan	10/15/12	01/04/13	01/15/13						1	4	2			Т	Т	Г										П	Т				П
CONOPS Work Shop	12/06/12	12/06/12	12/06/12						1		4	X																			
Transition Guide	04/30/13	04/30/13	04/30/13						T						M																
Annual Project Review	04/30/13	04/30/13	04/30/13	П	П				T			Т			4	1										П	Т	Т			П
Technical Demo#1	06/25/13	06/25/13	06/25/13						1							4				CHI			- 0		MA	100					
CONEMP Work Shop	09/16/13	11/14/13	N/A													_			-	514	-	A	-	~	TVI.	**	-				
Technical Demo #2	11/15/13	03/03/14	3/14/14																						Δ						
Final Transition Demonstration (FXD)	02/17/14	03/03/14	3/20/14																			ĺ				×					
Transition Decision	6/30/14	4/29/2014	6/17/14						1																	4	K				П
Joint TTPs	6/30/14	N/A	N/A				L	imi	tec	ı Us	ser	Te	st/l	JSF	F J	TT	PΝ	lor	kin	g	iro	up	lea	ad	per	_	ng				12.5
Final Project Brief	6/16/14	8/20/2014	8/20/2014						1											-								1	1	4	

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering

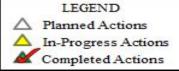
Nuclear Threats

Project (Number/Name)

P162 I Nuclear and Conventional Physical

Date: February 2015

Security



# Defense Security Enterprise Architecture (DSEA) Milestones

							F	Y 13									FY	14										FY	15	y			
Milestones	Baseline Date	Current Date	Completed Date	<	21	-	22		Q3		Q4		- 1	21.	т	Q2			Q3	Т	0	14	+	QI		Т	Q2			Q3	Т	0	4
	Date	Date	Date	0	N D	1	F M	1 A	34	1 1	A	s	0	N D	1	F	34	A	34	1	1 /	A 3	0	N	D	1	F	34	A	34	1	I A	A   S
DSE Discovery Phase	2/28/13	2/28/13	2/28/13				M			.,,																							
DSEA Workshop	6/26/13	6/26/13	6/26/13							M										П		Τ			Т								T
DSEA Team Charter	8/30/13	8/14/13	8/14/13								~														Т	Г							
DSEA Management Plan	9/30/13	12/4/13	12/4/13			П			П					-																			
Gather/Socialize/Define Requirements	10/31/13	12/4/13	12/4/13											-								T			T								T
Conduct Market Survey	1/31/14	1/9/14	1/9/14					T							4							T	T	T	Τ								T
Identify Backbone Solution for DSEA	3/31/14	3/31/14	1/13/14		T			Т			Τ	П			۵					Т		T	T	T	T								T
Technical Integration Kick-off Meeting	5/9/14	5/7/14	5/7/14	57														4			1												
DSEA Technical Demonstration Plan	6/30/14	8/15/14	12/2014		Τ			Г	П											T	T	T	T	T	A	1					T		
Conduct Capability Technology Demonstration	9/26/14	9/17/14																					T			4	7						
Conduct Operational Demonstration	3/31/15	2/27/15																1		T		T	T	T	T		1	7			T		T
Transition to POR	TBD	TBD																							1							1	

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

Project (Number/Name)

0400 / 4

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats

P162 I Nuclear and Conventional Physical

Date: February 2015

Security

LEGEND

Planned Actions In-Progress Actions Completed Actions

UNCLASSIFIED

# Continuous Evaluation Concept Demonstration Milestones

	Baseline	Current	C1-1-1				j	FY	13								F	Y	14										FY	15				
Milestones	Date	Date	Completed Date	(	Q1		Q2		Q	3		Q4		Q	1	П	Q2		(	<b>Q</b> 3	Т	Q	4		Q	1		Q	2	è	Q3		Q	24
				0 1	N D	J	F	м.	AN	4 ј	J	A	s c	D	ı D	J	F	M.	A	M	J	J /	1 5	S	1	N I	) ]	F	М	Α	м	J	J 2	A
CE Interview/Surveys	11/30/2012	07/15/2013	11/30/2012		X									Ī													T						1	T
CE Workshop	12/11/2012	07/15/2013	12/13/2012		4	X																	Ï											
Working Group Kick-off Meetings	02/12/2012	07/15/2013	02/12/2012				4	<																										
Acquire Commercial Data for Demo	07/31/2013	07/31/2013	09/09/2013										K												T									
Software/Hardware Installed at DMDC		07/09/2014	09/09/2013										W.																					
Stand-up Analytical Cell		07/09/2014	10/10/2013			T							4	K	•																			
Initial System Integration Testing		07/09/2014	04/22/2014																W.									T						T
Population Sets for Demo	05/11/2013	12/19/2013																									_			Ven				
SORN Legal Review	10/01/2013	1/31/2014																									4	1			RN :	at Ol	MB;	
CE CONOPS Legal/Privacy Review	05/29/2013	04/09/2014	5																								1	1		арі	PFOV	rai		

LEGEND

△ Planned Actions

△ In-Progress Actions

✓ Completed Actions

# UNCLASSIFIED

# Continuous Evaluation Concept Demonstration Milestones

	Baseline	Current	Completed					FY	13									FY	14								F	Y 1	5			
Milestones	Date	Date	Date	(	Q1 N I	0 1	Q2			Q3 M J	ı	Q4	S (		)1 V D		Q2 F			Q3 M :	, ,	Q	-	0	Q1		Q2 F N	A A	Q3 M	J	Q J	24 A S
Ops Demo	1/10/2014	1/10/2014																								Δ						
Transition	5/15/2014	5/15/2014																						T		1			Δ	TE	BD	
Final Report Submitted	7/31/2015	7/31/2015																											Δ	тв	D	
												Ш												L								$\perp$
				Ц	_	1	$\perp$		Ш	_	_	Ш	1	_	$\perp$	_		Ш			1	1		L		4	1	1	Ш	_	1	4
					_	1			Ш	_	_	Ш	1	1	1			Ш		_	1	1		L		4	1	1		_	1	4
					, ,																											

Nuclear Threats

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 

R-1 Program Element (Number/Name) PE 0603161D8Z I Nuclear and

Conventional Physical Security/Countering

Project (Number/Name) P162 I Nuclear and Conventional Physical

Date: February 2015

Security

0400 / 4

LEGEND Planned Actions In-Progress Actions Completed Actions

# Defense Installation Access Control Milestones

	Baseline	Current					FY	12									F	Y 1	3									F	7 14	1			
Milestones	Date	Date	Completed Date	Q	1	Q	2	(	Q3		Q	24		Q1		(	22	T	Q	3	- 23	Q4		. (	Q1		Q	2	П	Q3		9	Q4
				O N	D	JE	M	A	м	J J	I A	A S	0	N	D	J :	FN	1 4	A N	1 J	J	А	S	0	N :	D	J F	N	1 A	M	J	J.	A S
Kickoff Meeting Completed	08/08/2012	08/08/2012	08/08/2012								4																						
Sys Integration Test 1	11/26/2012	11/26/2012	11/26/2012											1			Τ												П				T
JCTD Management Plan Submitted	12/05/2013	12/05/2013	12/05/2013												26					T													
DIAC CONOPS to RFO	04/05/2013	04/05/2013	04/05/2013															4	×														
Demonstration Execution Document Complete	05/01/2013	05/01/2013	05/01/2013																4	/									İ				
Sys Integration Test 2	05/30/2013	05/30/2013	05/30/2013		П				Т										2	/								Т	П				T
NORTHCOM Test Readiness Review Mtg	06/27/2013	06/27/2013	06/27/2013						T	T		T	T			T	T			4					T				T	T		T	T
RFO Program Review Board	04/15/14	04/15/14	TBD																													1	2
Base Entry System Test	10/01/13	3/27/14	In Progress																										~				

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

- Schedule metrics will be based off of the
  - "Current" Date
- Changes of current dates need to be noted in issues/changes

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security

LEGEND

△ Planned Actions

△ In-Progress Actions

✓ Completed Actions

# Defense Installation Access Control Milestones

	Dti		C1-1-1		F	Y 1	2					F	Y 1	3				Γ				F	Y 14	4					F	715	
Milestones	Baseline Date	Current Date	Completed Date	(	Q3	T	Q4		Ç	21		Q2	T	Q	3	(	Q4	T	Q1	П	Ç	)2		Q3	Т	Q	4	Q	1		Q2
			233	A	М	J	Α	s	0	ND	J	F	M	A N	J	J	A S	C	N	D	J I	FΝ	4A	М.	J J	A	S	0	4 D	J	FI
Ops Demo 1	10/28/201 3	06/05/2014	06/05/2014																					4	×	Y					
Tech Demo 2	02/17/201 4	Unknown	Not Required								Γ																				
Ops Demo 2	04/21/201 4	Unknown	10/2014	5074																								X			
Transition	08/30/201 4	08/30/2014	TBD										Τ	Τ				Τ							T						
Final Report Submitted	08/30/201 4	08/30/2014	1								Г																П		2	Δ	

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
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- Changes of current dates need to be noted in issues/changes

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and

Conventional Physical Security/Countering
Nuclear Threats

Project (Number/Name)

P162 I Nuclear and Conventional Physical

**Date:** February 2015

Security



△ Planned Actions
△ In-Progress Actions
✓ Completed Actions

# PNAF Transport Container Milestones

	Baseline	Current	Completed				F	Y 1	3								FY	7 14									1	FY	15			
Milestones	Date	Date	Date	Q	21		Q2		Q3		Q	24		Q1		Q	2		Q3	Т	Q	4	T	Q	1		Q2		C	23	Т	Q4
				O	N D	J	FN	4 A	м	J	J	A S	0	N	D.	J I	F N	Α	М	J	J A	A S	S	) N	D	J	F	м	A	МJ	J	Α
Developed Project Plan	07 Feb 13	07 Feb 13	27 Mar 13				4																									
Developed Container Analysis	25 Feb 13	25 Feb 13	20 Sep 13									2					T		П		T		T	T								П
Developed Initial Container Design	23 Sep 13	23 Sep 13	07 Jan 14												4	K							T									
Phase I final Milestone Review	06 Feb 14	06 Feb 14	06 Feb 14													4																
Initiate Phase II funding Received	06 June 06	06 June 06	06 June 06																	4	X		T									
Produce Prototype	31 Oct 14																						I				Δ					
													L		1	1		L	Ш				1		L				4	1	L	Ш
																		L	Ш	_	1		1		L							Ш

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity
0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P162 / Nuclear and Conventional Physical
Security



# Missile Field Defense Force Command, Control, Communications and Situational Awareness

	D. T						1	FY (	)1								F	Y 0	2									F	7 03	3			
Milestones	Baseline Date	Current Date	Completed Date	Q	1	(	Q2		Q3		(	24	T	Q1		(	22	Т	Q3	3	-	Q4		(	Q1	Т	Q	2	Т	Q3	T	Q	24
				ON	D	J	F	M	M	J	J.	A S	0	N	D	J	FI	A A	M	J	J	A	S	0	N	D.	J E	N	1 A	М	J.	J /	A
Phase 1 (Planning Phase)								4																									
Preliminary Design	Fa								W																								
Critical Design	12				Т						4		T		4			T		Г			7	1	T	Т	T	T	T	П		T	T
Prototype Production						П							4		4	X		T	Т	Г	П		7		1	Т	T		T	П	T	T	1
Prototype Testing	1				T	П	Т		T				T	_		4	/	T	T				7		T	1	T	T	T	П	7	T	7
Design Revision					T	П	T		T			T	T		_			۵					7		T		Ť	T	T	П		Ť	1
System Fabrication																		T	T			2					Ť		T	П		Ť	1
Test & Evaluation					T	П	T		T			T	T					•		Т					7		Ť	T	T	П	T	Ť	7
System Turnover						Н	$\forall$		+			$\top$	$^{\dagger}$			$\forall$	Ť	T	+	$\vdash$	Н				Ť	-	^	t	t	Н	$\forall$	Ť	1

### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

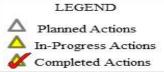
- Schedule metrics will be based off of the "Current" Date
- Changes of current dates need to be noted in issues/changes

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity
0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Conventional Physical Security

Nuclear Threats



# Missile Field Defense Force Command, Control, Communications and Situational Awareness

							I	FY 0	L								FY	02										FY	03					
Milestones	Baseline Date	Current Date	Completed Date	C	21	Г	Q2		Q3		Q	1	(	21	T	Q	2	-	Q3	Т	Q	14	T	Q	1	T	Q	2		Q3		(	Q4	
				0 1	N D	J	F	M A	м	J.	J A	s	0	N E	)	F	м	A	м	J	J A	A S	0	N	i D	J	F	М	A	м	J	J	A	:
Phase 1 (Planning Phase)								4																										
Preliminary Design									×																									
Critical Design											_			4	X	3								T										Ī
Prototype Production						Г	П		П	T			_		4		Т			7	1		T	T	T	T	T	Т	Т			T	П	Ī
Prototype Testing	1						П		П					_		×				1		T	T	T	T	T		Т	Г			T		İ
Design Revision							П		П	T				1	<u> </u>		-	×		T			T	T	T	T	T	Т				T		Ī
System Fabrication					T		П		П	T					T					1	T	4		T	T	T	T	T	Г					Ī
Test & Evaluation									П						T			_					T	7		T						T	П	ĺ
System Turnover						Г	П		$\Box$	T		П		$\top$	Ť		1	To	od	a	v	1		T	1	1		Т	П			Т	П	Ì

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

- Schedule metrics will be based off of the "Current" Date
- Changes of current dates need to be noted in issues/changes

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of	Defense	,	Date: February 2015
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
0400 / 4	PE 0603161D8Z I Nuclear and	P162 / Nuc	clear and Conventional Physical
	Conventional Physical Security/Countering	Security	
	Nuclear Threats		

# Schedule Details

	Sta	art	Er	ıd
Events by Sub Project	Quarter	Year	Quarter	Year
Intregrated Ground Security, Surveillance and Response Capability				
Intregrated Ground Security, Surveillance and Response Capability	1	2014	2	2015
Secure Transportable Maintenance System Safe Internal Delay Capability			,	
Secure Transportable Maintenance System Safe Internal Delay Capability	1	2014	4	2015
PNAF Transport Container				
PNAF Transport Container	1	2014	1	2015
Defense Installation Access Control			,	
Defense Installation Access Control	1	2014	4	2014
Continuous Evaluation Concept Demonstration				
Continuous Evaluation Concept Demonstration	1	2014	4	2014
Defense Security Enterprise Architecture			,	
Defense Security Enterprise Architecture	1	2014	2	2015
Mission Assurance, Threat Alert, Disaster Resiliency and Response				
Mission Assurance, Threat Alert, Disaster Resiliency and Response	1	2014	4	2014
Navy Spike Weapon System EO Seeker Upgrade				
Navy Spike Weapon System EO Seeker Upgrade	1	2014	4	2014
Standoff Weapons Defeat IPT				
Standoff Weapons Defeat IPT	1	2014	4	2015
Radar Assisted Area Protection			,	
Radar Assisted Area Protection	1	2014	4	2014
Foliage Penetration Technology Evaluation			,	

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of D		Date: February 2015	
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
0400 / 4	PE 0603161D8Z I Nuclear and	P162 / Nuc	clear and Conventional Physical
	Conventional Physical Security/Countering	Security	
	Nuclear Threats		

·	Sta	art	Er	nd	
Events by Sub Project	Quarter	Year	Quarter	Year	
Foliage Penetration Technology Evaluation	1	2014	2	2015	
Marine Mammal Enhanced Interdiction					
Marine Mammal Enhanced Interdiction	1	2014	3	2015	
Marine Mammal Vigilance Localization					
Marine Mammal Vigilance Localization	1	2014	4	2014	
Integrated Waterside Security – Concept Demonstration					
Integrated Waterside Security – Concept Demonstration	1	2014	4	2014	
Ground-Based Operational Surveillance System (Expeditionary)					
Ground-Based Operational Surveillance System (Expeditionary)	1	2014	4	2015	
Missile Field Defense Force Command, Control,					
Missile Field Defense Force Command, Control,	1	2014	2	2015	

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense										Date: February 2015			
Appropriation/Budget Activity 0400 / 4					PE 0603161D8Z / Nuclear and					roject (Number/Name) 041			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost	
P041: CNT Rad/Nuc Passive Defense ADC&P	-	1.927	-	-	-	-	-	-	-	-	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

# A. Mission Description and Budget Item Justification

This project establishes a Defense-wide Countering Nuclear Threats (CNT) Materiel development Program. The CNT acquisition strategy directly applies to a Joint requirement for CNT materiel development and addresses the materiel and sustainment gaps for general purpose Joint Forces, including the US Army 20th Support Command and Navy Visit, Board, Search, and Seizure, as well as the Technical Support Groups; NIMBLE ELDER and the US Special Operations Command where required.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Title: CNT Rad/Nuc Passive Defense	1.927	-	-
<b>Description:</b> Advanced Development of Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System and the Joint Personal Dosimeter).			
The Radiological Detection System will provide a ruggedized Radiation Detection, Indication, and Computation for real time gamma radiation monitoring and low energy x-ray, beta, alpha, and neutron detection.			
The Joint Personal Dosimeter will provide a joint solution to increase capability and reduce life-cycle costs.			
Both systems will address Operation TOMODACHI lessons learned for common, interoperable equipment with adequate sensitivity and common units of measure.			
FY 2014 Accomplishments: Developed Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System and the Joint Personal Dosimeter)			
Accomplishments/Planned Programs Subtotals	1.927	-	-

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

N/A

xhibit R-2A, RDT&E Project Justification: PB 2016 Office of the	he Secretary Of Defense	Date: February 2015
ppropriation/Budget Activity 400 / 4	R-1 Program Element (Number/Name) PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) P041 I CNT Rad/Nuc Passive Defense ADC&P
C. Other Program Funding Summary (\$ in Millions)  Remarks		
D. Acquisition Strategy N/A		
i. Performance Metrics  The program performance metrics are established/approved thro echnical progress is reviewed on a quarterly basis. Performance		

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity
0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P041 / CNT Rad/Nuc Passive Defense
ADC&P

Product Development (\$ in Millions)		FY 2014 FY 201		2015	FY 2016 5 Base		FY 2016 OCO		FY 2016 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	Total Cost	Target Value of Contract
Joint Personal Dosimeter	Sub Allot	Joint Product Manager - Rad / Nuc Defense : Aberdeen, MD	-	1.247		-		-		-		-	-	-	-
Radiological Detection System	Sub Allot	Joint Product Manager - Rad / Nuc Defense : Aberdeen, MD	-	0.680		-		-		-		-	-	-	-
Subtotal		-	1.927		-		-		-		-	-	-	-	

_									
									Target
	Prior			FY 2016	FY 2016	FY 2016	Cost To	Total	Value of
	Years	FY 2014	FY 2015	Base	oco	Total	Complete	Cost	Contract
Project Cost Totals	-	1.927	-	-	-	-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering

Nuclear Threats

Project (Number/Name)

P041 I CNT Rad/Nuc Passive Defense

Date: February 2015

ADC&P

LEGEND A Planned Actions In-Progress Actions Completed Actions

# Radiological Detection System (RDS) Milestones

	Baseline	Current	Completed				1	FY	13									FY	14						1	FY	15	(co	nt'c	l on	ne	xt c	har	t)	
Milestones	Date	Date	Date	Q		_	Q2		Q		-	Q4	_	-	21	Τ	Q2		_	Q3		_	24	I	_	21		Q	-		Q3	_		Q4	_
				0 1	V D	J	F	м	AN	1 J	J	A	S	0 1	4 D	J	F	М	A	М	J	J	A	S	0 1	N	) J	F	M	A	M	J	J	A	S
Project Initiation / Kick- off Meeting			Jan 2013			W.																													
IMS/IMP	July 2013	July 2013	July 2013								4						Г									П				П					
Market Survey	July 2013	July 2013	July 2013						$\top$	T	4	1		7	1	T	T						T	1	Ť	Ť		T	T	T				П	
RMA Report	Sept 2013	Nov 2013	Nov 2013		T				$\top$	T			П		×		T	T			1	1	1	1	Ť	Ť	1	T	T	T				П	
Acquisition Decision Memorandum	Sept 2013	Nov 2013	Nov 2013						1	T				4	×		T								Ť	T	T			T					
Phase 1 Close-out	Oct 2013	Oct 2013	Oct 2013										4	K		Γ	Г							T	T			T							
Performance Specification and RFP release	Nov 2013	Aug 2014	Aug 2014						T								T					4	×		Ī	T									
Contract Award	Mar 2014	Dec 2014																					1		4	Δ		T		П					
Final Requirements Review	Nov 2013	Dec 2014			1				$\top$	T	T			$^{\dagger}$	$\dagger$		T	T			1	1	1	$\dagger$	Ť	1	Δ	T	T	T				П	

## **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P041 / CNT Rad/Nuc Passive Defense
ADC&P

LEGEND

△ Planned Actions

△ In-Progress Actions

✓ Completed Actions

# Radiological Detection System (RDS) Milestones

							FY	15							1	FY	16								F	Y 1	7			
Milestones	Baseline Date	Current Date	Completed Date	Q1		Q	2	Q	3	(	24	Q	21		Q2		Q	3	- 0	Q4		Q	1		<b>Q</b> 2	Т	Q	3	Q	4
				O N	D	J F	M	A M	J	J.	A S	0 1	I D	J	F	M.	A N	1 J	J.	A	S	O	I D	J	F	M A	A M	J	J A	A S
Phase 2 Close-out	Jun 2014	Nov 2014		1	4				П														Т							
Contractor development + Ctr testing	Jun 2014	Jan 2015 (start)			1	1		Ŧ	4					T	П				П				T		Ī					1.55
Critical Design Reviews	Jan 2015	Aug 2015			П				П		4				П				П				Т		П	Т				7.50
Test Article Deliveries	Feb 2015	Nov 2015			П	T			П	1		1	Δ		П	T			П	1		T	T		T	T	T		T	
Phase 3 Close-out	Mar 2015	Dec 2015			П	1			П				Δ		П				П		T	T	T		T	T				
Developmental Testing and OA conducted	Mar 2015	Jan 2016 (start)			П	1		T	П					4	H	4		F	H		+	1	1	===		T				
Test Report	Mar 2016	Feb 2017							П										П				Т		Δ					
Phase 4 Close-out	Mar 2016	Feb 2017				1			П	1					П	T			П	1		Ť	T		4	_	T	-	T	
LRIP Option Award and build	May 2016	Apr 2017 (start)			П				П					T	П				П				T				4		4	

#### PSEP Milestones:

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
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- Changes of current dates need to be noted in issues/changes

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

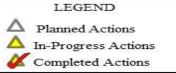
Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P041 / CNT Rad/Nuc Passive Defense
ADC&P



# Radiological Detection System (RDS) Milestones

							F	Y 17								FY	18									FY:	19			
Milestones	Baseline Date	Current Date	Completed Date	Q	21	(	22	- 29	Q3	Т	Q4		Q1		Q	2	1.3	Q3		Q4		(	21	Т	Q2		Q3		C	24
				O I	N D	J	F M	A	M .	J J	A	S	o N	D	J	M	I A	м.	J J	A	s	0	N I	) J	F	M.	A M	J	J ,	A
LRIP Units delivered	Mar 2017	Aug 2017									_																			
Phase 5 Close-out	Apr 2017	Aug 2017				П		П		T	Δ		T	П			Т			T	П			T	T		T	П		T
First Article Test Planning and Test	May 2017	Jul 2017 (start)				П		П	T	4	_	Ħ	Ť	Ħ	Ť	Ť	Ħ		_	1			T	T	Ī			П	T	T
Log Demo (including training) conducted	Jul 2017	Sep 2018 (start)																			1	\	Δ							
MOT&E (including training) conducted	Oct 2017	Aug 2018 (start)																		Δ	4	7								
FRP OTA Evaluation report	May 2018	Oct 2018 (start)																			4	^	- 2	4						
JILA Report	Feb 2018	Nov 2018 (start)																					4	- 4	4					
FRP Decision	Jun 2018	Feb 2019																							Δ					

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 

R-1 Program Element (Number/Name)

Project (Number/Name)

0400 / 4

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering Nuclear Threats

P041 I CNT Rad/Nuc Passive Defense

**Date:** February 2015

ADC&P

LEGEND Planned Actions

In-Progress Actions

Completed Actions

# Joint Personal Dosimeter (JPD) Milestones

							FY	13									F	7 14	4						F	Y 1	15 (	cor	ıt'd	ne	t sl	ide	)	
Milestones	Baseline Date	Current Date	Completed Date	Q	1	Q	2		Q3	Т	Q	4	- 2	Q1	Т	(	2	Т	Q3	9		Q4	1	(	Q1	Т	(	22	Т	Q	3	Г	Q4	4
				O N	D	JI	F M	A	M.	J J	A	s	0	N	D	J	F N	I A	M	J	J.	A	s	0	N	D	J	FD	M A	A IV	J	J	A	
Project Initiation / Kick- off Meeting			July 2013							4	K																							
Navy Battlefield Dosimeter System Contract Award	Mar 2014	Sep 2014																					4											
IMS/IMP	Jan 2013	Jul 2014																			Δ	8												
Performance Specification	Mar 2014	Sep 2014																				4	7						Τ				Γ	Γ
Installation Study	Apr 2014 (start)	July 2014 (start)																		4	^	-		4	7		- (1-)							
NVLAP Accreditation	May 2014 (start)	Nov 2014 (start)																						4	7	4	Δ	3						
Phase 2 Close-out	May 2014	Nov 2014			П			П	П			Г				Т	Τ		П		П			4	Δ	2			Т					Τ
Critical Design Review	July 2014	Sep 2014			П	T		П	T	1	$\top$	T	П	$\Box$	$\top$	T	Ť	T	Ħ		П	7	Δ	S	7	T	1		T				T	Ť
Phase 1 Close-out	Dec 2014	Feb 2015						П				1																Δ			1			

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

- Schedule metrics will be based off of the "Current" Date
- Changes of current dates need to be noted in issues/changes

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 0400 / 4

R-1 Program Element (Number/Name)

PE 0603161D8Z I Nuclear and Conventional Physical Security/Countering

Nuclear Threats

Project (Number/Name)

P041 I CNT Rad/Nuc Passive Defense

**Date:** February 2015

ADC&P

LEGEND Planned Actions In-Progress Actions Completed Actions

# Joint Personal Dosimeter (JPD) Milestones

							FY	13									F	7 14							F	Y 1.	5 (c	ont	'dı	next	sli	de)		
Milestones	Baseline Date	Current Date	Completed Date	Q	1	Q	2	3	Q3	Т	Q	1	- 33	Q1	П	C	22	Т	Q3	1	(	24	T	Ç	21	Т	Q	2	Т	Q3		(	Q4	
				ON	D	J	FM	Α	M.	J J	A	s	0	N	D	J	F N	I A	M	J	J.	A	S	0 1	N I	D :	J F	м	A	M	J	J.	A	S
Project Initiation / Kick- off Meeting			July 2013							4	K																							
Navy Battlefield Dosimeter System Contract Award	Mar 2014	Sep 2014																				4	4	2										
IMS/IMP	Jan 2013	Jul 2014																			Δ	8												
Performance Specification	Mar 2014	Sep 2014				Т					T						Т				П	4	7				T		П					
Installation Study	Apr 2014 (start)	July 2014 (start)																		4	^	1	+	4	1									
NVLAP Accreditation	May 2014 (start)	Nov 2014 (start)																						4	2	1	4							
Phase 2 Close-out	May 2014	Nov 2014			П	Т		П	П			Γ				Т	Т	Г			П			4	$\Delta$	8	Τ	П	П			П	П	
Critical Design Review	July 2014	Sep 2014			П	Ť		П	T	1		T		$\exists$	$\top$	T	Ť	T			П	7	4	8	Ť	Ť	T	$^{\dagger}$	Т	T				
Phase 1 Close-out	Dec 2014	Feb 2015																									1	1	Т		1.0			-

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense Date: February 2015 Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) PE 0603161D8Z I Nuclear and 0400 / 4

Conventional Physical Security/Countering Nuclear Threats

P041 I CNT Rad/Nuc Passive Defense

ADC&P

LEGEND Planned Actions In-Progress Actions Completed Actions

# Joint Personal Dosimeter (JPD) Milestones

May 2014

																														-		~ -	_
							F	Y 1	5								FY	7 16								FY	17	(ne	t si	ide			
Milestones	Baseline Date	Current Date	Completed Date	Q	1	Г	Q2		Q3	9	(	24		Q1		Q	2		Q3		Q	4		Q1		3	<b>Q</b> 2	Т	Q	3		Q4	
				O N	V D	J	F	M A	M	J	J.	A S	0	N	D	J	M	I A	M	J	J A	s	0	N	D	J	F	M A	N	IJ	J	A	s
System Verification Review	July 2015	Jan 2015			100	Δ																											
Functional Configuration Audit	Mar 2016	Jan 2015			100	Δ																											
JPD MS C	Oct 2016	Jun 2015								Δ																							
Phase 3 Close-out	Sep 2015	Sep 2015										$\triangle$					Т	П					Т	П			П	Т					Г
Product Qualification Testing	Dec 2016 (start)	Jul 2015 (start)									Δ		F	H	4	7										-21							
IOT&E	July 2016 (start)	Feb 2016 (start)														1	4	_															
Log Demo	Sep 2016	May 2016																	Δ									Т					
ЛLA Memo	Feb 2017	Sep 2016																				1	1										
Full Rate Production Decision	Apr 2017	Dec 2017																							Δ	K.							

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
- \*Please use this format. Minor changes acceptable (i.e. annotations)

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**Exhibit R-4**, **RDT&E Schedule Profile:** PB 2016 Office of the Secretary Of Defense

**Appropriation/Budget Activity** 0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and

Conventional Physical Security/Countering
Nuclear Threats

Project (Number/Name)

P041 I CNT Rad/Nuc Passive Defense

Date: February 2015

ADC&P

LEGEND

Planned Actions In-Progress Actions

Completed Actions

# Joint Personal Dosimeter (JPD) Milestones

							FY	15								FY	16							I	Y	17 (	nex	t sli	ide)		
Milestones	Baseline Date	Current Date	Completed Date	Q	1	Q	22	0	23		Q4		Q1	Т	Q	2	- 3	Q3	Т	Q	4		Q1		(	22	Т	Q3	3	-	Q4
				O N	D	J	F M	A	M J	J	A S	0	N :	D	J F	м	А	M .	J ,	J A	s	0	N	D	J	FN	A A	M	J	J	A
System Verification Review	July 2015	Jan 2015				Δ																									
Functional Configuration Audit	Mar 2016	Jan 2015			100	Δ																									
JPD MS C	Oct 2016	Jun 2015							1	7																					
Phase 3 Close-out	Sep 2015	Sep 2015														Т				Т		Г		П		Т	Т				
Product Qualification Testing	Dec 2016 (start)	Jul 2015 (start)								_		F	H	Δ		П									21-		Ī				
IOT&E	July 2016 (start)	Feb 2016 (start)													1	_	Δ										Ī				
Log Demo	Sep 2016	May 2016																Δ													
JILA Memo	Feb 2017	Sep 2016														Т										Т					
Full Rate Production Decision	Apr 2017	Dec 2017																						Δ	S.		T				

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of	Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of Defense  Appropriation/Budget Activity  R-1 Program Flement (Number/Name)									
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)							
0400 / 4	PE 0603161D8Z I Nuclear and	P041 / CN	T Rad/Nuc Passive Defense							
	Conventional Physical Security/Countering	ADC&P								
	Nuclear Threats									

# Schedule Details

	St	art	Eı	nd
Events by Sub Project	Quarter	Year	Quarter	Year
Radiological Detection System				
Radiological Detection System	1	2014	2	2019
Joint Personal Dosimeter				
Joint Personal Dosimeter	4	2014	1	2017

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2016 C	Office of the	Secretary (	Of Defense					Date: Febr	uary 2015	
Appropriation/Budget Activity 0400 / 4					PE 060316	31D8Z I Nuc nal Physica	t (Number/ clear and I Security/C	•		umber/Nan ional Techn	ne) ical Nuclear	Forensics
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
P040: National Technical Nuclear Forensics Systems	-	21.428	12.469	3.351	-	3.351	3.568	6.977	7.192	7.337	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

Nuclear forensics is the thorough collection, analysis and evaluation of radiological and nuclear material in a pre-detonation state and post-detonation radiological or nuclear materials, devices and debris, as well as the immediate effects created by a nuclear detonation. The ability to identify the source of nuclear material from radioactive debris is critical to our national defense and security. Swift and accurate forensic and attribution (identification) capabilities are vital to developing an appropriate national response to a nuclear event and preventing future attacks in a timely manner.

Nuclear Terrorism is one of the most significant and pressing threats identified by national leadership. A credible nuclear forensics program is essential to preventing nuclear terrorism by deterring nations from sponsoring nuclear terrorism. During the Deputy Management Advisory Group process shortfalls and resources to close these gaps were identified and supported by the Deputy Secretary of Defense. The purpose of this program is to develop systems such as ground based Prompt Diagnostic sensors and Particulate Airborne Collection Systems to provide timely and accurate information to national leadership in the area of Nuclear Forensics.

Per DoDI 2060.04 OSD AT&L NCB is the program lead for the Department of Defense in Nuclear Forensics. NCB represents DoD interests in all areas of nuclear forensics but focuses heavily on post-detonation applications due to Presidential guidance assigning the department the lead role in develop, providing, and maintaining post detonation Nuclear Forensics capability.

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

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016	
Title: National Technical Nuclear Forensics Systems	21.428	12.469	3.351	
<b>Description:</b> Advanced development of ground based diagnostic and collection systems. This next generation technology will provide new information that increases accuracy and provides an improved timeline in support of senior leadership decision making.				
<ul> <li>FY 2014 Accomplishments:</li> <li>Developed a Particulate Airborne Collection System that allows additional airborne sampling flexibility to reduce the risk in providing samples for the forensics process</li> <li>Installed, tested and integrated a ground based Prompt Diagnostic systems in various key metropolitan areas</li> </ul>				

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary	Of Defense		Date: February 2015
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
0400 / 4	PE 0603161D8Z I Nuclear and	P040 / Nat	ional Technical Nuclear Forensics
	Conventional Physical Security/Countering	Systems	
	Nuclear Threats		

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
• Developed a Gaseous Airborne Collection System that provides the Department of Defense with mobile nuclear air sampling capability to support collection requirements for treaty verification and National Technical Nuclear Forensics.			
FY 2015 Plans: • Finalize the installation, testing, and operational support and integration of ground based Prompt Diagnostic systems in various key metropolitan areas			
Continue to develop a Gaseous Airborne Collection System that provides the Department of Defense with mobile nuclear air sampling capability to support collection requirements for treaty verification and National Technical Nuclear Forensics.			
FY 2016 Plans: • Finalize the development of a Gaseous Airborne Collection System that provides the Department of Defense with mobile nuclear air sampling capability to support collection requirements for treaty verification and National Technical Nuclear Forensics.			
Accomplishments/Planned Programs Subtotals	21.428	12.469	3.351

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

N/A

**Remarks** 

# D. Acquisition Strategy

N/A

## E. Performance Metrics

The program performance metrics are established/approved through the Countering Nuclear Threats Program Manager. The cost, schedule and technical progress is reviewed on a quarterly basis. Performance variances are addressed and corrective action(s) is(are) implemented as necessary. This is new program focusing on advanced development to meet critical needs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P040 / National Technical Nuclear Forensics
Systems

Product Developmer	nt (\$ in M	illions)		FY 2	2014	FY 2	2015		2016 ise		2016 CO	FY 2016 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	Total Cost	Target Value of Contract
DISCREET OCULUS	Sub Allot	Defense Threat Reduction Agency : Ft. Belvoir, VA	-	12.500		6.000		-		-		-	-	-	-
Modular Whole Air Collection System	Sub Allot	Air Force Technical Applications Center : Patrick AFB, FL	-	0.750		0.678		-		-		-	-	-	-
Particular Airborne Collection System	Sub Allot	Air Force Technical Applications Center : Patrick AFB, FL	-	5.271		5.791		-		-		-	-	-	-
Gobal Initiative Information Portal	IA	Department of State : Washington, DC	-	0.656		-		-		-		-	-	-	-
SOCOM Render Safe	Various	Multiple performers : Multiple locations	-	1.951		-		-		-		-	-	-	-
Airborne Radiation Detection, Identification and Measurement Systems	Sub Allot	Joint Product Manager - Rad / Nuc Defense : Aberdeen, MD	-	-		-		3.351		-		3.351	-	-	-
		Subtotal	-	21.128		12.469		3.351		-		3.351	-	-	-

Management Service	es (\$ in M	illions)		FY 2	2014	FY :	2015		2016 ase	FY 2		FY 2016 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	Total Cost	Target Value of Contract
Nuclear Testing, Diagnostics, Forensics and Stockpile Stewardship Course	IA	Lawrence Livermore National Laboratory : Livermore, CA	-	0.300		-		-		-		-	-	-	-
		Subtotal	-	0.300		-		-		-		-	-	-	-

		OI THE SECIE	tary Of Defer	ise					Date:	February	2015	
Appropriation/Budget Activity 0400 / 4				3161D8	lement (No Z I Nuclear hysical Sec S	and	Project (Numb P040 / National Systems		,	luclear I	-orensics	
	rior ears	FY 2014	FY	2015	FY 2 Ba		FY 2		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	21.428	12.469		3.351		-		3.351	-	-	-

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense

Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0603161D8Z / Nuclear and
Conventional Physical Security/Countering
Nuclear Threats

Date: February 2015

Project (Number/Name)
P040 / National Technical Nuclear Forensics
Systems



# Build & Deploy DISCREET OCULUS Sensor Systems in Washington DC and New York, NY

Version 1							FY	7 14				FY 15									FY 16										
Milestones	Baseline Date	Current	Completed Date	Q	1	(	02		Q3	I	Q4	1	Q		Ç	2	L	Q3	Ţ	Q	•		Q1	I	Q	2		Q3	I	Q4	
Art I was a second				ON	I D	3	F M	A	M J		A	SC	N	D	J	E M	A	M	J :	A	S	O	N	D.	JF	M	A	M	J	A	S
Washington DC installation Complete	Dec 30, 2014	Dec 30, 2014												4																	
New York installation Complete	April 30, 2016	April 30, 2016																									Δ				
						П												П													

#### **PSEP Milestones:**

- Completion of major phases, task items, or deliverables
- Decision/kill points, performance reviews, etc.
- Demonstrations/Events (Please provide start/end dates as depicted)
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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office	of the Secretary Of Defense		Date: February 2015
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
0400 / 4	PE 0603161D8Z I Nuclear and	P040 / Nat	tional Technical Nuclear Forensics
	Conventional Physical Security/Countering	Systems	
	Nuclear Threats		

# Particulate Airborne Collection System and Modular Whole-air Collection System Timeline

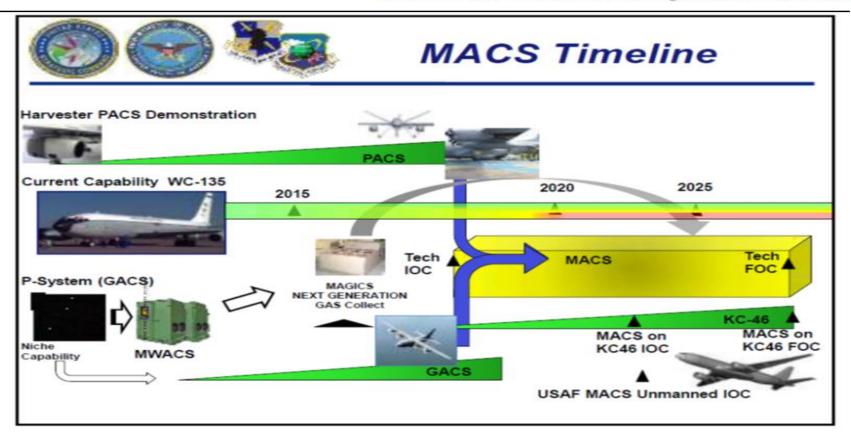


Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of D	)efense		Date: February 2015
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
0400 / 4	PE 0603161D8Z I Nuclear and	P040 / Nat	ional Technical Nuclear Forensics
	Conventional Physical Security/Countering	Systems	
	Nuclear Threats		

# Schedule Details

	Sta	art	Er	nd
Events by Sub Project	Quarter	Year	Quarter	Year
DISCREET OCULUS				
DISCREET OCULUS	1	2014	3	2016
Harvester Particulate Airborne Collection System				
Harvester Particulate Airborne Collection System	1	2014	1	2016
Modular Whole Air Collection System				
Modular Whole Air Collection System	1	2014	1	2016