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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604161D8Z I <i>Nuclear and Conventional Physical Security/Countering Nuclear Threats</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	61.180	12.320	8.314	11.276	-	11.276	7.386	6.321	6.434	6.499	Continuing	Continuing
163: <i>Nuclear and Conventional Physical Security</i>	49.462	12.320	3.914	7.855	-	7.855	7.286	6.321	6.434	6.499	Continuing	Continuing
042: <i>CNT Prevention SDD</i>	11.718	0.000	4.400	3.421	-	3.421	0.100	0.000	0.000	0.000	Continuing	Continuing

Note

The FY2019 funding request was reduced by \$3.461 million to account for the availability of prior year execution balances with payback in FY20 & FY21.

Please note: FY 2018 funding, within internal financial system, was erroneously combined within project code 163 (\$12.320) versus the proper breakout between project codes 163 (\$7.223) and 042 (\$5.097). The internal system cannot be changed at this time preventing us from reporting the actual cost breakdown.

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 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 program will develop systems that are producible, supportable, and affordable and to demonstrate system integration, interoperability, and utility prior to full-rate production. 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 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),

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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. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	12.536	8.333	11.699	-	11.699
Current President's Budget	12.320	8.314	11.276	-	11.276
Total Adjustments	-0.216	-0.019	-0.423	-	-0.423
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.192	-			
• FFRDC	-0.024	-0.019	-	-	-
• INV-D-032 CDBP Bio-Chem Threats Preparedness Reduction	-	-	-0.423	-	-0.423

Change Summary Explanation

Depending on the stages of individual projects funding will transition between RDT&E and procurement program elements.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / <i>Nuclear and Conventional Physical Security/Countering Nuclear Threats</i>	Project (Number/Name) 163 / <i>Nuclear and Conventional Physical Security</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
<i>163: Nuclear and Conventional Physical Security</i>	49.462	12.320	3.914	7.855	-	7.855	7.286	6.321	6.434	6.499	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Please note: FY 2018 funding, within internal financial system, was erroneously combined within project code 163 (\$12.320) versus the proper breakout between project codes 163 (\$7.223) and 042 (\$5.097). The internal system cannot be changed at this time preventing us from reporting the actual cost breakdown.

A. Mission Description and Budget Item Justification

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Under this integrated approach, funds are used to provide 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 program will develop systems that are producible, supportable, and affordable and to demonstrate system integration, interoperability, and utility prior to full-rate production. 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 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.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 163 / Nuclear and Conventional Physical Security

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
<p>Title: Detection and Assessment</p> <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 2019 Plans:</p> <ul style="list-style-type: none"> • Test and evaluate a Joint Interoperable Gateway for Security, Anti-terrorism and Warfighting command control display equipment capable of integrating/supporting the designated USAF physical security sensor and communication module • Test and evaluate commercial-off-the-shelf Indoor Gunshot Detection technologies in applications within DoD facilities • Develop Trace Explosive Detection System Improvement • Test and Evaluate Colorimetric Systems <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> • Continue to test and evaluate commercial-off-the-shelf Indoor Gunshot Detection technologies in applications within DoD facilities • Continue to test and evaluate a Joint Interoperable Gateway for Security, Anti-terrorism and Warfighting command control display equipment capable of integrating/supporting the designated USAF physical security sensor and communication module. <p>FY 2019 to FY 2020 Increase/Decrease Statement: Projects and project cost vary from year to year</p>	4.700	2.137	4.620
<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 2019 Plans:</p> <ul style="list-style-type: none"> • No current projects are being planned in this area <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> • No current projects are being planned in this area <p>FY 2019 to FY 2020 Increase/Decrease Statement: Projects and project cost vary from year to year</p>	0.000	0.000	0.000
<p>Title: Installation and Transport Security</p>	0.000	0.329	0.614

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
<p>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.</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> • Development of Stabilized Crew-Served Heavy Machine Gun Mount <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> • Continue development of Stabilized Crew-Served Heavy Machine Gun Mount <p>FY 2019 to FY 2020 Increase/Decrease Statement: Projects and project cost vary from year to year</p>			
<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 2019 Plans:</p> <ul style="list-style-type: none"> • Continue to develop a counter Unmanned Underwater / Surface / Ground Vehicle technology roadmap <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> • Continue efforts with the Stand-Off Weapon Defeat Integrated Product Team <p>FY 2019 to FY 2020 Increase/Decrease Statement: Projects and project cost vary from year to year</p>	0.927	0.639	1.021
<p>Title: Storage and Safeguards</p> <p>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.</p> <p>FY 2019 Plans:</p>	0.000	0.000	0.000

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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 163 / Nuclear and Conventional Physical Security		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
<ul style="list-style-type: none"> No current projects are being planned in this area <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> No current projects are being planned in this area <p>FY 2019 to FY 2020 Increase/Decrease Statement: There were no changes</p>				
<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 2019 Plans:</p> <ul style="list-style-type: none"> Continue to develop Response Force Command, Control & Communications Continue to develop C2 Enhanced Capability Suite <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> Continue to monitor the test & evaluation of various Physical Security Technologies being developed by the Physical Security Enterprise and Analysis Group and other organizations. <p>FY 2019 to FY 2020 Increase/Decrease Statement: Projects and project cost vary from year to year</p>		0.453	0.136	0.550
<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 Enterprise RDT&E Program.</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> Conduct physical security test and evaluation efforts Provide DOD and industry the means to achieve PSE interoperability <p>FY 2020 Plans:</p>		1.143	0.673	1.050

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
<ul style="list-style-type: none"> • Research, develop and test interoperability bridges for the Security Equipment Integration Working Group (SEIWG) and Integrated Sensor Architecture (ISA) based interface standards <p>FY 2019 to FY 2020 Increase/Decrease Statement: Projects and project cost vary from year to year</p> <p>Title: CNT Rad/Nuc Passive Defense</p> <p>Description: Advanced Development of Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System and the Joint Personal Dosimeter).</p> <p>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.</p> <p>The Joint Personal Dosimeter will provide a joint solution to increase capability and reduce life-cycle costs.</p> <p>Both systems will address Operation TOMODACHI (response to Japan's Fukushima Daiichi nuclear power plant incident) lessons learned for common, interoperable equipment with adequate sensitivity and common units of measure.</p>	5.097	-	-
Accomplishments/Planned Programs Subtotals	12.320	3.914	7.855

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

N/A

Remarks

NA

D. Acquisition Strategy

N/A

E. Performance Metrics

The program performance metrics are established/approved through the Office of the Deputy Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs / Nuclear Matters. The cost, schedule and technical progress of each project is reviewed at quarterly PSEAG. Performance variances are addressed and corrective action is implemented as necessary.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 163 / Nuclear and Conventional Physical Security
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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
National Information Exchange Model	Various	SPAWAR Atlantic : Charleston, SC	0.474	-		-		-		-		-	Continuing	Continuing	-
Military Ocean Terminal	Various	Various : Various	0.285	-		-		-		-		-	-	-	-
Force Protection Cross-Domain	MIPR	PEO IEW&S : Ft Belvoir, VA	0.466	-		-		-		-		-	Continuing	Continuing	-
Tactical Security System	MIPR	PEO IEW&S : Ft Belvoir, MD	0.317	-		-		-		-		-	Continuing	Continuing	-
C2 Enhanced Capability Suite	MIPR	SPAWAR Pacific : Various	0.650	0.070		-		-		-		-	Continuing	Continuing	-
Foliage Penetration	MIPR	Various : Various	0.187	-		-		-		-		-	Continuing	Continuing	-
ESS Cyber Security Assessment	MIPR	Various : Various	0.261	-		-		-		-		-	Continuing	Continuing	-
Indoor Gunshot Detection System	MIPR	SPAWAR Atlantic : Charleston, SC	0.427	0.291		0.208		0.208		-		0.208	-	-	-
Physical Security RDT&E	Various	Various : Various	42.731	0.123		-		-		-		-	Continuing	Continuing	-
Interoperability Standards	MIPR	SPAWAR Atlantic : Charleston, SC	-	1.346		-		-		-		-	Continuing	Continuing	-
Trace Explosive Detection System Improvement	MIPR	EOD Tech Division : Indian Head, MD	-	0.526		0.826		0.829		-		0.829	-	-	-
Integrating MANTAS USA with NUTR COP	MIPR	SPAWARSYSCEN Pacific : San Diego, CA	-	0.249		-		-		-		-	-	-	-
Detection & Assessment	Various	Various : Various	-	-		-		2.476		-		2.476	Continuing	Continuing	-
Access Control	Various	Various : Various	-	-		-		-		-		-	Continuing	Continuing	-
Storage & Safeguards	Various	Various : Various	-	-		-		-		-		-	Continuing	Continuing	-
Analytical Support	Various	Various : Various	-	-		-		1.119		-		1.119	Continuing	Continuing	-
Decision Support	Various	Various : Various	-	-		-		0.298		-		0.298	Continuing	Continuing	-
Prevention	Various	Various : Various	-	-		-		0.128		-		0.128	Continuing	Continuing	-
Installation & Transport Security	Various	Various : Various	-	-		-		-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 163 / Nuclear and Conventional Physical Security
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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Stablized Crew-Served Heavy Machine Gun Mount	MIPR	NSWC Crane : Crane, IN	-	-		0.329		0.614		-		0.614	Continuing	Continuing	-
JIGSAW - TASS Integration	MIPR	Multiply Performers : Multiple Locations	-	0.776		0.607		0.569		-		0.569	Continuing	Continuing	-
Radiological Detection System	Sub Allot	JPEO CBD : Aberdeen, MD	-	5.097		-		-		-		-	Continuing	Continuing	-
Subtotal			45.798	8.478		1.970		6.241		-		6.241	Continuing	Continuing	N/A

Remarks
NA

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PSEAG T&E	MIPR	SPAWAR Atlantic : Charleston, SC	0.650	0.123		0.123		-		-		-	Continuing	Continuing	-
Comparative Evaluation of Man-Portable Mass Spectrometry Explosive Detection Systems	MIPR	EOD Tech Division : Indian Head, MD	0.918	-		-		-		-		-	-	-	-
Comparative Colorimetric	MIPR	EOD Tech Division : Indian Head, MD	0.978	0.172		0.998		0.669		-		0.669	-	-	-
Detection of Insensitive Munitions	MIPR	EOD Tech Division : Indian Head, MD	0.465	-		-		-		-		-	-	-	-
Development, Test and Evaluation of System Operations Audit and Recording	MIPR	SPAWAR Atlantic : Charleston, SC	0.653	-		-		-		-		-	-	-	-
Explosive Vapor Detection Test & Evaluation	MIPR	EOD Tech Division : Indian Head, MD	-	0.603		-		-		-		-	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

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Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Raman Comparative	MIPR	EOD Tech Division : Indian Head, MD	-	0.713		-		-		-		-	-	-	-
Radiological Detection System	Sub Allot	JPEO CBD : Aberdeen, MD	-	0.248		-		-		-		-	-	-	-
Stand-Off Weapon Defeat IPT	MIPR	NSWC Dahlgren Division : Dahlgren Division	-	1.231		0.203		0.693		-		0.693	-	-	-
PSEAG Test & Evaluation	MIPR	Multiple Performers : Multiple Performers	-	-		-		0.252		-		0.252	Continuing	Continuing	-
C-UAS in the Homeland	MIPR	Multiple Performers : Multiple Locations	-	0.752		0.620		-		-		-	Continuing	Continuing	-
Subtotal			3.664	3.842		1.944		1.614		-		1.614	Continuing	Continuing	N/A

Remarks
NA

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	49.462	12.320	3.914	7.855	-	7.855	Continuing	Continuing	N/A

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 163 / Nuclear and Conventional Physical Security



PSEAG REQUIREMENTS PROCESS





Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / <i>Nuclear and Conventional Physical Security/Countering Nuclear Threats</i>	Project (Number/Name) 163 / <i>Nuclear and Conventional Physical Security</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Detection & Assessment</i>				
Detection & Assessment	1	2012	4	2024
<i>Decision Support</i>				
Decision Support	1	2012	4	2024
<i>Storage & Safeguards</i>				
Storage & Safeguards	1	2012	4	2024
<i>Installation & Transport Security</i>				
Installation & transport Security	1	2012	4	2024
<i>Prevention</i>				
Prevention	1	2012	4	2024
<i>Access Control</i>				
Access Control	1	2012	4	2024
<i>Analytical Support</i>				
Analytical Support	4	2018	4	2024

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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 042 / CNT Prevention SDD
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
042: CNT Prevention SDD	11.718	0.000	4.400	3.421	-	3.421	0.100	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Please note: FY 2018 funding, within internal financial system, was erroneously combined within project code 163 (\$12.320) versus the proper breakout between project codes 163 (\$7.223) and 042 (\$5.097). The internal system cannot be changed at this time preventing us from reporting the actual cost breakdown.

A. Mission Description and Budget Item Justification

Establish a Defense-wide Nuclear Threat Reduction (NTR) Materiel Development Program focused on transitioning maturing technology development into operational capabilities that address gaps identified by Services, Combatant Commands, and Joint Staff. The CNT acquisition strategy directly applies to Joint requirements for CNT materiel development and addresses the materiel and sustainment gaps for general purpose Joint Forces including the US Army 20th CBNECommand / Navy Visit, Board, Search, and Seizure / Technical Support Groups (NIMBLE ELDER and the US Special Operations Command).

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

	FY 2018	FY 2019	FY 2020
Title: CNT Rad/Nuc Passive Defense	0.000	4.400	3.421
Description: 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 (response to Japan's Fukushima Daiichi nuclear power plant incident) lessons learned for common, interoperable equipment with adequate sensitivity and common units of measure.			
FY 2019 Plans: Continue the development of Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System)			
FY 2020 Plans: Complete the development of Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System)			
FY 2019 to FY 2020 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Office of the Secretary Of Defense	Date: February 2019
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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / <i>Nuclear and Conventional Physical Security/Countering Nuclear Threats</i>	Project (Number/Name) 042 / <i>CNT Prevention SDD</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
No change			
Accomplishments/Planned Programs Subtotals	0.000	4.400	3.421

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 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Office of the Secretary Of Defense **Date:** February 2019

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 042 / CNT Prevention SDD
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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Radiological Detection System	Sub Allot	JPEO CBD : Aberdeen, MD	1.901	0.000		4.400		3.421		-		3.421	Continuing	Continuing	-
Joint Personal Dosimeter	Sub Allot	JPEO CBD : Aberdeen, MD	9.817	-		-		-		-		-	Continuing	Continuing	-
Active Prevention System	TBD	TBD : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Subtotal			11.718	0.000		4.400		3.421		-		3.421	Continuing	Continuing	N/A

Remarks
Please note: FY 2018 funding, within internal financial system, was erroneously combined within project code 163 (\$12.320) versus the proper breakout between project codes 163 (\$7.223) and 042 (\$5.097). The internal system cannot be changed at this time preventing us from reporting the actual cost breakdown.

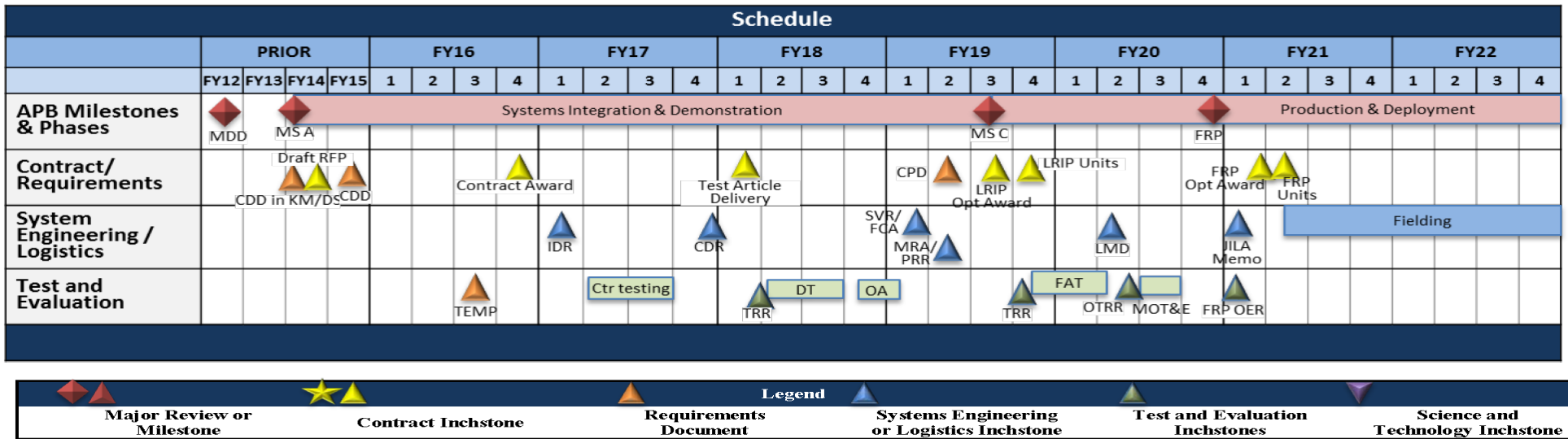
	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.718	0.000	4.400	3.421	-	3.421	Continuing	Continuing	N/A

Remarks
Please note: FY 2018 funding, within internal financial system, was erroneously combined within project code 163 (\$12.320) versus the proper breakout between project codes 163 (\$7.223) and 042 (\$5.097). The internal system cannot be changed at this time preventing us from reporting the actual cost breakdown.

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 042 / CNT Prevention SDD

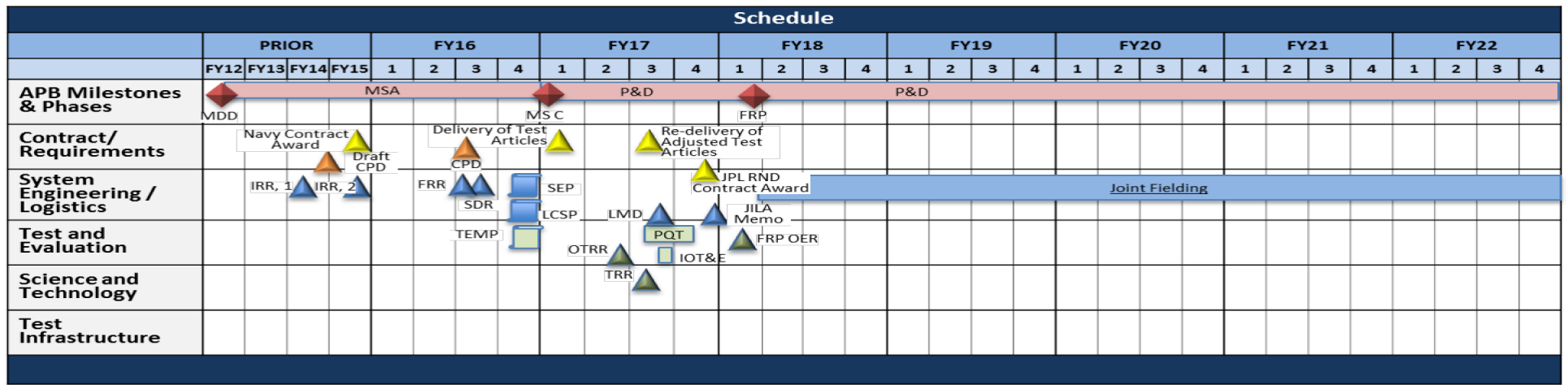
Radiological Detection System



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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / Nuclear and Conventional Physical Security/Countering Nuclear Threats	Project (Number/Name) 042 / CNT Prevention SDD

Joint Personal Dosimeter



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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Office of the Secretary Of Defense		Date: February 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604161D8Z / <i>Nuclear and Conventional Physical Security/Countering Nuclear Threats</i>	Project (Number/Name) 042 / <i>CNT Prevention SDD</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Radiological Detection System</i>				
Radiological Detection System	1	2018	4	2020
<i>Joint Personal Dosimeter</i>				
Joint Personal Dosimeter	4	2014	1	2018
<i>Active Prevention System</i>				
Active Prevention System	1	2019	4	2024