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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					R-1 Program Element (Number/Name)							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					PE 0607310D8Z / <i>CWMD Systems: Operational Systems Development</i>							
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	10.588	6.945	5.902	12.734	-	12.734	13.209	12.320	12.552	12.679	Continuing	Continuing
242: <i>Operational System Development</i>	10.588	6.945	5.902	12.734	-	12.734	13.209	12.320	12.552	12.679	Continuing	Continuing

Note

Decrease from FY 2018 to FY2019 the result of reallocation of resources across the portfolio to better support the full RDT&E cycle and technology insertions. Increase from FY2019 to FY2020 the result of further reallocation of resources to gain efficiencies following the elimination of BA-6 / PE#0306310D8Z and combination of O&M projects CWMD Sustainment with Threat Reduction and Arms Control.

A. Mission Description and Budget Item Justification

The Countering Weapons of Mass Destruction (CWMD) Systems program provides funding for research, development, integration, and deployment of CWMD capabilities. Funding is allocated to a portfolio of projects and activities in response to Combatant Command, joint, and Military Service capability needs and research initiatives. The CWMD Systems program supports the National Defense Strategy objective of “dissuading, preventing, or deterring state adversaries and non-state actors from acquiring, proliferating, or using weapons of mass destruction.”

The CWMD Systems program is organized to develop, enhance, mature and transition technologies across the RDT&E continuum, from Advanced Technology Development through Operational Systems Development, as well as limited sustainment in unique cases. A focus area is investment in CWMD-related technologies that require additional development to transition to fielded capabilities, in response to validated, prioritized requirements. This effort fills a seam in which capability gaps are not being addressed adequately or sufficiently to meet warfighter needs. The CWMD Systems program closes gaps identified by specialized military units and leverages prior S&T investments to continue development and fielding of operational systems to those units.

The program’s legacy focus on CWMD situational awareness capabilities remains a significant component of the investment portfolio. U.S. Special Operations Command, which assumed CWMD mission responsibilities in January 2017 per the Unified Command Plan, is providing focus and guidance for development of CWMD situational awareness capabilities. The CWMD Systems program funds initiatives to close CWMD situational awareness gaps by leveraging mature technologies, modifying existing systems, and utilizing technology-enabled analytical cells to provide support to Combatant Commands and other joint and Service commands. These cells curate, synthesize, and contextualize CWMD information for end-users. This hybrid approach facilitates cross-organizational information sharing and collaboration, necessary for addressing the transregional character of WMD proliferation.

During FY 2018 and FY 2019 the CWMD Systems program utilized four Research, Development, Test & Evaluation (RDT&E) program elements (BA-3 / PE#0303310D8Z, BA-5 / PE#0305310D8Z, BA-6 / PE#0306310D8Z, and BA-7 / PE#0607310D8Z), as well as an Operations and Maintenance (O&M) "CWMD Sustainment" line (PE#0901388D8Z ORC-2531). Reallocation of resources beginning in FY 2020 will eliminate the BA-6 / PE#0306310D8Z program element and address O&M requirements with the "Threat Reduction and Arms Control" line (PE#0901388D8Z ORC-3501).

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607310D8Z / <i>CWMD Systems: Operational Systems Development</i>
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This Program Element (PE) funds upgrades and improvements to fielded systems or system components or enhancements to prototype technologies that are designed for the CWMD mission or can be repurposed to support it. Funding is used to integrate prototypes into existing systems or modify and enhance existing systems.

This appropriation funds travel to support the requirements of this program, and 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, development 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	7.222	5.915	8.489	-	8.489
Current President's Budget	6.945	5.902	12.734	-	12.734
Total Adjustments	-0.277	-0.013	4.245	-	4.245
• Congressional General Reductions	0.000	-			
• Congressional Directed Reductions	0.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	0.000	-			
• Congressional Directed Transfers	0.000	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.263	-			
• FFRDC reduction	-0.014	-0.013			
• Reallocation from other CWMS Systems	-	-	4.722	-	4.722
PEs					
• Economic adjustment	-	-	-0.477	-	-0.477

Change Summary Explanation

Decrease from FY 2018 to FY2019 the result of reallocation of resources across the portfolio to better support the full RDT&E cycle and technology insertions. Increase from FY2019 to FY2020 the result of further reallocation of resources to gain efficiencies following the elimination of BA-6 / PE# 0306310D8Z and combination of O&M projects CWMD Sustainment with Threat Reduction and Arms Control.

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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 / 7					R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: <i>Operational Systems Development</i>				Project (Number/Name) 242 / <i>Operational System Development</i>			
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
242: <i>Operational System Development</i>	10.588	6.945	5.902	12.734	-	12.734	13.209	12.320	12.552	12.679	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Decrease from FY 2018 to FY2019 the result of reallocation of resources across the portfolio to better support the full RDT&E cycle and technology insertions. Increase from FY2019 to FY2020 the result of further reallocation of resources to gain efficiencies following the elimination of BA-6 / PE#0306310D8Z and combination of O&M projects CWMD Sustainment with Threat Reduction and Arms Control.

A. Mission Description and Budget Item Justification

The Countering Weapons of Mass Destruction (CWMD) Systems program provides funding for research, development, integration, and deployment of CWMD capabilities. Funding is allocated to a portfolio of projects and activities in response to Combatant Command, joint, and Military Service capability needs and research initiatives.

The CWMD Systems program is organized to develop, enhance, mature and transition technologies across the RDT&E continuum, from Advanced Technology Development through Operational Systems Development, as well as limited sustainment in unique cases. A focus area is investment in CWMD-related technologies that require additional development to transition to fielded capabilities, in response to validated, prioritized requirements. This effort fills a seam in which capability gaps are not being addressed adequately or sufficiently to meet warfighter needs. The CWMD Systems program closes gaps identified by specialized military units and leverages prior S&T investments to continue development and fielding of operational systems to those units.

The program's legacy focus on CWMD situational awareness capabilities remains a significant component of the investment portfolio. U.S. Special Operations Command, which assumed CWMD mission responsibilities in January 2017 per the Unified Command Plan, is providing focus and guidance for development of CWMD situational awareness capabilities. The CWMD Systems program funds initiatives to close CWMD situational awareness gaps by leveraging mature technologies, modifying existing systems, and utilizing technology-enabled analytical cells to provide support to Combatant Commands and other joint and Service commands. These cells curate, synthesize, and contextualize CWMD information for end-users. This hybrid approach facilitates cross-organizational information sharing and collaboration, necessary for addressing the transregional character of WMD proliferation.

During FY 2018 and FY 2019 the CWMD Systems program utilized four Research, Development, Test & Evaluation (RDT&E) program elements (BA-3 / PE#0303310D8Z, BA-5 / PE#0305310D8Z, BA-6 / PE#0306310D8Z, and BA-7 / PE#0607310D8Z), as well as an Operations and Maintenance (O&M) "CWMD Sustainment" line (PE#0901388D8Z ORC-2531). Reallocation of resources beginning in FY 2020 will eliminate the BA-6 / PE#0306310D8Z program element and address O&M requirements with the "Threat Reduction and Arms Control" line (PE#0901388D8Z ORC-3501).

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: <i>Operational Systems Development</i>	Project (Number/Name) 242 / <i>Operational System Development</i>
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This Program Element (PE) funds upgrades and improvements to fielded systems or system components or enhancements to prototype technologies that are designed for the CWMD mission or can be repurposed to support it. Funding is used to integrate prototypes into existing systems or modify and enhance existing systems.

This appropriation funds travel to support the requirements of this program, and 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, development and test and evaluation efforts.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
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Title: P*242: Operational Systems Development	6.945	5.902	12.734
<p>Description: Funds upgrades and improvements to fielded systems or system components, or enhancements to prototype technologies, that are designed for the CWMD mission or can be repurposed to support it. Funding is used to integrate prototypes into existing systems or modify and enhance existing systems. Address the prioritized capability needs of existing information systems and other platforms to augment, upgrade and enhance core CWMD capabilities.</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> • Upgrade and enhance technologies, applications, and information systems, focusing on systems in use by U.S. Special Operations Command and other Combatant Commands • Enhance or upgrade components of the DoD CWMD User-Defined Operational Picture (UDOP) in support of USSOCOM and other Combatant Commands • Enhance or upgrade systems or components for specialized military units requiring unique CWMD capabilities • Continue/complete development, integration, and/or modification of technologies, systems, and/or applications to meet CWMD capability needs of Combatant Commands and specialized military units, building upon projects initiated in FY2018 • Complete CWMD-related research and analysis conducted by faculty and military/civilian students at DoD academic institutions <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> • Upgrade and enhance technologies, applications, and information systems, focusing on systems in use by U.S. Special Operations Command and other Combatant Commands • Enhance or upgrade systems or components for specialized military units requiring unique CWMD capabilities • Continue development, integration, and/or modification of technologies, systems, and/or applications to meet capability needs of Combatant Commands and specialized military units, building upon projects initiated in FY2019 • Complete CWMD-related research and analysis conducted by faculty and military/civilian students at DoD academic institutions <p>FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY2019 to FY2020 the result of reallocation of resources to gain efficiencies following the elimination of BA-6 / PE#0306310D8Z and combination of O&M projects CWMD Sustainment with Threat Reduction and Arms Control.</p>			
Accomplishments/Planned Programs Subtotals	6.945	5.902	12.734

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

N/A

Remarks

D. Acquisition Strategy

Make improvements to fielded systems and identify how capabilities can be further improved through interoperability between fielded systems.

E. Performance Metrics

Success in this area is measured by compliance with various statutes and DoD directives that govern the conduct of the affairs within the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (OASD/NCB). Maintain cost, schedule, and performance reporting, review, and adjudication. Maintain requirements traceability matrix.

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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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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			
Upgrade & enhance SOF technologies, applications & information systems	MIPR	AFTAC : TBD	-	1.737	Jan 2018	1.479	Jan 2019	3.184		-		3.184	Continuing	Continuing	-
Upgrade & enhance DoD User-Defined Operational Picture (UDOP) in support of USSOCOM & other Combatant Commands	MIPR	USSOCOM : TBD	-	1.736	Feb 2018	1.477	Feb 2019	3.184		-		3.184	Continuing	Continuing	-
Enhance warfighter capability to collect WMD samples	Various	TBD : TBD	-	1.736	Mar 2018	1.479	Feb 2019	3.184		-		3.184	Continuing	Continuing	-
Enhance AFTAC capabilities to support nuclear treaty monitoring and nuclear event detection	MIPR	AFTAC : TBD	-	1.736	Jan 2018	1.467	Jan 2019	3.182		-		3.182	Continuing	Continuing	-
Upgrade fielded CWMD Systems and componenets	Various	Various : Various	10.588	-		-		-		-		-	Continuing	Continuing	-
Subtotal			10.588	6.945		5.902		12.734		-		12.734	Continuing	Continuing	N/A

Project Cost Totals	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	10.588	6.945	5.902	12.734	-	12.734	Continuing	Continuing	N/A

Remarks
 Decrease from FY 2018 to FY2019 the result of reallocation of resources across the portfolio to better support the full RDT&E cycle and technology insertions. Increase from FY2019 to FY2020 the result of further reallocation of resources to gain efficiencies following the elimination of BA-6 / PE#0306310D8Z and combination of O&M projects CWMD Sustainment with Threat Reduction and Arms Control.

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Office of the Secretary Of Defense		Date: February 2019
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**CWMD Systems: Operational System Development
BA 7 / PE 0607310D8Z**

FY17				FY18				FY19				FY20				FY21				FY22				FY23			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Upgrade fielded CWMD Systems & components																											
				Upgrade & enhance SOF technologies, applications & information systems																							
				Upgrade & enhance DoD User-Defined Operational Picture (UDOP) in support of USSOCOM & others																							
				Enhance warfighter capability to collect WMD samples																							
				Enhance AFTAC capabilities to support nuclear treaty monitoring & nuclear event detection																							