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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Office of the Secretary Of Defense **Date:** May 2017

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)					PE 0303310D8Z / Countering Weapons of Mass Destruction (CWMD) Systems: Advanced Technology Development (ATD)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	131.643	40.938	44.836	33.382	-	33.382	24.454	17.193	24.392	27.775	Continuing	Continuing
P*004: Countering Weapons of Mass Destruction (CWMD) Systems	131.643	40.938	44.836	33.382	-	33.382	24.454	17.193	24.392	27.775	Continuing	Continuing

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 needs and research initiatives.

A focal point of this program is development of CWMD situational awareness capabilities. The Joint Requirements Oversight Council approved the Information Systems Initial Capabilities Document for CWMD Situational Awareness on 23 December 2015, which identifies the need for a family of systems to mitigate capability gaps identified by the Combatant Commands. U.S. Special Operations Command, which assumed CWMD mission responsibilities in January 2017 per the Unified Command Plan, is providing focus and direction for development of CWMD situational awareness capabilities. Gaining situational awareness of weapons of mass destruction (WMD) threats and risks, as well as U.S. and international efforts to counter WMD proliferation, requires expertise and information access. Relevant information is spread across disconnected systems, on multiple networks, and in the open source domain, making it difficult to discover and use information to support mission needs. WMD-related situations in recent years, including the removal of chemical weapons from Syria and the response to the West African Ebola outbreak, have demonstrated the need for Combatant Commands to access and share CWMD information, collaborate on planning and operations, and have a common understanding of the operational environment with mission partners. CWMD Systems is addressing existing gaps and deficiencies through a portfolio of investments.

The CWMD Systems program provides funding for two technology-enabled fusion cells at the Defense Threat Reduction Agency (DTRA) and the Defense Intelligence Agency (DIA), which utilize information systems and applications to enable CWMD situational awareness. Existing DoD information systems, networks, and applications are utilized and/or modified using CWMD Systems funding. Development of new applications reuses software to the extent possible. The DTRA and DIA cells curate, synthesize, and contextualize CWMD information for end-users. This hybrid approach facilitates cross-organizational information sharing and collaboration, necessary for addressing the trans regional character of WMD proliferation.

The CWMD Systems program utilizes 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 (ORC-2531).

This Program Element (PE) funds research, development, testing, and evaluation of materiel and non-materiel solutions to develop CWMD capabilities. Funds are used for software development and integration, including development of new applications for existing systems; contractor personnel for fusion cells at DTRA and DIA; research partnerships with DoD and civilian academic institutions, FFRDCs and UARCs; and interagency table-top exercises conducted on behalf of Combatant Commands.

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0303310D8Z <i>I Countering Weapons of Mass Destruction (CWMD) Systems: Advanced Technology Development (ATD)</i>
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	42.404	44.836	42.436	-	42.436
Current President's Budget	40.938	44.836	33.382	-	33.382
Total Adjustments	-1.466	0.000	-9.054	-	-9.054
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.466	-			
• Realignment to Other Programs	-	-	-9.054	0.000	-9.054

Change Summary Explanation

Change in FY2018 from previous President's Budget to Current President's Budget is due to reallocation of resources to two new Program Elements (05/030531D8Z and 06/0306310D8Z) to support transition of mature technologies to acquisition programs of record.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Office of the Secretary Of Defense										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0303310D8Z / <i>Countering Weapons of Mass Destruction (CWMD) Systems: Advanced Technology Development (ATD)</i>				Project (Number/Name) P*004 / <i>Countering Weapons of Mass Destruction (CWMD) Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P*004: <i>Countering Weapons of Mass Destruction (CWMD) Systems</i>	131.643	40.938	44.836	33.382	-	33.382	24.454	17.193	24.392	27.775	Continuing	Continuing

A. Mission Description and Budget Item Justification

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A focal point of this program is development of CWMD situational awareness capabilities. The Joint Requirements Oversight Council approved the Information Systems Initial Capabilities Document for CWMD Situational Awareness on 23 December 2015, which identifies the need for a family of systems to mitigate capability gaps identified by the Combatant Commands. U.S. Special Operations Command, which assumed CWMD mission responsibilities in January 2017 per the Unified Command Plan, is providing focus and direction for development of CWMD situational awareness capabilities. Gaining situational awareness of weapons of mass destruction (WMD) threats and risks, as well as U.S. and international efforts to counter WMD proliferation, requires expertise and information access. Relevant information is spread across disconnected systems, on multiple networks, and in the open source domain, making it difficult to discover and use information to support mission needs. WMD-related situations in recent years, including the removal of chemical weapons from Syria and the response to the West African Ebola outbreak, have demonstrated the need for Combatant Commands to access and share CWMD information, collaborate on planning and operations, and have a common understanding of the operational environment with mission partners. CWMD Systems is addressing existing gaps and deficiencies through a portfolio of investments.

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This Program Element (PE) funds research, development, testing, and evaluation of materiel and non-materiel solutions to develop CWMD capabilities. Funds are used for software development and integration, including development of new applications for existing systems; contractor personnel for fusion cells at DTRA and DIA; research partnerships with DoD and civilian academic institutions, FFRDCs and UARCs; and interagency table-top exercises conducted on behalf of Combatant Commands.

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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 2016	FY 2017	FY 2018
Title: Countering Weapons of Mass Destruction (CWMD) Systems		40.938	44.836	33.382
Description: Research, develop, test, and evaluate materiel and non-materiel solutions to develop CWMD capabilities. Funds are used for software development and integration, including development of new applications for existing systems; contractor personnel for fusion cells at DTRA and DIA; research partnerships with DoD and civilian academic institutions, FFRDCs and UARCs; and interagency table-top exercises conducted on behalf of Combatant Commands.				
FY 2016 Accomplishments: <ul style="list-style-type: none">• Completed developmental prototype information system (“Constellation 1.0”) and received authority to operate on SIPRNET and the Secure Unclassified Network (SUNet)• The DIA/DTRA cells curated, cross-referenced, and characterized thousands of WMD-related facilities to support situational understanding of global sources of WMD threat materials.• Conducted a large, interagency table-top exercise to gain insights into CWMD situational awareness needs of Combatant Command, interagency and other mission partners• WMD-related research conducted on emerging technologies and impact on WMD proliferation, use of new tools and techniques for monitoring and verification, and proliferation finance.				
FY 2017 Plans: <ul style="list-style-type: none">• Due to FY17 NDAA and appropriation constraints, Constellation 1.0 developmental prototype is discontinued• DTRA and DIA fusion cells are focused on development of CWMD “user defined operational picture” in support of U.S. Special Operations Command• Existing information systems and applications are being used, modified, and/or integrated to support CWMD situational awareness needs.• Sponsored a CWMD senior leader seminar for Commander, U.S. Special Operations Command in Dec 2016• Will conduct another interagency table-top exercise to support U.S. Central Command and U.S. Special Operations Command• WMD-related research will be conducted by Naval Postgraduate School, National Defense University, the Center for Nonproliferation Studies, and the JASONS.				
FY 2018 Plans: <ul style="list-style-type: none">• Continue development, integration, and/or modification of situational awareness systems and applications to meet Combatant Command needs, building upon projects initiated in FY2017• Complete development of CWMD “user defined operational picture” in support of U.S. Special Operations Command				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Conduct table-top exercises and senior leader seminars in support of U.S. Special Operations Command or other Combatant Command request • Continue WMD-related research studies and analyses. 			
Accomplishments/Planned Programs Subtotals		40.938	44.836
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Utilize or reuse information technologies to field initial capabilities to end-users. As technologies mature and user needs are refined, systems or applications may transition to acquisition program(s) or be sustained separately. Integration of or interoperability among systems is also an acquisition pathway.			
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.			