Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Chemical and Biological Defense Program	Date: February 2015
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*

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	-	189.193	180.536	172.754	-	172.754	118.284	59.084	39.362	43.353	Continuing	Continuing
CA4: *CONTAMINATION AVOIDANCE (ACD&P)*	-	16.800	40.088	60.192	-	60.192	41.486	3.372	2.370	7.056	Continuing	Continuing
CM4: *HOMELAND DEFENSE (ACD&P)*	-	1.200	-	-	-	-	-	-	-	-	-	1.200
DE4: *DECONTAMINATION SYSTEMS (ACD&P)*	-	14.748	2.900	1.594	-	1.594	-	-	-	14.000	Continuing	Continuing
IP4: *INDIVIDUAL PROTECTION (ACD&P)*	-	0.588	6.811	4.217	-	4.217	0.400	-	-	-	-	12.016
IS4: *INFORMATION SYSTEMS (ACD&P)*	-	9.085	6.169	7.464	-	7.464	8.355	7.871	1.240	0.870	Continuing	Continuing
MB4: *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	-	132.696	106.380	81.916	-	81.916	49.207	28.642	16.949	7.710	Continuing	Continuing
MC4: *MEDICAL CHEMICAL DEFENSE (ACD&P)*	-	1.970	-	-	-	-	-	-	-	-	-	1.970
TE4: *TEST & EVALUATION (ACD&P)*	-	12.106	18.188	17.371	-	17.371	18.836	19.199	18.803	13.717	Continuing	Continuing

A. Mission Description and Budget Item Justification

Operational forces have an immediate need to survive, safely operate, and sustain operations in a Chemical and Biological (CB) threat environment across the continuum of global, contingency, special operations/low intensity conflict, counternarcotics, and other high-risk missions. This program element supports the Advanced Component Development and Prototypes (ACD&P) of medical and non-medical CB defensive equipment and materiel. Congress directed centralized management of Department of Defense (DoD) medical and non-medical CB Defense initiatives. DoD missions for civil support operations have recently expanded and have resulted in providing focus to develop technologies to support CB counterterrorism initiatives. ADC&P is conducted for an array of chemical, biological, and toxin detection and warning systems providing early warning, collector concentrators, generic detection, improved reagents, and decontamination systems using solutions that will remove and/or detoxify contaminated materiel without damaging combat equipment, personnel, or the environment. CB sensors and diagnostics enhance the Departments environmental and medical surveillance efforts by improving the monitoring and surveillance of threats and forces preparing for and engaged in military operations. These efforts are required to enable military commanders and the Military Health System to prevent, treat, and mitigate threats to individual Service Members and military units. Integration of CB sensor and diagnostic data from the programs in this ACD&P will also be usable within the homeland security and Federal public health common operating pictures.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Chemical and Biological Defense Program	Date: February 2015
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*

The Department of Defense is responsible for research, development, acquisition, and deployment of medical countermeasures to prevent or mitigate the health effects of CB threats to the Armed Forces and directs strategic planning for and oversight of programs to support medical countermeasures development and acquisition for our Armed Forces personnel. The CB medical threat to the Armed Forces, in contrast with public health threats to U.S. citizens, encompasses all potential or continuing enemy actions that can render a Service Member combat ineffective. CB medical threats, because they apply as a whole to military units deployed on a specific mission and/or operations, may result in the unit being unable to complete its mission. CB medical countermeasures developed by DoD, unlike those developed to support U.S. population, must support military commanders practical operational requirements and deployment strategies and must emphasizes prevention of injury and illness and protection of the force. Preventive measures in this ACD&P, such as vaccines against the most likely biological threat agents and traditional / non-traditional chemical agent prophylaxis, conserves fighting strength, decreases the logistics burden by reducing the need for larger deployed hospital footprint and greater demand for tactical and strategic medical evacuation, and satisfies the need for greater flexibility in military planning and operations. When vaccines and other prophylactic medical countermeasures are not available, efforts on this ACD&P support pre-hospitalization treatment, en-route care, hospital care, and long-term clinical outcomes. Specific items in this category include improvements to CB diagnostics and therapeutics to mitigate the consequences of biologic agents and exposure to ionizing radiation due to nuclear or radiological attacks. DoD is the only Federal activity conducting ACD&P on these prophylactic, diagnostic, and therapeutic CB medical countermeasures.

The Department of Defense coordinates its efforts with the Departments of Health and Human Services to promote synergy and minimize redundancy. The Department of Defense ensures coordination by participating in the Public Health Emergency Medical Countermeasures Enterprise interagency strategic planning process ("One Portfolio"). The Department of Defense's longstanding experience and success in CB medical countermeasure research, development, acquisition, and deployment not only ensures protection of the Armed Forces, it also accelerates and improves the overall national efforts in CB medical countermeasure research, development, and acquisition because of its unique facilities, testing capabilities, and trained and experienced personnel.

ACD&P also supports the development of updated test capabilities to evaluate Chemical, Biological, Radiological, and Nuclear Defense systems. Also included is the Techbase Technology Transition effort which validates high-risk/high-payoff technologies that could significantly improve Warfighter capabilities.

The projects in this program element support efforts in the technology development phase of the acquisition strategy and are therefore correctly placed in Budget Activity 4.

FY 2015 funding includes $163.2 million of base funding and $17.3 million of Ebola emergency funding.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Chemical and Biological Defense Program	Date: February 2015
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	189.237	179.236	166.946	-	166.946
Current President's Budget	189.193	180.536	172.754	-	172.754
Total Adjustments	-0.044	1.300	5.808	-	5.808
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-16.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	17.300			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.186	-			
• SBIR/STTR Transfer	-2.230	-			
• Other Adjustments	-	-	5.808	-	5.808

Change Summary Explanation

Funding: N/A

Schedule: N/A

Technical: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program											Date: February 2015	
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*				Project (Number/Name) CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*			
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**
CA4: *CONTAMINATION AVOIDANCE (ACD&P)*	-	16.800	40.088	60.192	-	60.192	41.486	3.372	2.370	7.056	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Advanced Component Development and Prototypes (ACD&P) Project supports Component Advanced Development and System Integration (CAD/SI) of reconnaissance, detection, identification, and hazard prediction equipment, hardware, and software. Experimentation and demonstration will be used in this phase to reduce risk and inform supporting materiel solutions, CONOPS and TTPs. Individual efforts are: (1) Biosurveillance (BSV), (2) Next Generation Chemical Detector (NGCD); (3) Non-Traditional Agent (NTA) Defense: and Test Equipment, Strategy and Support (TESS) focuses on Test Infrastructure improvements and initiatives.

Biosurveillance (BSV) actively gathers, analyzes, and interprets collected information that includes biosphere data that relate to disease activity and threats to human or animal health in order to achieve early warning of health threats, early detection of health events, and overall situational awareness of disease activity. BSV will align the biosurveillance efforts across DoD and national strategies. BSV will scope and influence BSV capabilities as products to meet Warfighter requirements through innovative management of key BSV initiatives. BSV requirements address medical and physical CBRN mission needs spanned in over 11 requirements documents and through Combatant Commander (COCOM) identified needs. BSV funds will support Joint US Forces Korea (USFK) Portal and Integrated Threat recognition (JUPITR) ATD/BSV ATD which will find, demonstrate, transition, and transfer the best operational concepts and technology solutions in support of a holistic approach to countering biological threats from the laboratory to operational use and theater confirmation of a Biological Event. JUPITR ATD will consist of four legs; Early Warning (EW), Biological Identification Capabilities Sets (BICS), Assessment of Environmental Detectors (AED), and Biosurveillance Portal (BSP). The JUPITR ATD will provide the USFK with a holistic biosurveillance capability to provide early warning, detection, collection, identification, and theater confirmation of a Biological event. The JUPITR ATD consists of filling capability gaps through information sharing and communication systems and detection/diagnostic systems for the USFK. Outputs will focus on proving component, CONOPS, and subsystem transition into relevant technologies that are currently programs of record (PORs) NGDS, TDS and CALS. Systems used in Operational Demonstration will be left behind with a two year sustainment plan for continuing use. Whole system live agent test (WSLAT) of AED units will support JPM NBC CA business case analysis for maritime and fixed site Point Biological Detection.

The Next Generation Chemical Detector (NGCD) consists of several detection systems. The systems will address sampling of multiple phases of matter; locating liquids and solids on surfaces; and vapor and aerosol monitoring. NGCD will detect and identify non-traditional agents, chemical warfare agents (CWAs), and toxic industrial chemicals (TICs) in the air and on surfaces. The NGCD will provide improved CWA/TIC selectivity and sensitivity on multiple platforms as well as multiple environments. These detectors will improve detection, consequence management, reconnaissance, and weapons of mass destruction (WMD) interdiction capabilities. The NGCD focuses on developing three detection systems; the NGCD variant 1 - Detector Alarm, the NGCD variant 2 - Survey Detector, and the NGCD variant 3 - Sample Analyzer detectors simultaneously during the TMRR Phase. The NGCD variant 1 will provide Joint Warfighters with a capability to detect and identify Non-Traditional Agents (NTAs), Chemical Warfare Agents (CWAs) and Toxic Industrial Chemicals (TICs) in aerosol and vapor forms. The NGCD variant 2 will provide Joint Warfighters with a capability to detect and identify liquid and solid CWAs, NTAs, and TICs on surfaces. The NGCD variant 3 will provide Joint Warfighters with a capability to collect NTA,

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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CWA, and TIC chemical samples for all states of matter, identify, and quantify the chemical agent of interest in support of reconnaissance, surveillance, site assessment, and decontamination to check and confirm clean.

The Non-Traditional Agent (NTA) Defense program supports the chemical and biological (CB) defense efforts as acquisition programs address emerging threat requirements across the full spectrum of commodities. Dedicated systems engineering analyses to identify projects that will transition information, technologies, and capabilities into acquisition programs that account for the breadth and depth of emerging threats which span the full range of military missions. By leveraging previous work done on NTAs (NTA DETECT) within the DoD, interagency cooperation, and international partnerships, the NTA Defense program will provide essential enablers such as threat understanding; operational impacts of performance trades; and comprehensive, integrated, and layered defense concepts against current NTA threats. The program will develop a balanced portfolio which will target capabilities to reduce risk from technology gaps inherent from emerging threats.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) BSV ***Description:*** Biosurveillance Joint United Forces Korea Portal and Integrated Threat Reduction (JUPITR) Advanced Technology Demonstration (ATD). ***FY 2016 Plans:*** Continue to provide residual capability for the Biological Identification Capability Sets (BICS) under the BSV USFK JUPITR ATD previously funded under MCS through FY2015.	-	-	1.700
Title: 2) BSV ***Description:*** Biosurveillance Joint United Forces Korea Portal and Integrated Threat Reduction (JUPITR) Advanced Technology Demonstration (ATD). ***FY 2016 Plans:*** Continue to provide residual capability for JUPITR Technologies specifically the Assessment of Environmental Detection (AED) previously funded under MSC through FY2015	-	-	6.069
Title: 3) BSV ***Description:*** Biosurveillance Joint United Forces Korea Portal and Integrated Threat Reduction (JUPITR) Advanced Technology Demonstration (ATD). ***FY 2016 Plans:*** Continue to provide residual capability for the Early Warning (EW) component under the BSV USFK JUPITR ATD previously funded under MCS through FY2015.	-	-	2.901
Title: 4) BSV	-	-	4.146

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Biosurveillance Joint United Forces Korea Portal and Integrated Threat Reduction (JUPITR) Advanced Technology Demonstration (ATD). ***FY 2016 Plans:*** Continue to provide residual capability for the Biosurveillance Portal (BSP) under the BSV USFK JUPITR ATD previously funded under MSC through FY2015.			
Title: 5) BSV ***Description:*** Biosurveillance Joint United Forces Korea Portal and Integrated Threat Reduction (JUPITR) Advanced Technology Demonstration (ATD). ***FY 2016 Plans:*** Continue to provide residual capability and operational demonstration test support for AED, EW, BSP and BICS within the USFK JUPITR ATD previously funded under MSC through FY2015.	-	-	2.900
Title: 6) Next Generation Chemical Detector (NGCD) ***FY 2014 Accomplishments:*** Continued Government Integrated Product Development Team, program management, systems engineering and IPT support. ***FY 2015 Plans:*** Continue Government Integrated Product Development Team, program management, systems engineering and IPT support. ***FY 2016 Plans:*** Continue Government Integrated Product Development Team, program management, systems engineering and IPT support.	5.179	7.216	7.299
Title: 7) NGCD ***FY 2014 Accomplishments:*** Initiated Breadboard testing. ***FY 2015 Plans:*** Complete Breadboard testing. Initiate Brassboard testing. ***FY 2016 Plans:*** Complete Brassboard testing. Initiate Final prototype testing and Early Operational Assessment (EOA).	1.500	6.142	10.368
Title: 8) NGCD ***Description:*** NGCD1-Smiths Detection Contract	0.506	0.782	0.933

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Awarded one contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (one system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototype and support government testing. (two systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (five systems at approximately $100,000 each).			
Title: 9) NGCD ***Description:*** NGCD1-Signature Science Contract ***FY 2014 Accomplishments:*** Awarded one contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (one system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (two systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (five systems at approximately $100,000 each).	1.174	4.704	3.425
Title: 10) NGCD ***Description:*** NGCD1- Chemring Chemhound Contract	1.158	2.050	1.927

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Awarded one contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (one system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (two systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (five systems at approximately $100,000 each).			
Title: 11) NGCD ***Description:*** NGCD2-Smiths Detection Contract ***FY 2014 Accomplishments:*** Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).	0.446	0.704	0.839
Title: 12) NGCD ***Description:*** NGCD2-Chemring Contract	1.340	2.429	2.464

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).			
Title: 13) NGCD ***Description:*** NGCD2-FLIR/NOMADICS Contract ***FY 2014 Accomplishments:*** Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).	1.532	3.977	3.622
Title: 14) NGCD ***Description:*** NGCD2-ChemImage Contract	1.061	2.918	3.083

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).			
Title: 15) NGCD ***Description:*** NGCD3-Bruker Contract ***FY 2014 Accomplishments:*** Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).	0.637	2.382	1.786
Title: 16) NGCD ***Description:*** NGCD3-Chemring MARS Contract	1.425	2.494	2.543

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).			
Title: 17) NGCD ***Description:*** NGCD3-Battelle Contract ***FY 2014 Accomplishments:*** Awarded 1 contract to perform system engineering, technical management, technology experimentation, system design, manufactured breadboard prototypes and supported government testing. Breadboard Prototype systems (1 system at approximately $100,000). ***FY 2015 Plans:*** Award option to mature system, design Brassboard prototypes, continue performing system engineering, technical management, technology experimentation, system design, manufacture Brassboard prototypes and support government testing. (2 systems at approximately $100,000 each). ***FY 2016 Plans:*** Complete maturation of Brassboard system. Continue performing system engineering, technical management, technology experimentation, system design, and support government testing. Award option to develop Final prototype systems (5 systems at approximately $100,000 each).	0.842	3.765	3.487
Title: 18) NTA DEFENSE - Technology Assessments ***FY 2016 Plans:***	-	-	0.700

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Initiate testing / characterization of Commercial Off The Shelf (COTS) CB systems to determine potential technology candidates for inclusion into program acquisition strategies to support emerging threat priorities.			
Title: 19) SBIR/STTR	-	0.525	-
FY 2015 Plans: SBIR/STTR - FY15 - Small Business Innovative Research.			
Accomplishments/Planned Programs Subtotals	16.800	40.088	60.192

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• CA5: *CONTAMINATION AVOIDANCE (EMD)*	28.757	50.582	56.104	-	56.104	65.765	93.784	44.238	58.712	Continuing	Continuing
• JF0100: *JOINT CHEMICAL AGENT DETECTOR (JCAD)*	47.262	36.924	7.834	-	7.834	7.547	-	-	-	-	99.567
• JF0104: *NEXT GEN CHEMICAL DETECTOR (NGCD)*	-	-	1.000	-	1.000	2.378	1.000	17.208	17.204	Continuing	Continuing
• JN0900: *NON TRADITIONAL AGENT DETECTION (NTA DETECT)*	1.121	-	-	-	-	-	-	-	-	-	1.121
• JX0300: *BIOSURVEILLANCE (BSV)*	2.450	-	-	-	-	-	-	-	-	-	2.450
• MC0100: *JOINT NBC RECONNAISSANCE SYSTEM (JNBCRS)*	-	3.600	3.600	-	3.600	3.600	3.600	-	-	-	14.400
• MC0101: *CBRN DISMOUNTED RECONNAISSANCE SYSTEMS (CBRN DRS)*	64.398	123.694	108.704	-	108.704	97.789	102.288	134.343	151.179	Continuing	Continuing
• MX0001: *JOINT BIO TACTICAL DETECTION SYSTEM (JBTDS)*	-	-	-	-	-	-	17.385	69.379	69.377	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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D. Acquisition Strategy

BIOSURVEILLANCE (BSV)

BSV is a set of capabilities that acquire, integrate, and analyze medical, environmental, and incident management data using existing and next generation systems, medical and non-medical sample collection tools and identifiers/diagnostics; and transition hardware/software tools and devices as residuals from the Biosurveillance Joint United States Force Korea (USFK) Portal and Integrated Threat Recognition (JUPITR) Advanced Technology Demonstration (ATD). Lessons learned from the ATD will be transitioned to the programs of record associated with the CBDP (such as NGDS, TDS & CALS). The acquisition strategy will address the materiel solutions identified out of the multiple Biosurveillance (BSV) related Analysis of Alternatives (AoA's).

NEXT GENERATION CHEMICAL DETECTOR (NGCD)

System Engineering and market survey results suggested the most effective way to develop NGCD was to divide the program into four unique capabilities to detect and identify the full spectrum of chemical compounds in all phases of matter. The Government awarded ten (10) contracts in June 2014 to support Technology Maturation Risk Reduction (TMRR) acquisition phase activities in three of the four capability areas. Three (3) contracts for the Air Monitoring capability, four (4) contracts for the Surface survey capability, and three (3) contracts for the Multi-Sample Analysis capability. Full and Open competition will be used to award Engineering and Manufacturing Development (EMD) contracts with production options for each capability at Milestone B. Candidates for acceleration to provide partial capability will be selected from either the NGCD2 or NGCD1, based on emerging breadboard test results.

NON TRADITIONAL AGENT DEFENSE (NTA DEFENSE)

The Non-Traditional Agent (NTA) Defense program supports the Chemical Biological Defense Program (CBDP) to develop countermeasures for all emerging threats across all commodities. The NTA Defense program consists of a number of projects and initiatives through full and open contract actions that: (1) evaluate COTS and GOTS technologies and systems, (2) conduct demonstrations and experiments, (3) integrates Intelligence Community threat analysis, JRO/ J-8 operational risk analysis with systems technical performance to identify technologies or systems that can be rapidly developed, and deployed, and/or transitioned to an Acquisition Program for technology insertion or derive an Engineering Change Proposal (ECP) to a fielded system, and (4) coordination of DoD, interagency, international NTA projects. These initiatives allow CBDP/JPEO to mitigate risk against emerging threats and better prepare the warfighter to deal with technological surprise across the full range of military missions.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** NGCD - NGCD - HW S - Prototype System Design #1	C/CPIF	Smiths Detection : Edgewood, MD	0.000	0.506	Jun 2014	0.782	Dec 2014	0.933	Nov 2015	-		0.933	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #2	C/CPIF	Signature Science : Austin, TX	0.000	1.174	Jun 2014	4.704	Jan 2015	3.425	Nov 2015	-		3.425	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #3	C/CPIF	Chemring Detection Systems : Inc., Charlotte, NC	0.000	1.158	Jun 2014	2.050	Dec 2014	1.927	Jan 2016	-		1.927	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #4	C/CPIF	Smiths Detection : Edgewood, MD	0.000	0.446	Jun 2014	0.704	Dec 2014	0.839	Nov 2015	-		0.839	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #5	C/CPIF	Chemring Detection Systems : Inc., Charlotte, NC	0.000	1.340	Jun 2014	2.429	Jan 2015	2.464	Nov 2015	-		2.464	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #6	C/CPIF	FLIR/Nomadics : Stillwater, OK	0.000	1.532	Jun 2014	3.977	Dec 2014	3.622	Nov 2015	-		3.622	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #7	C/CPIF	ChemImage : Pittsburgh, PA	0.000	1.061	Jun 2014	2.918	Dec 2014	3.083	Nov 2015	-		3.083	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #8	C/CPIF	Bruker Detection Corp. : Billerica, MA	0.000	0.637	Jun 2014	2.382	Jan 2015	1.786	Nov 2015	-		1.786	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #9	C/CPIF	Chemring Detection Systems : Inc., Charlotte, NC	0.000	1.425	Jun 2014	2.494	Dec 2014	2.543	Nov 2015	-		2.543	Continuing	Continuing	-
NGCD - HW S - Prototype System Design #10	C/CPIF	Battelle Memorial Institute : Columbus, OH	0.000	0.842	Jun 2014	3.765	Jan 2015	3.487	Nov 2015	-		3.487	Continuing	Continuing	-
** NTA DEFENSE - NTA Defense HW S - COTS Characterization	C/CPFF	Various :	0.000	-		-		0.450	Mar 2016	-		0.450	Continuing	Continuing	-
NTA Defense HW S - COTS Characterization	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	-		-		0.250	Mar 2016	-		0.250	Continuing	Continuing	-
		Subtotal	0.000	10.121		26.205		24.809		-		24.809	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Ten (10) contracts were awarded for Prototype System Design in FY14. FY15 & FY16 provide funds for continuation of those contracts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSV - TD/D C - BSV-BSP residual purchase and sustainment	C/CPAF	Johns Hopkins University - Applied Physics Lab : Laurel, MD	0.000	-		-		4.183	Jan 2016	-		4.183	Continuing	Continuing	-
ES S - Assessment of Environmental Detectors (6 systems at OSAN)	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	-		-		7.132	Jan 2016	-		7.132	Continuing	Continuing	-
TD/D C - BSV - Biological Identification Capability Sets sustainment assays	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	-		-		2.763	Oct 2015	-		2.763	Continuing	Continuing	-
ES S - BSV - Early Warning sustainment costs for software package	MIPR	JPM Guardian : Aberdeen Proving Ground, MD	0.000	-		-		1.838	Oct 2015	-		1.838	Continuing	Continuing	-
** NGCD - ES S - Joint Service T&E/SE IPT	MIPR	Various :	0.000	0.620	Dec 2013	1.017	Nov 2014	1.077	Nov 2015	-		1.077	Continuing	Continuing	-
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	TBD :	0.000	-		0.525		-		-		-	Continuing	Continuing	-
		Subtotal	0.000	0.620		1.542		16.993		-		16.993	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** NGCD - NGCD- OTHT SB - Breadboard Test	MIPR	Various :	0.000	1.500	Apr 2014	-		-		-		-	Continuing	Continuing	-
NGCD - Brassboard Test	MIPR	Various :	0.000	-		6.142	Dec 2014	4.880	Dec 2015	-		4.880	Continuing	Continuing	-
NGCD-OTHT SB - Final Prototype	MIPR	Various :	0.000	-		-		3.603	Dec 2015	-		3.603	Continuing	Continuing	-
NGCD-OTHT SB - Early Operational Assessment (EOA)	MIPR	Various :	0.000	-		-		1.885	Jun 2016	-		1.885	Continuing	Continuing	-
		Subtotal	0.000	1.500		6.142		10.368		-		10.368	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSV - PM/MS S - BSV-BMO Labor & Travel Support	MIPR	JPEO Chem/Bio Defense (JPEO-CBD) : Aberdeen Proving Ground, MD	0.000	-		-		0.500	Aug 2016	-		0.500	Continuing	Continuing	-
PM/MS S - BSV - ECBC Matrix Govt labor	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	-		-		0.800	Oct 2015	-		0.800	Continuing	Continuing	-
PM/MS S - BSV - ECBC ATD Team	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	-		-		0.500	Mar 2015	-		0.500	Continuing	Continuing	-
** NGCD - PM/MS S - Program Management and Systems Engineering Support	MIPR	JPM NBC Contamination Avoidance (JPM NBC CA) : JPEO, Aberdeen Proving Ground, MD	1.044	4.559	Dec 2013	6.199	Nov 2014	6.222	Nov 2015	-		6.222	Continuing	Continuing	-
		Subtotal	1.044	4.559		6.199		8.022		-		8.022	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Also includes the Government Integrated Product Development Team

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.044	16.800		40.088		60.192		-		60.192	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*

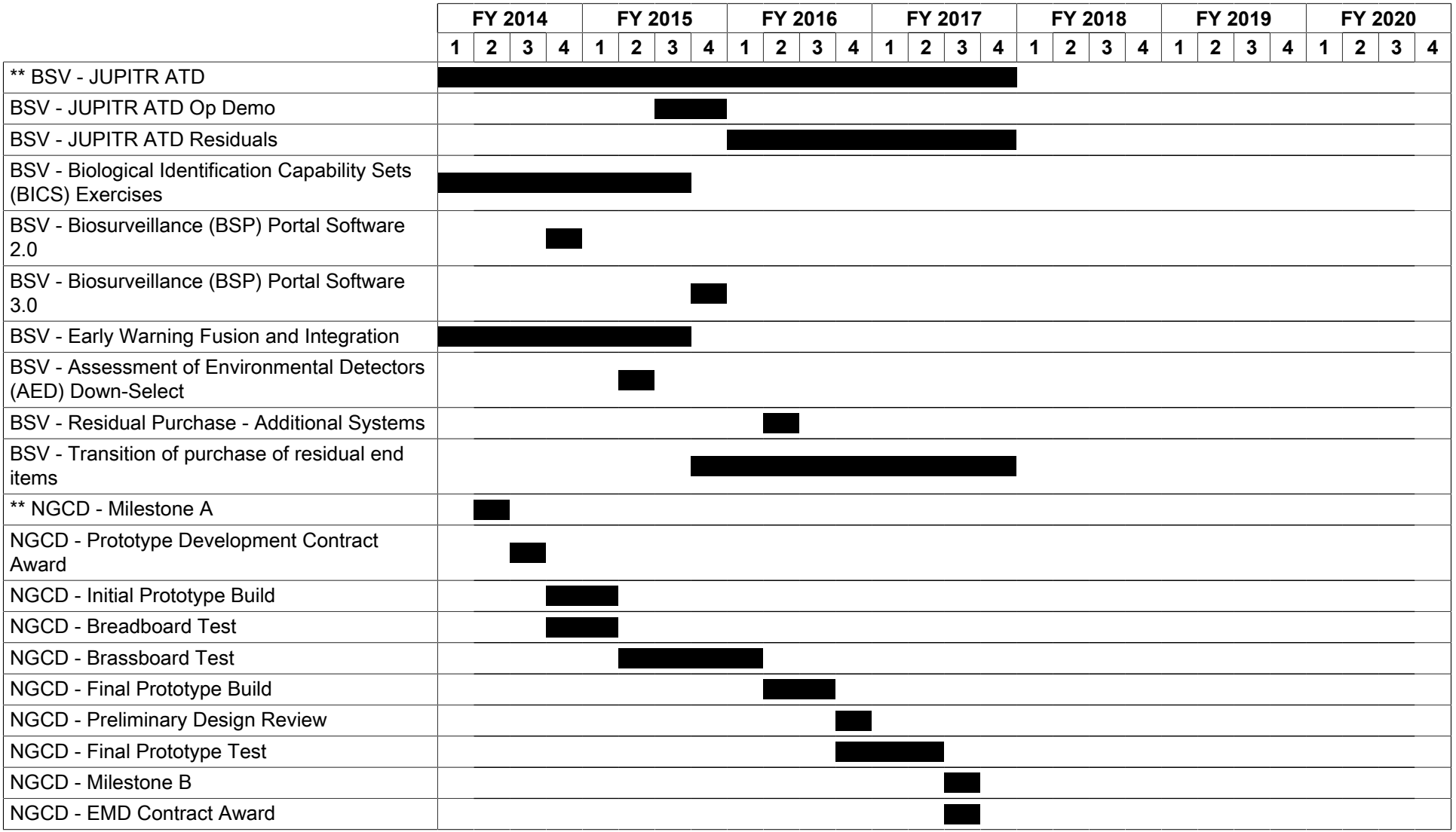

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
** NTA DEFENSE - Technology Assessments: COTS Characterization																												

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** BSV - JUPITR ATD	1	2014	4	2017
BSV - JUPITR ATD Op Demo	3	2015	4	2015
BSV - JUPITR ATD Residuals	1	2016	4	2017
BSV - Biological Identification Capability Sets (BICS) Exercises	1	2014	3	2015
BSV - Biosurveillance (BSP) Portal Software 2.0	4	2014	4	2014
BSV - Biosurveillance (BSP) Portal Software 3.0	4	2015	4	2015
BSV - Early Warning Fusion and Integration	1	2014	3	2015
BSV - Assessment of Environmental Detectors (AED) Down-Select	2	2015	2	2015
BSV - Residual Purchase - Additional Systems	2	2016	2	2016
BSV - Transition of purchase of residual end items	4	2015	4	2017
** NGCD - Milestone A	2	2014	2	2014
NGCD - Prototype Development Contract Award	3	2014	3	2014
NGCD - Initial Prototype Build	4	2014	1	2015
NGCD - Breadboard Test	4	2014	1	2015
NGCD - Brassboard Test	2	2015	1	2016
NGCD - Final Prototype Build	2	2016	3	2016
NGCD - Preliminary Design Review	4	2016	4	2016
NGCD - Final Prototype Test	4	2016	2	2017
NGCD - Milestone B	3	2017	3	2017
NGCD - EMD Contract Award	3	2017	3	2017
** NTA DEFENSE - Technology Assessments: COTS Characterization	1	2016	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program			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
CM4: *HOMELAND DEFENSE (ACD&P)*	-	1.200	-	-	-	-	-	-	-	-	-	1.200
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Experimentation and demonstration will be used in this phase to reduce risk and inform supporting materiel solutions, CONOPS and TTPs.

This Advanced Component Development and Prototypes (ACD&P) Project supports Component Advanced Development and System Integration (CAD/SI) for programs that provide a comprehensive, integrated and layered CBRN protection and response capability for military installations and specialized military consequence management units both at home and abroad. Particular emphasis is placed on improving military-civilian interoperability in CBRN detection and response capabilities; providing tiered levels of CBRN protection and response capabilities to military installations; and tailored modular and integrated Commercial off-the-shelf (COTS) solutions to consequence management units.

This program also supports the acquisition and delivery of an integrated chemical, biological, radiological, nuclear and explosive (CBRNE) rapid response capability for National Guard Bureau's (NGB) Weapons of Mass Destruction Civil Support Teams (WMD-CST) and Special Purpose Units - Chemical Biological Equipment (SPU-CBE) which consists of the CBRNE Enhanced Response Force Package (CERFP), the United States Marine Corps Chemical Biological Incident Response Force (CBIRF) the United States Army Reserve (USARC) Chemical Recon Platoons, Decon Platoons, Defense Support of Civil Authority CBRN Response Force (DCRF), and the 20th Support Command Nuclear Disablement (NDT) and CBRNE Teams. Key activities of this program include ongoing life cycle assessments for the portfolio of fielded commercial-off-the-shelf (COTS) CBRNE equipment, identification and evaluation of emerging technologies, prioritization and fielding of improved capabilities to meet established requirements, and the establishment of institutionalized training. The overall capability package includes hand held detection, protection, decontamination, situational awareness software assessment and sampling tools, The purpose of this program is to address legacy requirements gaps/deficiencies for WMD-CST's and SPU-CBE's where they exist through the streamlined acquisition of COTS/government-off-the-shelf (GOTS) capability upgrades that incorporate proven advancements in technology to satisfy mission performance standards.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) SPU CBE ***Description:*** CBRN Commercial Off-The-Shelf (COTS) Equipment Evaluation ***FY 2014 Accomplishments:*** Conducted evaluation of Commercial Off-The-Shelf (COTS) Equipment in support of the Special Purpose Unit mission requirement.	1.200	-	-
Accomplishments/Planned Programs Subtotals	1.200	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CM4 / *HOMELAND DEFENSE (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• CM5: *HOMELAND DEFENSE (EMD)*	14.311	16.508	17.192	-	17.192	18.108	1.518	-	-	-	67.637
• JS0004: *WMD - CIVIL SUPPORT TEAMS (WMD CST)*	13.866	13.292	5.069	-	5.069	-	-	-	-	-	32.227
• JS0005: *COMMON ANALYTICAL LABORATORY SYSTEM (CALS)*	-	-	-	-	-	17.794	41.181	64.778	63.907	Continuing	Continuing

Remarks

D. Acquisition Strategy

SPU CB EQUIPMENT (SPUCBE)

Evaluate advancements in commercial off the shelf (COTS)/government-off-the-shelf (GOTS) equipment against the current technology baseline of equipment fielded to Special Purpose Units. Establish a time phased modernization plan to integrate and incorporate proven advancements in commercially available technology into the Special Purpose Unit mission set based on highest priority capability requirements and availability of resources.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) CM4 / *HOMELAND DEFENSE (ACD&P)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** SPU CBE - DTE S - CBRN System Evaluation	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	1.200	Oct 2014	-		-		-		-	-	1.200	-
		Subtotal	0.000	1.200		-		-		-		-	-	1.200	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.200		-		-		-		-	-	1.200	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CM4 / *HOMELAND DEFENSE (ACD&P)*	

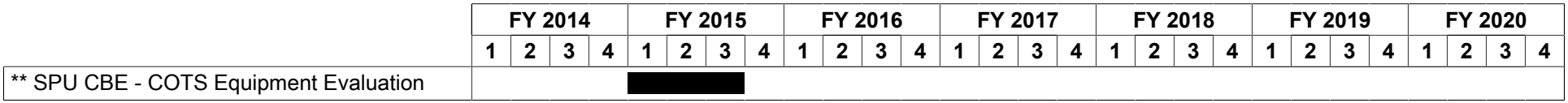

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CM4 / *HOMELAND DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** SPU CBE - COTS Equipment Evaluation	1	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*	

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
DE4: *DECONTAMINATION SYSTEMS (ACD&P)*	-	14.748	2.900	1.594	-	1.594	-	-	-	14.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports the development of Contamination Mitigation (ConMit) systems utilizing solutions that will remove and/or detoxify contaminated material without damaging combat equipment, personnel, or the environment. ConMit systems provide a force restoration capability for units that become contaminated. Development efforts will provide systems that reduce operational impact and logistics burden, reduce sustainment costs, increase safety, and minimize environmental effects associated with decontamination and contamination mitigation operations. Experimentation and demonstration will be used in this phase to reduce risk and inform supporting materiel solutions, CONOPS and TTPs.

The programs supported under this Project include (1) Decontamination Family of Systems (DFoS), (2) Contamination Indicator Decontamination Assurance System (CIDAS), (3) General Purpose Decontaminant (GPD), (4) Joint Service Equipment Wipe (JSEW), and (5) Joint Biological Aircraft Decontamination (JBAD) System.

The DFoS program facilitates the rapid transition of mature Science and Technology (S&T) research efforts to existing Decontamination or ConMit Initial Capabilities Document (ICD) Programs of Record and guides S&T community efforts toward meeting the needs of the Warfighter. Leveraging the outcome of the Materiel Development Decision (MDD) (3QFY11) directed Analysis of Alternatives (AoA), DFoS will develop a Family of Systems (FoS) to provide novel preparatory and responsive contamination mitigation technologies to meet the capability gaps for decontaminating chemical and biological (CB) warfare agents and Non Traditional Agents (NTA) from personnel, equipment, vehicle, ship, and aircraft interiors/exteriors, terrain and fixed facility interiors/exteriors.

CIDAS will provide a contamination indicator/decontamination assurance technology; it will consist of an indicator and an applicator, for which there will be three configurations. The indicator will be sprayed on tactical vehicles, aircraft, ships, crew-served weapons, and individual weapons that may have been exposed to traditional and non-traditional chemical contamination. CIDAS is a new capability for the Joint Forces that will reduce the logistics burden of decontamination by indicating presence and location of traditional (Nerve and Blister) and non-traditional chemical agents on militarily relevant surfaces pre- and post-decontamination.

General Purpose Decontaminant (GPD) is a liquid decontaminant that will provide thorough decontamination capabilities for tactical vehicles, shipboard surfaces, crew-served weapons, and individual/personal weapons in hostile and non-hostile environments that have been exposed to traditional and non-traditional CB contamination.

The Joint Service Equipment Wipe (JSEW) is a decontamination wipe that will provide immediate/operational decontamination capabilities for sensitive and non-sensitive equipment in hostile and non-hostile environments that have been exposed to chemical agents/contamination and shall decontaminate Nerve and Blister agents from a starting liquid challenge of 10 g/m2 to less than or equal to 1 g/m2 and non-traditional agents from a starting liquid challenge of 5 g/m2 to less than or equal to 1 g/m2. In addition, the JSEW is intended to be a replacement for the Individual Equipment Decontamination Kit (M295). Follow on increments of JSEW may include biological agent capability and/or use on skin.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

The JBAD System program is a new start in FY15. The JBAD System will provide thorough biological decontamination of the interior and exterior of tactical and cargo aircraft. The JBAD System is a capability set that will include a shelter to encapsulate an airframe, a decontamination delivery system (e.g. hot-humid air-blower, etc.), environmental control and monitoring system(s), and other ancillary components required to ensure efficacious biological agent decontamination. It will provide the capability to decontaminate biologically contaminated airframes to safe levels and allow more rapid return to service.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) DFoS ***FY 2014 Accomplishments:*** Completed NTA Solid Oxidizer Reformulation effort. Initiated and completed an aircraft contamination mitigation demonstration for thorough decontamination of biological agents.	2.015	-	-
Title: 2) DFoS - CIDAS ***FY 2014 Accomplishments:*** Designed and built large scale applicator prototypes to meet specific User requirements. Completed Technology Demonstrations to include indication efficacy and pot life testing, material compatibility testing, environmental efficacy testing, human factors assessment, accelerated aging testing, and a logistics analysis. Initiated Milestone B and contract documentation.	3.870	-	-
Title: 3) DFoS - CIDAS ***FY 2015 Plans:*** Complete Milestone B and contract documentation.	-	0.298	-
Title: 4) DFoS - GPD ***FY 2014 Accomplishments:*** Completed Competitive Prototyping Phase II and initiated the final phase of Developmental Testing (DT) to include the System Requirements Review (SRR), chemical and biological efficacy testing at relevant environments/conditions, shelf-life, and decontaminant compatibility and Early User Evaluation.	5.351	-	-
Title: 5) DFoS - GPD ***FY 2014 Accomplishments:*** Purchased 13,760 gallons of prototype GPDs (at approximately $41 per gallon) for the final phase of DT.	0.564	-	-
Title: 6) DFoS - JSEW ***FY 2014 Accomplishments:***	2.382	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Completed Competitive Prototyping Phase II and initiated the final phase of Developmental Testing (DT) to include the System Requirements Review (SRR), chemical efficacy testing at relevant environments/conditions, complex surfaces, coverage area, packaging /Military (MIL-STD) 810-G, shelf-life, compatibility and conduct a Critical Design (CDR).			
Title: 7) DFoS - JSEW ***FY 2014 Accomplishments:*** Awarded base contract to purchase 15,000 JSEW test assets (at $10.12 each) for DT and Contract Data Requirements List (CDRLs)/Data Item Descriptions (DIDs).	0.566	-	-
Title: 8) JBAD ***FY 2015 Plans:*** Initiate Request for Proposal (RFP) development, conduct Industry Day, prepare documentation for the Developmental RFP Decision and conduct limited developmental testing. ***FY 2016 Plans:*** Complete and release RFP and prepare documentation to support Milestone B Decision.	-	2.553	1.594
Title: 9) SBIR/STTR ***FY 2015 Plans:*** SBIR/STTR - FY15 - Small Business Innovative Research.	-	0.049	-
Accomplishments/Planned Programs Subtotals	14.748	2.900	1.594

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• DE5: *DECONTAMINATION SYSTEMS (EMD)*	7.519	11.146	16.744	-	16.744	15.854	18.871	7.609	6.676	Continuing	Continuing
• JD0050: *DECONTAMINATION FAMILY OF SYSTEMS (DFoS)*	-	3.450	7.254	-	7.254	10.037	12.621	20.817	15.874	Continuing	Continuing
• JD0063: *CONTAMINATED HUMAN REMAINS POUCH (CHRP)*	-	3.365	1.542	-	1.542	-	-	-	-	-	4.907
• JD0070: *JOINT BIOLOGICAL AGENT DECONTAMINATION SYSTEM (JBAD)*	-	-	-	-	-	-	-	-	16.234	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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C. Other Program Funding Summary ($ in Millions)

Line Item	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

Remarks

D. Acquisition Strategy

DECONTAMINATION FAMILY OF SYSTEMS (DFoS)

The DFoS is utilizing an incremental acquisition strategy to transition various developmental technology efforts (Commercial-Off-The-Shelf (COTS), and DoD technology efforts) to meet high priority Warfighter capability gaps. DFoS will support Major Defense Acquisition Programs (MDAPs) and Programs of Record by guiding S&T efforts and transitioning mature technologies to meet program requirements.

DFoS CONTAMINATION INDICATOR DECONTAMINATION ASSURANCE SYSTEM (DFoS CIDAS)

The CIDAS program will follow an evolutionary acquisition strategy in consonance with the Joint Requirements Office (JRO)/User developed capability documents. Following MS A, collaborated with JSTO/DTRA efforts, including the Hazard Mitigation, Materiel and Equipment Restoration (HaMMER) Advanced Technology Development Operational Demonstration and Extended User Evaluations, and conducted technology demonstrations on candidate indicator and applicator technologies to mitigate risk and identify affordable mature technologies that meet requirements. Determined need for and initiated Government designed large scale applicator to meet specific User requirements. Following MS B, use full and open competition to award a performance based contract with options for LRIP and FRP for indicator and small and mid scale applicator systems. Integrate and test contractor and Government designs in DT and operational testing.

DFoS GENERAL PURPOSE DECONTAMINANT (DFoS GPD)

Due to the maturity levels of the systems entering the Technology Development (TD) phase, the Milestone Decision Authority (MDA) issued an Acquisition Decision Memorandum (ADM) which approved GPD to by-pass Milestone (MS) B and enter directly to MS C Low Rate Initial Production (LRIP). During the TD Phase (which includes CP I, CP II), the GPD Program employed a Competitive Prototyping (CP) effort to facilitate the evaluation of Commercial Off The Shelf (COTS) technologies releasing an Request for Proposal (RFP) as a combined synopsis/solicitation for commercial and Non-Developmental Items (NDI), utilizing full and open competition. As the GPD program enters the final phase of Technology Development (Developmental Test), the program will continue to follow an evolutionary acquisition strategy. The production contract in support of MS C is a single award for LRIP with four option years for FRP, using Full and Open Competition in accordance with FAR Subpart 6.1. This strategy ensures that all prospective sources, with the capability of meeting the program requirements, have the opportunity to participate.

DFoS JOINT SENSITIVE EQUIPMENT WIPE (DFoS JSEW)

Due to the maturity levels of the systems entering the Technology Development (TD) phase, the Milestone Decision Authority (MDA) issued an Acquisition Decision Memorandum (ADM) which approved JSEW to pursue a Milestone (MS) A to MS C Low Rate Initial Production (LRIP) acquisition strategy. During the TD Phase (which

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includes CP I, CP II), the JSEW Program employed a Competitive Prototyping (CP) effort to facilitate the evaluation of Commercial Off The Shelf (COTS) technologies releasing an Request for Proposal (RFP) as a combined synopsis/solicitation for commercial and Non-Developmental Items (NDI), utilizing full and open competition. As the JSEW program enters the final phase of Technology Development (Developmental Test), the program will continue to follow an evolutionary acquisition strategy. The JSEW acquisition strategy to support upcoming JSEW contracting efforts for DT, LRIP, and FRP is a single contract award for DT, with options for LRIP and FRP, using Full and Open Competition in accordance with FAR Subpart 6.1. This strategy ensures that all prospective sources, with the capability of meeting the contract requirements, have the opportunity to participate.

JOINT BIOLOGICAL AGENT DECONTAMINATION SYSTEM (JBAD)

The JBAD System program will leverage the Joint Biological Agent Decontamination System Joint Capability Technology Demonstration to mature and deliver incremental capabilities to meet Air Mobility Command and US Transportation Command needs for interior and exterior decontamination of aircraft against biological agents. The JBAD will employ full and open competition and competitive prototyping during the Engineering Manufacturing and Development (EMD) phase.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** DFoS CIDAS - HW S - Prototype Development	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	0.635	Jan 2014	-		-		-		-	Continuing	Continuing	-
HW S - Prototype Development	C/FFP	AGENTASE LLC : Pittsburgh, PA	0.000	0.018	Mar 2014	-		-		-		-	Continuing	Continuing	-
** DFoS GPD - HW S - Developmental Test Prototypes	C/FFP	STERIS Corporation : Mentor, OH	0.000	0.564	Aug 2014	-		-		-		-	Continuing	Continuing	-
** DFoS JSEW - HW S - Development Testing Prototypes	C/FFP	STERIS Corporation : Mentor, OH	0.000	0.566	Sep 2014	-		-		-		-	Continuing	Continuing	-
		Subtotal	0.000	1.783		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** DFoS - TD/D S - IPT and Technical Support	MIPR	Various :	3.767	0.163	Jan 2014	-		-		-		-	Continuing	Continuing	-
TD/D C - Technical Planning and Demo Preparation	C/FP	Aeroclave : LLC, Maitland, FL	0.000	0.850	Dec 2013	-		-		-		-	Continuing	Continuing	-
TD/D C - Technical Planning and Demo Preparation #2	C/CPFF	Materials Engineering and Technical Support Services Corp. (METTS) : Westerville, OH	0.000	0.150	Feb 2014	-		-		-		-	Continuing	Continuing	-
** DFoS CIDAS - TD/D SB - IPT and Technical Support	MIPR	Various :	0.000	1.520	Dec 2013	0.226	Nov 2014	-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** DFoS GPD - ES S - IPT and Technical Support	MIPR	Various :	0.000	0.874	Dec 2013	-		-		-		-	Continuing	Continuing	-
** DFoS JSEW - ES S - IPT and Technical Support	MIPR	Various :	0.000	0.645	Jan 2014	-		-		-		-	Continuing	Continuing	-
** JBAD - TD/D S - IPT and Technical Support	MIPR	Various :	0.000	-		1.226	Jan 2015	1.271	Nov 2015	-		1.271	Continuing	Continuing	-
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	TBD :	0.000	-		0.049		-		-		-	Continuing	Continuing	-
		Subtotal	3.767	4.202		1.501		1.271		-		1.271	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** DFoS - DTE S - UNS NTA Solid Oxidizer Reformulation	MIPR	Naval Surface Warfare Center (NSWC) - Dahlgren Center : Dahlgren, VA	4.034	0.655	Jan 2014	-		-		-		-	Continuing	Continuing	-
** DFoS CIDAS - DTE S - Technology Demonstration	MIPR	Various :	0.000	0.825	Dec 2013	0.011	Nov 2014	-		-		-	Continuing	Continuing	-
** DFoS GPD - DTE S - Competitive Prototyping and Developmental Testing	MIPR	Various :	0.000	3.552	Dec 2013	-		-		-		-	Continuing	Continuing	-
** DFoS JSEW - DTE S - Competitive Prototyping and Developmental Testing	MIPR	Various :	0.000	1.522	Jan 2014	-		-		-		-	Continuing	Continuing	-
** JBAD - DTE S - Limited Developmental Testing	MIPR	Various :	0.000	-		0.800	Mar 2015	-		-		-	Continuing	Continuing	-
		Subtotal	4.034	6.554		0.811		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** DFoS - PM/MS C - Program Management and Technical Support	MIPR	Various :	7.309	0.197	Jun 2014	-		-		-		-	Continuing	Continuing	-
** DFoS CIDAS - PM/MS S - Program Management and Technical Support	MIPR	Various :	0.000	0.872	Jan 2014	0.061	Jan 2015	-		-		-	Continuing	Continuing	-
** DFoS GPD - PM/MS S - Program Management and Technical Support	MIPR	Various :	0.000	0.925	Jan 2014	-		-		-		-	Continuing	Continuing	-
** DFoS JSEW - PM/MS S - Program Management and Technical Support	MIPR	Various :	0.000	0.215	Feb 2014	-		-		-		-	Continuing	Continuing	-
** JBAD - PM/MS S - Program Management and Technical Support	MIPR	Various :	0.000	-		0.527	Dec 2014	0.323	Dec 2015	-		0.323	Continuing	Continuing	-
		Subtotal	7.309	2.209		0.588		0.323		-		0.323	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	15.110	14.748		2.900		1.594		-		1.594	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

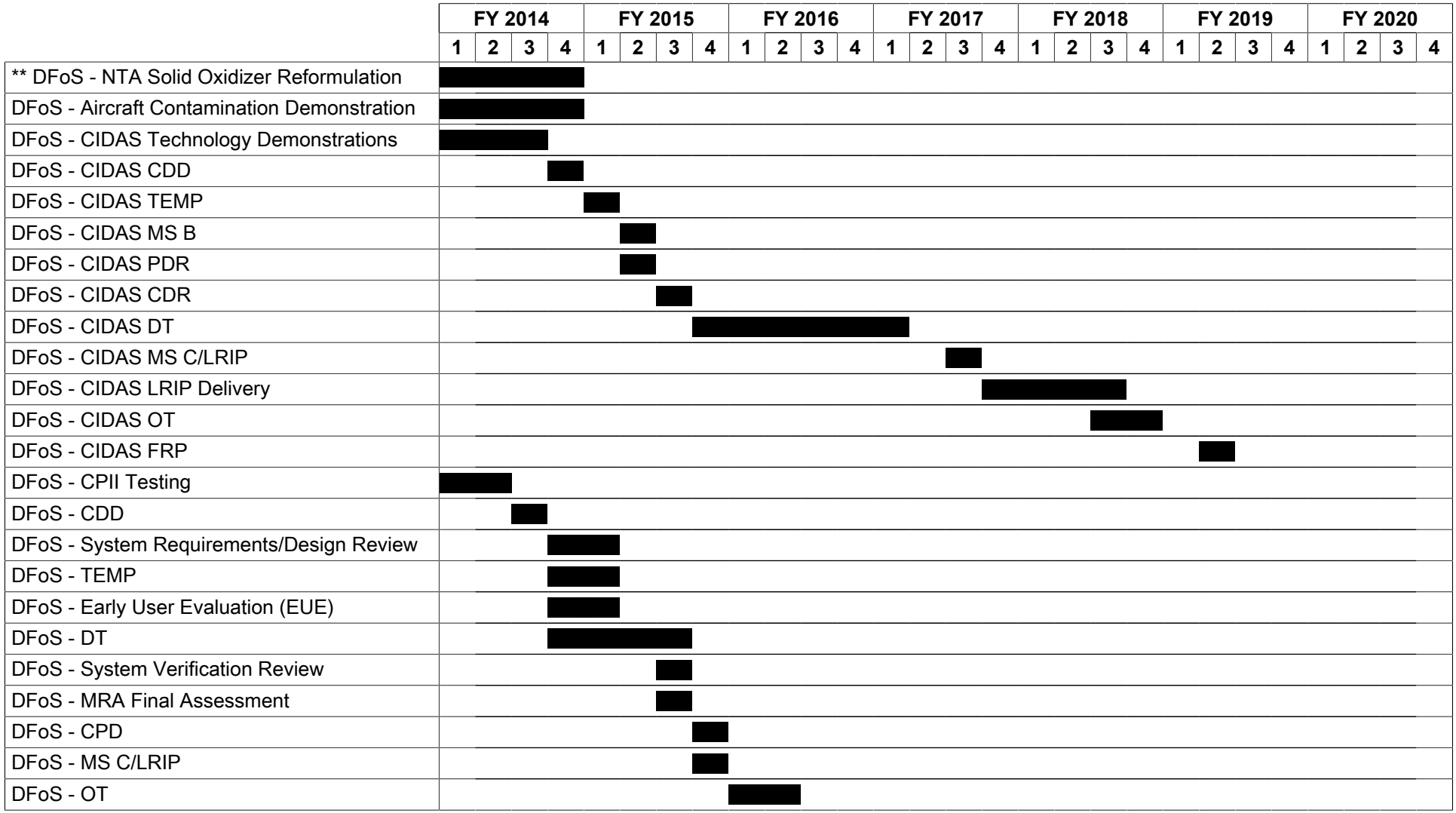

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

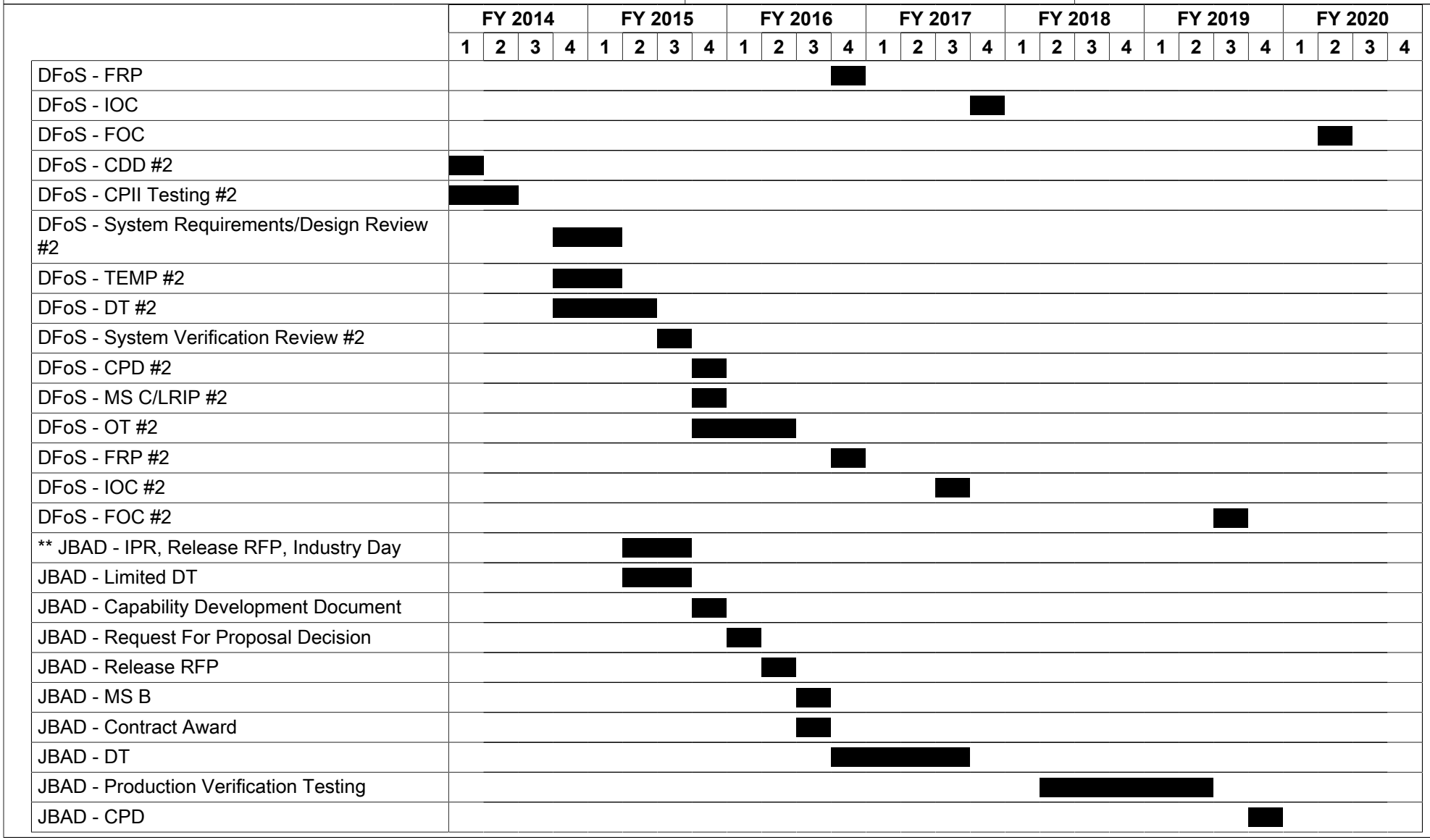

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*	

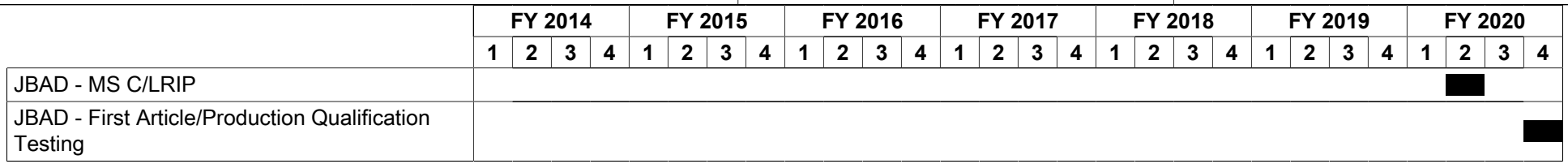

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** DFoS - NTA Solid Oxidizer Reformulation	1	2014	4	2014
DFoS - Aircraft Contamination Demonstration	1	2014	4	2014
DFoS - CIDAS Technology Demonstrations	1	2014	3	2014
DFoS - CIDAS CDD	4	2014	4	2014
DFoS - CIDAS TEMP	1	2015	1	2015
DFoS - CIDAS MS B	2	2015	2	2015
DFoS - CIDAS PDR	2	2015	2	2015
DFoS - CIDAS CDR	3	2015	3	2015
DFoS - CIDAS DT	4	2015	1	2017
DFoS - CIDAS MS C/LRIP	3	2017	3	2017
DFoS - CIDAS LRIP Delivery	4	2017	3	2018
DFoS - CIDAS OT	3	2018	4	2018
DFoS - CIDAS FRP	2	2019	2	2019
DFoS - CPII Testing	1	2014	2	2014
DFoS - CDD	3	2014	3	2014
DFoS - System Requirements/Design Review	4	2014	1	2015
DFoS - TEMP	4	2014	1	2015
DFoS - Early User Evaluation (EUE)	4	2014	1	2015
DFoS - DT	4	2014	3	2015
DFoS - System Verification Review	3	2015	3	2015
DFoS - MRA Final Assessment	3	2015	3	2015
DFoS - CPD	4	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DFoS - MS C/LRIP	4	2015	4	2015
DFoS - OT	1	2016	2	2016
DFoS - FRP	4	2016	4	2016
DFoS - IOC	4	2017	4	2017
DFoS - FOC	2	2020	2	2020
DFoS - CDD #2	1	2014	1	2014
DFoS - CPII Testing #2	1	2014	2	2014
DFoS - System Requirements/Design Review #2	4	2014	1	2015
DFoS - TEMP #2	4	2014	1	2015
DFoS - DT #2	4	2014	2	2015
DFoS - System Verification Review #2	3	2015	3	2015
DFoS - CPD #2	4	2015	4	2015
DFoS - MS C/LRIP #2	4	2015	4	2015
DFoS - OT #2	4	2015	2	2016
DFoS - FRP #2	4	2016	4	2016
DFoS - IOC #2	3	2017	3	2017
DFoS - FOC #2	3	2019	3	2019
** JBAD - IPR, Release RFP, Industry Day	2	2015	3	2015
JBAD - Limited DT	2	2015	3	2015
JBAD - Capability Development Document	4	2015	4	2015
JBAD - Request For Proposal Decision	1	2016	1	2016
JBAD - Release RFP	2	2016	2	2016
JBAD - MS B	3	2016	3	2016
JBAD - Contract Award	3	2016	3	2016
JBAD - DT	4	2016	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JBAD - Production Verification Testing	2	2018	2	2019
JBAD - CPD	4	2019	4	2019
JBAD - MS C/LRIP	2	2020	2	2020
JBAD - First Article/Production Qualification Testing	4	2020	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program											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**
IP4: *INDIVIDUAL PROTECTION (ACD&P)*	-	0.588	6.811	4.217	-	4.217	0.400	-	-	-	-	12.016
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides for Advanced Component Development and Prototypes (ACD&P). Experimentation and demonstration will be used in this phase to reduce risk and inform supporting materiel solutions, CONOPS and TTPs.

The Joint Service General Purpose Mask (JSGPM) Advanced Respiratory Protection Initiative (ARPI) will address improved mask protection, filter protection against Toxic Industrial Chemicals (TIC)/Toxic Industrial Materials (TIM) and improved profile and breathing resistance; and wearability compatibility/integration. This will be accomplished through class-based analysis, Filtration Advanced Screening Test (FAST), desorption study, and advanced CBRN filtration efforts. Several technologies are being pursued by the Joint Science and Technology Office (JSTO), with two specific technologies being pursued in the FY14-16 timeframe. The JSGPM ARPI effort will investigate alternative designs and modifications to Zirconium hydroxide, Zinc, Argentum (Silver), Triethylene di-amine (TEDA)) (ZZAT) to further increase filtration of TICs and Chemical Warfare Agents (CWA). ZZAT is a zirconium hydroxide based filtration media that can potentially be layered with carbon. The first technology, known as Cobalt-Zinc ZZAT (CoZZAT), uses a layered bed of carbon concept to improve TIC and CWA protection capabilities, while the second technology known as Metal Organic Framework (MOF), is an engineered media that is a porous crystalline compound made up of metal ions and organic bridging molecules (ligands) for targeted removal of chemicals. The JSGPM APRI effort will also investigate various applications of nanofiber particulate media.

The Uniform Integrated Protection Ensemble (UIPE) is a Chemical, Biological, Radiological, Nuclear (CBRN) protective system offering the capability to select a tailored material solution based on the expected threat level commensurate with operational mission requirements. Where appropriate, a family of systems approach that meets the scope of UIPE individual protection capability needs will be utilized. The objective of UIPE is to fully integrate CBRN and toxic industrial material (TIM) protections into an ensemble, identical in fit and form to the combat uniform (including mask - helmet integration and protective boots and gloves), thus negating the need for separate protective ensemble components. This integrated protection approach will result in increased warfighter operational performance in a CBRN environment. The UIPE program will develop, integrate, test, procure and field incremental capability solutions that are modular in function and offer improvements in form and fit over current systems; the program will explore trade-space in areas such as protection level, heat stress, durability, antimicrobial properties, flame resistance, launderability, self-detoxification, and protection time in order to provide capabilities that afford maximum utility to the warfighter. Where appropriate modeling and simulation tools will be used to lower UIPE program risks, reduce costs, and ensure a high confidence in selected technologies. UIPE is aimed specifically at providing enhanced individual protection capabilities to the warfighter through reduction of physiological and psychological effects associated with CBRN protective garment thermal burden, weight, and bulk. The UIPE program will consider modernization in order to ensure that the warfighter retains access to state of the art capability to support future operational mission requirements.

The UIPE Increment 2 (UIPE 2) will build upon and enhance the capabilities attained in UIPE 1. UIPE 2 will provide reduced thermal burden and weight compared to current protective ensembles. UIPE 2 will develop, integrate, test, procure, and field incremental capability solutions that are modular in function and offer improvements

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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over current systems. The program will explore trade-space in areas such as protection level, heat stress, durability, antimicrobial properties, flame resistance, launderability, self-detoxification, and protection time in order to provide capabilities that afford maximum utility to the Warfighter. Where appropriate, modeling and simulation tools will be used to lower UIPE 2 program risks, reduce costs, and ensure a high confidence in selected technologies.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) JSGPM (ARPI) ***FY 2014 Accomplishments:*** Investigated alternative designs and modifications to ZZAT (Zirconium hydroxide, Zinc, Argentum (Silver), Triethylene di-amine (TEDA)) to further increase filtration of TICs and Chemical Warfare Agents (CWA). ZZAT is a zirconium hydroxide based filtration media that can potentially be layered with carbon. Initiated technology bed design analysis on Cobalt-Zinc ZZAT (CoZZAT), investigated various applications of nanofiber particulate media, and provided program management support. ***FY 2015 Plans:*** Begin Bed Design Analysis for second technology to be transitioned from Tech Base.	0.588	3.831	-
Title: 2) UIPE 2 ***FY 2015 Plans:*** Initiate program planning, prepare Milestone (MS) A documentation, and achieve MS A. Release Request for Information (RFI) to obtain technologies/materials. Conduct baseline assessments to determine trade space around key capabilities. ***FY 2016 Plans:*** Complete trade space analysis. Initiate Technology Maturation and Risk Reduction activities based off trade space analysis results to down select viable material and closure candidates. Initiate developmental testing on material and closures to include physical properties testing, thermal burden testing, flame resistance testing, and aerosol and chemical swatch testing. Initiate garment design concept activities to include system level prototype testing such as Fluorescent Aerosol Swatch Testing (FAST), Thermal Manikin and Modeling, and Man In Simulant Testing (MIST). Award contract to purchase 200 ensembles for system level testing at a unit cost of $2,000.00 each. Develop Capabilities Development Document (CDD), conduct Manufacturing Readiness Assessment (MRA) and Joint Integrated Logistics Assessment (JILA).	-	2.852	4.217
Title: 3) SBIR/STTR ***FY 2015 Plans:*** SBIR/STTR - FY15 - Small Business Innovative Research.	-	0.128	-
Accomplishments/Planned Programs Subtotals	0.588	6.811	4.217

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IP4 / *INDIVIDUAL PROTECTION (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• IP5: *INDIVIDUAL PROTECTION (EMD)*	24.989	15.435	19.439	-	19.439	14.262	11.524	11.610	1.799	Continuing	Continuing
• JI0002: *JS AIRCREW MASK (JSAM)*	0.413	11.526	24.630	-	24.630	54.447	61.961	55.136	50.374	Continuing	Continuing
• JI0003: *JOINT SERVICE GENERAL PURPOSE MASK (JSGPM)*	85.343	61.131	60.777	-	60.777	55.118	48.982	-	-	-	311.351
• MA0401: *CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)*	15.772	6.948	11.101	-	11.101	11.101	11.101	14.000	16.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

JS GENERAL PURPOSE MASK (JSGPM)

The JSGPM Advanced Respiratory Protection Initiative (ARPI) effort is using the M61 filter contracts awarded to 3M and Avon to develop improved filters for the JSGPM. There is a continual technology refreshment CLIN that allows for filter development tasks to be awarded under this contract. The tasks can be competed between the two awardees or award to both to ensure competition on future spares and delivery orders. As filter technologies transition from the Defense Threat Reduction Agency (DTRA) and Joint Science and Technology Office (JSTO), the technologies will be matured from system/subsystem prototyping demonstration technologies at Technology Readiness Level (TRL) 6 to actual system "mission proven" through successful mission operations in a mission environment at TRL 9. There are multiple technologies being explored by DTRA, thus, this is a continual product improvement effort to enhance filtration. The JSGPM ARPI effort will investigate alternative designs and modifications to ZZAT (Zirconium hydroxide, Zinc, Argentum (Silver), Triethylene di-amine (TEDA)) to further increase filtration of TICs and Chemical Warfare Agents (CWA). ZZAT is a zirconium hydroxide based filtration media that can potentially be layered with carbon. The first technology, known as Cobalt-Zinc ZZAT (CoZZAT), uses a layered bed of carbon concept to improve TIC and CWA protection capabilities, while the second technology known as Metal Organic Framework (MOF), is an engineered media that is a porous crystalline compound made up of metal ions and organic bridging molecules (ligands) for targeted removal of chemicals.

CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)

The UIPE 2 supports an evolutionary acquisition strategy with the intent of protecting the Warfighter from operationally relevant and non-traditional chemical, biological, radiological, and nuclear (CBRN)/toxic industrial hazards during Joint Force operations. UIPE 2 will leverage the approved UIPE CBRN initial capabilities document (ICD) to build on and enhance capabilities attained in UIPE 1 by continuing to provide integrated individual protective equipment that enables the Warfighter to operate

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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in a contaminated environment with no or minimal degradation to performance. UIPE 2 will perform trade space analysis by releasing a Request for Information for materials and closures. This analysis will not only provide a baseline assessment but will feed the requirements development process. The final UIPE 2 garment design will be government owned in order to control interfaces and insert future technologies.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSGPM - HW C - Filter Prototyping	Various	Various :	0.000	-		1.515	Feb 2015	-		-		-	-	1.515	-
** UIPE - HW S - Prototype Development	MIPR	TBD :	0.000	-		0.400	May 2015	-		-		-	-	0.400	-
HW S - Contract Award	C/CPFF	TBD :	0.000	-		-		1.000	Apr 2016	-		1.000	-	1.000	-
		Subtotal	0.000	-		1.915		1.000		-		1.000	-	2.915	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSGPM - ES C - Engineering Design Services	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.206	-		0.600	Jan 2015	-		-		-	0.200	1.006	-
ES C - Engineering Support	MIPR	Naval Surface Warfare Center (NSWC) - Dahlgren Center : Dahlgren, VA	0.016	-		0.200	Jan 2015	-		-		-	0.200	0.416	-
** UIPE - TD/D C - Integrated Product Team (IPT), Program, Engineering, and Technical Support	MIPR	Various :	0.000	-		0.980	May 2015	1.063	Jan 2016	-		1.063	-	2.043	-
TD/D S - Engineering/ Tradespace Analysis	MIPR	Various :	0.000	-		0.937	May 2015	-		-		-	-	0.937	-
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	TBD :	0.000	-		0.128		-		-		-	-	0.128	-
		Subtotal	0.222	-		2.845		1.063		-		1.063	0.400	4.530	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSGPM - DTE C - Prototype Testing	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.214	-		0.800	Feb 2015	-		-		-	-	1.014	-
** UIPE - DTE S - System Level Testing - FAST, MIST, Thermal Manikin and Modeling	Various	TBD :	0.000	-		-		1.300	May 2016	-		1.300	-	1.300	-
		Subtotal	0.214	-		0.800		1.300		-		1.300	-	2.314	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSGPM - PM/MS C - Program Management and Technical Support	Various	Various :	0.114	0.588	Mar 2014	0.716	Jan 2015	-		-		-	-	1.418	-
** UIPE - PM/MS S - Program Management Support	MIPR	Various :	0.000	-		0.535	May 2015	0.854	Jan 2016	-		0.854	-	1.389	-
		Subtotal	0.114	0.588		1.251		0.854		-		0.854	-	2.807	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.550	0.588		6.811		4.217		-		4.217	0.400	12.566	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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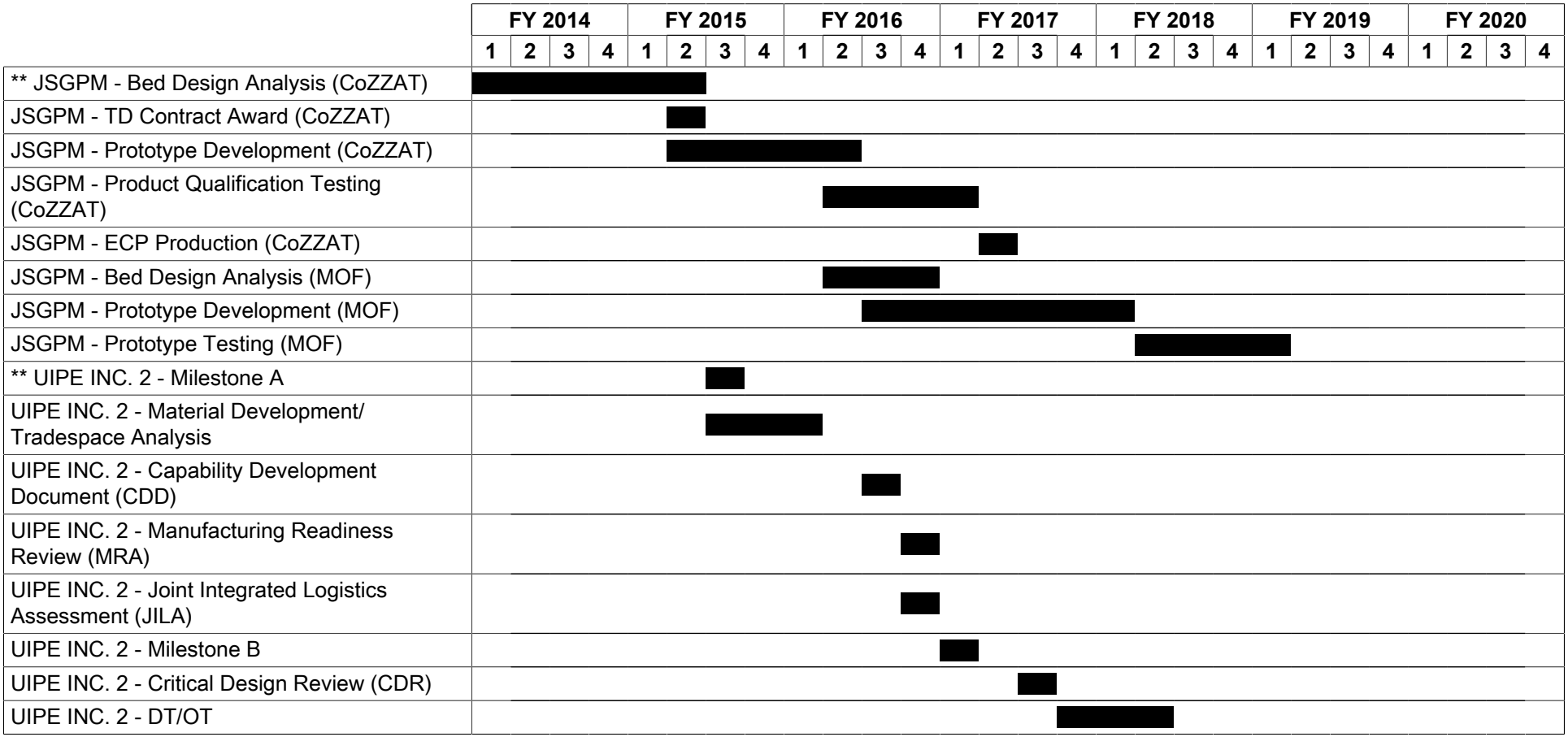

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JSGPM - Bed Design Analysis (CoZZAT)	1	2014	2	2015
JSGPM - TD Contract Award (CoZZAT)	2	2015	2	2015
JSGPM - Prototype Development (CoZZAT)	2	2015	2	2016
JSGPM - Product Qualification Testing (CoZZAT)	2	2016	1	2017
JSGPM - ECP Production (CoZZAT)	2	2017	2	2017
JSGPM - Bed Design Analysis (MOF)	2	2016	4	2016
JSGPM - Prototype Development (MOF)	3	2016	1	2018
JSGPM - Prototype Testing (MOF)	2	2018	1	2019
** UIPE INC. 2 - Milestone A	3	2015	3	2015
UIPE INC. 2 - Material Development/Tradespace Analysis	3	2015	1	2016
UIPE INC. 2 - Capability Development Document (CDD)	3	2016	3	2016
UIPE INC. 2 - Manufacturing Readiness Review (MRA)	4	2016	4	2016
UIPE INC. 2 - Joint Integrated Logistics Assessment (JILA)	4	2016	4	2016
UIPE INC. 2 - Milestone B	1	2017	1	2017
UIPE INC. 2 - Critical Design Review (CDR)	3	2017	3	2017
UIPE INC. 2 - DT/OT	4	2017	2	2018

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program			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
IS4: *INFORMATION SYSTEMS (ACD&P)*	-	9.085	6.169	7.464	-	7.464	8.355	7.871	1.240	0.870	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides for Advanced Component Development and Prototypes (ACD&P). Experimentation and demonstration will be used in this phase to reduce risk and inform supporting materiel solutions, CONOPS and TTPs.

Efforts included in this project are: (1) Joint Effects Model (JEM); (2) the Joint Warning and Reporting Network (JWARN); (3) the Biosurveillance Portal (BSP) and (4) Software Support Activity (SSA).

The Joint Effects Model (JEM) is a web-based software application that supplies the Department of Defense (DoD) with the one and only accredited tool to effectively model and simulate the effects of Chemical, Biological, Radiological and Nuclear (CBRN) weapon strikes and incidents. JEM is capable of providing all Warfighters with the ability to accurately model and predict the time-phased impact of CBRN and Toxic Industrial Chemical/Material (TIC/TIM) events and effects. JEM supports planning to mitigate the effects of Weapons of Mass Destruction (WMD) and to provide rapid estimates of hazards and effects into the Common Operational Picture (COP).

Follow-on increments of JEM will refine and display hazard areas in near real time to reflect inputs such as meteorological, oceanographic, or actual agent concentration data. JEM will automatically receive input data from the Command, Control, Communications, Computers and Intelligence (C4I) system on which it resides such as historical climatology, local observations, weather forecasts, natural environmental threats (i.e.: pandemic influenza, etc.), terrain data, intelligence information, or population data. Increment 2 will allow manual user input for factors such as concentrations of chemical warfare agents or actual exposure measurements and forecast sheltering stay-times and provide for modeling sheltering time through user-defined scenarios.

The Joint Warning and Reporting Network (JWARN) is an accredited Department of Defense (DOD) warning and reporting system that provides a standardized warning and reporting capability for Chemical, Biological, Radiological and Nuclear (CBRN) and Toxic Industrial Materials (TIM) incidents.

JWARN supports the Joint Force Commander (JFC) by improving force protection capabilities for units operating in chemical, biological, radiological and nuclear environments. JWARN provides a digital display of CBRN 1-6 reports on the Common Operational Picture, displayed through Service provided C4I systems resident at all echelons of command. JWARN will be operated by CBRN and non-CBRN trained personnel operating in the operations center at various command nodes. This provides commanders with situational awareness to inform decision making for force protection criteria, unmasking operations, decontamination, and continuity of operations in a contaminated environment. Future sensor configurations will forward sensor inputs directly to JWARN via established communication lanes, removing the man-in-the-loop requirement with the current system configuration. JWARN will be information system classification agnostic and must be able to operate on unclassified, secret, top secret, and mission partner IT Systems without increasing system operator requirement, i.e.: sensor to COP via one communication loop. As a result, sensors will then be able to communicate with JWARN on the same network, regardless of classification.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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The Biosurveillance Portal (BSP) is a new start in FY16. BSP is a web-based enterprise environment that will facilitate collaboration, communication, and information sharing in support of the detection, management, and mitigation of man-made and naturally occurring biological events. BSP bridges the communication gaps in the biosurveillance domain to provide a central access point for biosurveillance information and situational awareness for DoD, interagency and allied partners supporting the early identification and response to biological events.

BSP provides an integrated suite of web-based components designed to support public health officers, environmental officers, clinicians, physicians, and CBRN personnel as they maintain their situational awareness of local, regional, and global biological threats to the force. BSP does not duplicate existing DoD capabilities, but rather leverages existing tools and technologies to provide users across multiple organizations and disciplines with a centralized "one-stop shop" for all of their biosurveillance resources.

As software-intensive systems, JEM, JWARN, and BSP have no separately identifiable unit production components. JEM and JWARN are designated as ACAT III programs and unit cost calculations including Program Acquisition Unit Cost/Average Procurement Unit Cost (PAUC/APUC) and Operations and Sustainment (O&S) average annual per unit costs are not applicable. Expect BSP to be similarly designated.

The Software Support Activity (SSA) is a Chem-Bio Defense user developmental support and service organization to facilitate net-centric interoperability of systems in acquisition for the Warfighter. The SSA provides the CBRN Warfighter with Joint Service solutions for Integrated Architectures, Data Management/Modeling, Information Assurance (IA), Interoperability Certifications, Verification, Validation and Accreditation (VV&A) to support interoperable and integrated net-centric, service-oriented solutions for CBRN systems. The SSA emphasizes development of reference implementations to guide Government and industry system and software developers to ensure that their products meet common interoperability standards. The latest technologies/products include the definition of a Common CBRN Sensor Integration Standard (CCSI) and the CBRN Data Model. These technologies and direct enablers for the development of CBRN integrated sensor networks and the dissemination of CBRN information across all users. The SSA directly supports Chemical and Biological Defense Program (CBDP) initiatives by providing common service oriented architectures and frameworks for the collection and dissemination of Bio-Surveillance and other critical CBRN information.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) JEM Prototyping and Development	1.067	1.195	1.247
FY 2014 Accomplishments: Completed competitive prototyping down-select and award option for development and integration of JEM IT BOX capabilities. Prepared first Milestone Decision Authority build decision by integrating mature Science and Technology capabilities identified during the execution of the prototype contract with prototype software from competitive down-select.			
FY 2015 Plans: Provide JEM Increment 2 software development of additional capabilities defined in Requirements Definition Package 1 and perform integration into Command and Control (C2) systems as defined in Requirements Definition Package 3.			
FY 2016 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue JEM Increment 2 software development of capabilities defined in Requirements Definition Package 1 and perform integration into Command and Control (C2) systems as defined in Requirements Definition Package 3. Begin software development of capabilities defined in Requirements Definition Package 4 that support Science and Technology community use of JEM Increment 2 software.			
Title: 2) JEM Test & Evaluation (T&E) ***FY 2014 Accomplishments:*** Completed governmental development testing in support of competitive prototyping contract and down-select. Prepared T&E documentation for the Preliminary Design Review (PDR) and down-select decision. Prepared and submitted for approval IT BOX Test and Evaluation Master Plan to support IT BOX build decision in current year and Government Developmental Test in FY15. ***FY 2015 Plans:*** Conduct lab based Operational Test (OT) and limited scope service-specific Initial Operational Test & Evaluation (IOT&E) which will allow for Initial Operational Capability (IOC) of JEM Increment 2 as a standalone to be deployed to the services in 1QTR FY16. ***FY 2016 Plans:*** Continue lab based OT and limited scope service specific IOT&E to support fielding of software with additional capability in 1QTR FY17. Conduct Service C2 Follow-on Test and Evaluation (FOT&E) which will allow for IOC of JEM Increment 2 on service C2 systems in 1QTR FY17.	0.646	1.551	1.201
Title: 3) JEM Management Support ***FY 2014 Accomplishments:*** Provided program planning, financial management, contracting, schedule, and acquisition oversight support. Coordinate Critical Design Review (CDR) of capabilities to include in first software capability drop scheduled for 1QTR FY15. Coordinate Critical Design Review (CDR) of second software capability drop scheduled for 3QTR FY15. Coordinate first JEM IT BOX Milestone Decision Authority build decision with stakeholders. ***FY 2015 Plans:*** Perform program/financial management, costing, contracting, scheduling and acquisition oversight support for JEM Increment 2. Continue development and execution of Build Decisions (BD) for JEM Increment 2 while working within the agile development process, to include performing a Joint Integrated Logistics Assessment (JILA) and Logistics' Demonstration (LOG DEMO) in order to deploy JEM Increment 2 to the services. Complete development of Requirements Definition Package 3 (RDP-3), which defines requirements for C2 systems integration of the JEM software. Complete Build Decision 2 (BD2) for JEM Increment 2. ***FY 2016 Plans:***	0.307	0.257	0.323

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Complete Fielding Decision and IOC of Stand Alone capabilities of JEM Increment 2 in 1QTR FY16. Continue to perform program/financial management, costing, contracting, scheduling and acquisition oversight support for JEM Increment 2. Continue development and execution of Build Decision 4 (BD4) for JEM Increment 2 while working within the agile development process, to include performing a Joint Integrated Logistics Assessment (JILA) and Logistics' Demonstration (LOG DEMO) in order to deploy JEM Increment 2 to the services. Complete development of Requirements Definition Package 3 (RDP-3), which defines requirements for C2 systems integration of the JEM software. Complete fielding decision and IOC of C2 systems capabilities of JEM Increment 2 in 4QTR FY16.			
Title: 4) JEM Technical Support ***FY 2014 Accomplishments:*** Prepared and reviewed technical documentation to support competitive prototyping contract down-select decision and the Milestone Decision Authority build decision. Provided technical support during the competitive prototyping phase and technical assessment. Initiated Verification and Validation Plan for the capability drops of JEM scheduled to begin 1QTR FY15. ***FY 2015 Plans:*** Develop Verification, Validation, and Accreditation (VV&A) package for JEM Inc. 2. ***FY 2016 Plans:*** Continue Verification, Validation, and Accreditation (VV&A) package development for JEM Inc. 2.	0.472	0.368	0.553
Title: 5) JWARN Analysis of Alternatives (AoA) ***FY 2014 Accomplishments:*** Completed analysis on impacts of implementing the emerging technologies into the JWARN architecture.	0.218	-	-
Title: 6) JWARN Prototyping ***FY 2014 Accomplishments:*** Conducted software prototyping efforts supporting JWARN baseline development ***FY 2015 Plans:*** Perform software prototyping efforts supporting JWARN baseline development. ***FY 2016 Plans:*** Continue software prototyping efforts supporting JWARN baseline development.	2.051	1.149	0.911
Title: 7) JWARN Product Development ***FY 2014 Accomplishments:***	0.598	0.334	0.334

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Conducted JWARN Technology Demonstrations and User Assessments to evaluate and prove component and subsystem maturity of critical science and technology, system performance, and validate requirements within the IT BOX construct and Agile Process developed software prototype(s). ***FY 2015 Plans:*** Perform JWARN Technology Demonstrations and User Assessments to evaluate and prove component and subsystem maturity of critical science and technology, system performance, and validate requirements within the IT BOX construct and Agile Process developed software prototype(s). ***FY 2016 Plans:*** Continue JWARN Technology Demonstrations and User Assessments to evaluate and prove component and subsystem maturity of critical science and technology, system performance, and validate requirements within the IT BOX construct and Agile Process developed software prototype(s).			
Title: 8) JWARN Test and Evaluation (T&E) ***FY 2014 Accomplishments:*** Initiated government developmental testing and analysis of component and subsystem maturity, to include Technology Readiness Assessment(s), of software submitted for evaluation during prototyping. Prepare required documentation to support the DoD Information Assurance Certification and Accreditation Process and Joint Interoperability Certification process. Continue development of the Test and Evaluation Master Plan (TEMP). ***FY 2015 Plans:*** Provide government developmental testing and analysis of component and subsystem maturity, to include Technology Readiness Assessment(s), of software submitted for evaluation during prototyping. Continue the DoD Information Assurance Certification and Accreditation and Joint Interoperability Certification process. Complete development of the Test and Evaluation Master Plan (TEMP). ***FY 2016 Plans:*** Continue government developmental testing and analysis of component and subsystem maturity, to include Technology Readiness Assessment(s), of software submitted for evaluation during prototyping. Continue the DoD Information Assurance Certification and Accreditation and Joint Interoperability Certification process.	0.423	0.337	0.443
Title: 9) JWARN Software Contract ***FY 2014 Accomplishments:*** Awarded contract to conduct follow-on software efforts.	0.843	-	-
Title: 10) JWARN Program Management Support	0.862	0.443	0.494

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Continued strategic, tactical planning, program/financial management, costing, contracting, scheduling, acquisition oversight, and milestone documentation for the program within IT BOX construct and Agile Software development process. ***FY 2015 Plans:*** Provide strategic, tactical planning, program/financial management, costing, contracting, scheduling, acquisition oversight, and milestone documentation for the program within IT BOX construct and Agile Software development process. ***FY 2016 Plans:*** Will provide strategic, tactical planning, program/financial management, costing, contracting, scheduling, acquisition oversight, and milestone documentation for the program within IT BOX construct and Agile Software development process.			
Title: 11) JWARN Technical Support ***FY 2014 Accomplishments:*** Conducted engineering and technical support for JWARN development under the IT BOX construct and Agile Software development processes. Initiate independent system verification, validation and class type accreditation efforts as required. ***FY 2015 Plans:*** Provide engineering and technical support for JWARN development under the IT BOX construct and Agile Software development processes. Continue independent system verification, validation, and class type accreditation as required. ***FY 2016 Plans:*** Continue providing engineering and technical support for JWARN development under the IT BOX construct and Agile Software development processes. Continue independent system verification, validation, and class type accreditation as required.	1.506	0.344	0.778
Title: 12) BSP Program Management ***FY 2016 Plans:*** Management and oversight of technology development and transition efforts for new technologies and capabilities designed to satisfy BSP requirements.	-	-	0.373
Title: 13) BSP Product Development ***FY 2016 Plans:*** Prototyping, developing, and evaluating new technologies, models, and tools from both internal and external developers for transition into BSP.	-	-	0.707
Title: 14) SSA Integrated Architecture ***FY 2014 Accomplishments:***	0.092	0.099	0.100

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Initiated required modifications to the integrated Architecture on host platforms and document the infrastructure and technical standards. Examined program and system characteristics to determine compliance with DoD Directive 8500.01E (Information Assurance) and develop an acquisition IA strategy if required. ***FY 2015 Plans:*** Continue required modifications to the integrated Architecture on host platforms and document the infrastructure and technical standards, developing an acquisition IA strategy if deemed necessary in FY14. ***FY 2016 Plans:*** Continue required modifications to the integrated Architecture on host platforms and document the infrastructure and technical standards, developing an acquisition IA strategy if deemed necessary in FY14.			
Title: 15) SBIR/STTR ***FY 2015 Plans:*** SBIR/STTR - FY15 - Small Business Innovative Research.	-	0.092	-
Accomplishments/Planned Programs Subtotals	9.085	6.169	7.464

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• IS5: *INFORMATION SYSTEMS (EMD)*	9.155	10.340	19.960	-	19.960	23.747	22.976	24.353	25.736	Continuing	Continuing
• IS7: *INFORMATION SYSTEMS (OP SYS DEV)*	6.442	4.091	7.703	-	7.703	9.557	12.407	13.519	12.767	Continuing	Continuing
• G47101: *JOINT WARNING & REPORTING NETWORK (JWARN)*	1.112	0.766	-	-	-	4.589	1.522	0.533	0.479	Continuing	Continuing
• JC0208: *JOINT EFFECTS MODEL (JEM)*	-	1.141	3.316	-	3.316	5.069	3.086	3.031	2.728	Continuing	Continuing
• JS5230: *SOFTWARE SUPPORT ACTIVITY (SSA)*	0.100	-	0.100	-	0.100	0.100	0.100	0.100	0.090	Continuing	Continuing
• JX0301: *BIOSURVELLENCE PORTAL (BSP)*	-	-	1.620	-	1.620	1.220	1.220	1.220	1.220	Continuing	Continuing

Remarks

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D. Acquisition Strategy

JOINT EFFECTS MODEL (JEM)

JEM Increment 2 acquisition will utilize the JROC's "IT Box" construct for software development. The intent is to provide the next generation of capability with current and future technologies, as stated in the IS ICD, in less time and fielding products to the service more frequently than an incremental delivery approach.

As part of this strategy, JEM program office developed and issued a competitive prototyping contract in April 2013 where two offerers were given the same Technical Data Package (TDP), performance Work Statement (PWS), and software requirements and were tasked to deliver a JEM prototype that implements the CCMI architecture. This competitive prototyping strategy
was successful and a single JEM integrator, General Dynamics Information Technology (GDIT), was selected as the prime development contract in December 2013.

The current contractor for JEM 2.0 will provide all capabilities defined in the Requirement Definition Package 1 (RDP-1) document produced by the Joint Requirements Office (JRO). The JRO will release RDPs-2, 3, and 4 over the next three years prior to contract completion. It is anticipated when the contract is re-competed in FY18 that there will be four of five capability drops not yet developed under RDP-2 and two of five under RDP-3. The follow-on contract in FY18 will be responsible for developing the remaining capabilities under the JEM 2.0 contract. The JEM follow-on contract will utilize full and open competition and will be referred to as the JEM development, modernization and sustainment contract.

The JEM IS ICD describes the notional implementation plan for fielding of future JEM capabilities among four separate JEM Requirement Definition Packages (RDPs). RDP-1 contains the baseline capabilities for software and was released in June of 2014. RDP-2 will be released after the completion of RDP-1. This RDP will incorporate emerging capabilities that the Joint Science and Technology Office determines has reached a sufficient enough maturity for incorporation into JEM, such as ability to model new agents. Requirements to integrate baseline capabilities into a version that can be fielded on service C2 systems will be released in RDP-3. RDP-3 will be released following RDP-1 but prior to RDP-2, to rapidly allow baseline capabilities to be incorporated into C2 systems. RDP-4 is a notional package that would allow the Science and Technology community a venue to use the JEM program to develop a version of the product for S&T use. Capabilities that are only required for the Science and Technology community and not for operational users would be implemented in RDP-4. Capabilities in RDP-4 would not be required to go to Operational Test, as they would not be fielded to operational users.

RDP 1 - Baseline Capabilities: There are 5 planned Capability Drops (CD) within RDP 1.
RDP 2 - Emerging Capabilities: There are 5 planned Capability Drops (CD) within RDP 2.
RDP 3 - C2 Integration: There are 8 planned Capability Drops (CD) within RDP 3 tied to all the various Strategic and Service C2 Systems
RDP 4 - Analytical Support: There are 2 planned Capability Drops (CD) within RDP 4.

After an over-arching MS B with the MDA, each RDP will have an associated Build Decision. Each CD will have an associated fielding decision.

JOINT WARNING & REPORTING NETWORK (JWARN)

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

JWARN Increment 2 utilizes the JROC's "IT Box" construct for software requirements management and development. The intent is to provide the next generation of capability with current and future technologies, as stated in the IS ICD, in less time and away from an incremental delivery approach. This effort is being executed under a Cost-Plus-Award Term Incentive structure to gain maximum benefit to the Government in maintaining the fielded baseline and future software capability development and was awarded under a full and open competition Request for Proposal (RFP). The JWARN Program will procure a Sensor Connectivity Capability (SCC) (hardware materiel solution) in order to facilitate the transfer of CBRN sensor information from legacy CBRN sensors to DoD networks. This solution will be external to the CBRN Sensors and Service-identified network transmission device(s).

BIOSURVEILLANCE PORTAL (BSP)

BSP will utilize the JROC's "IT Box" construct for program requirements, management, and development. The intent is to provide the next generation of capability with current and future technologies in less time and fielding products to the DoD utilizing an incremental delivery approach. IT Box enables programs to tailor the incrementally fielded software program model in the DODI 5000.02 Interim to conduct multiple, more frequent fielding events in lieu of a single fielding event.

SOFTWARE SUPPORT ACTIVITY (SSA)

The SSA provides enterprise-wide services and coordination across all CBDP programs that contain data or software, or are capable of linking to the Global Information Grid (GIG). The SSA facilitates interoperability, integration, and supportability of existing and developing IT and National Security Systems (NSS). Phase 1a identifies CBDP programs that deal with data or software, and have an IT component. This will be followed by coordination to facilitate the concepts of interoperability, integration and supportability of enterprise-wide services. Next follows work with user communities to develop and demonstrate enterprise-wide common architectures, products and services. Phase 2 will support the application of the enterprise-wide architectures, products and services into the programs, with verification of compliance with the defined products and services.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JEM - Inc 2 - SW SB - Prototype development (a)	C/CPFF	General Dynamics Information Technologies : Fairfax, VA	3.144	0.564	Oct 2013	1.249	Apr 2015	1.247	Apr 2016	-		1.247	Continuing	Continuing	-
Inc 2 - SW SB - Prototype development (b)	C/CPFF	Information Emergency Management (IEM) : Durham, NC	3.144	0.503	Oct 2013	-		-		-		-	Continuing	Continuing	-
** JWARN - Inc 2 - SW S - Prototype development	C/CPFF	Northrop Grumman Corp. : Winter Park, FL	1.561	3.098	Dec 2013	1.316	Dec 2014	1.317	Dec 2015	-		1.317	Continuing	Continuing	-
** BSP - SW S - Software Development	Various	TBD :	0.000	-		-		0.707	Dec 2015	-		0.707	Continuing	Continuing	-
		Subtotal	7.849	4.165		2.565		3.271		-		3.271	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JEM - Inc 2 - TD/D SB - Engineering support	MIPR	Space and Naval Warfare (SPAWAR) Systems Center : San Diego, CA	1.672	0.472	Nov 2013	0.368	Nov 2014	0.553	Nov 2015	-		0.553	Continuing	Continuing	-
** JWARN - Inc 2 - TD/D SB - Engineering support	MIPR	Various :	4.187	2.104	Nov 2013	0.511	Nov 2014	1.011	Nov 2015	-		1.011	Continuing	Continuing	-
** SSA - ES S - Engineering Support	MIPR	Space and Naval Warfare (SPAWAR) Systems Center : San Diego, CA	0.000	0.092	Nov 2013	0.099	Nov 2014	0.100	Nov 2015	-		0.100	Continuing	Continuing	-
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	TBD :	0.000	-		0.092		-		-		-	Continuing	Continuing	-
		Subtotal	5.859	2.668		1.070		1.664		-		1.664	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JEM - Inc 2 - OTE S - OT&E	MIPR	Navy Operational Test and Eval Force (OPTEVFOR) : Norfolk, VA	0.000	-		1.497	Nov 2014	1.201	Nov 2015	-		1.201	Continuing	Continuing	-
DTE S - Hazard Prediction Model Development Test	MIPR	Naval Surface Warfare Center (NSWC) - Dahlgren Center : Dahlgren, VA	0.000	0.646	Nov 2013	-		-		-		-	Continuing	Continuing	-
** JWARN - Incr. 2 - OTHT SB - Gov't developmental testing	MIPR	Various :	1.780	0.225	Mar 2014	0.337	Mar 2015	-		-		-	Continuing	Continuing	-
		Subtotal	1.780	0.871		1.834		1.201		-		1.201	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JEM - Inc 2 - PM/MS C - Program Management	C/CPFF	Battelle Memorial Institute : Columbus, OH	1.341	0.307	Apr 2014	0.257	Apr 2015	0.323	Apr 2016	-		0.323	Continuing	Continuing	-
** JWARN - Inc 2 - PM/MS SB - Program management	MIPR	Space and Naval Warfare (SPAWAR) Systems Center : San Diego, CA	2.492	1.074	Nov 2013	0.443	Nov 2014	0.632	Nov 2015	-		0.632	Continuing	Continuing	-
** BSP - PM/MS S - Program Management Support	Various	Various :	0.000	-		-		0.373	Dec 2015	-		0.373	Continuing	Continuing	-
		Subtotal	3.833	1.381		0.700		1.328		-		1.328	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	19.321	9.085		6.169		7.464		-		7.464	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) IS4 / *INFORMATION SYSTEMS (ACD&P)*	

	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

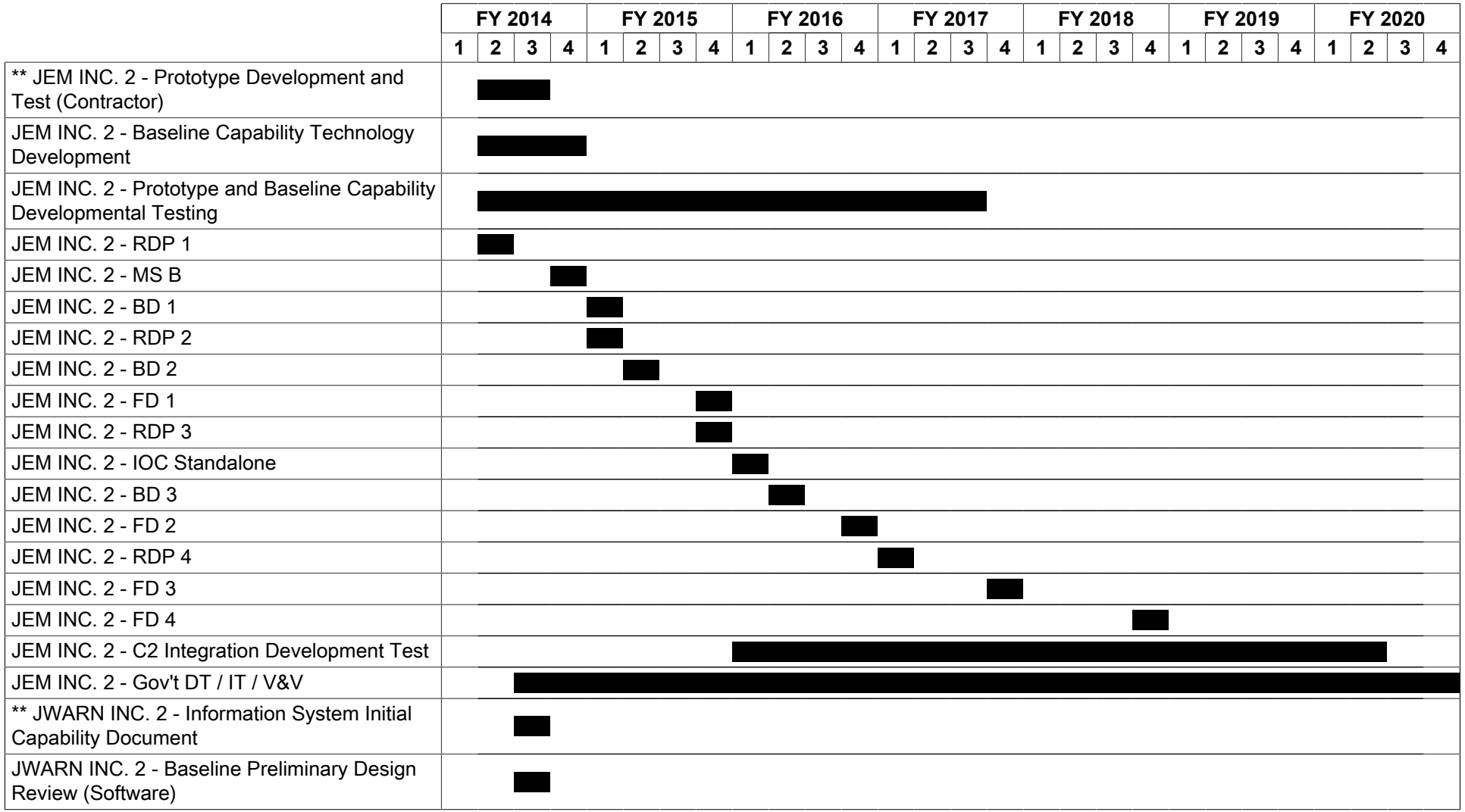

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

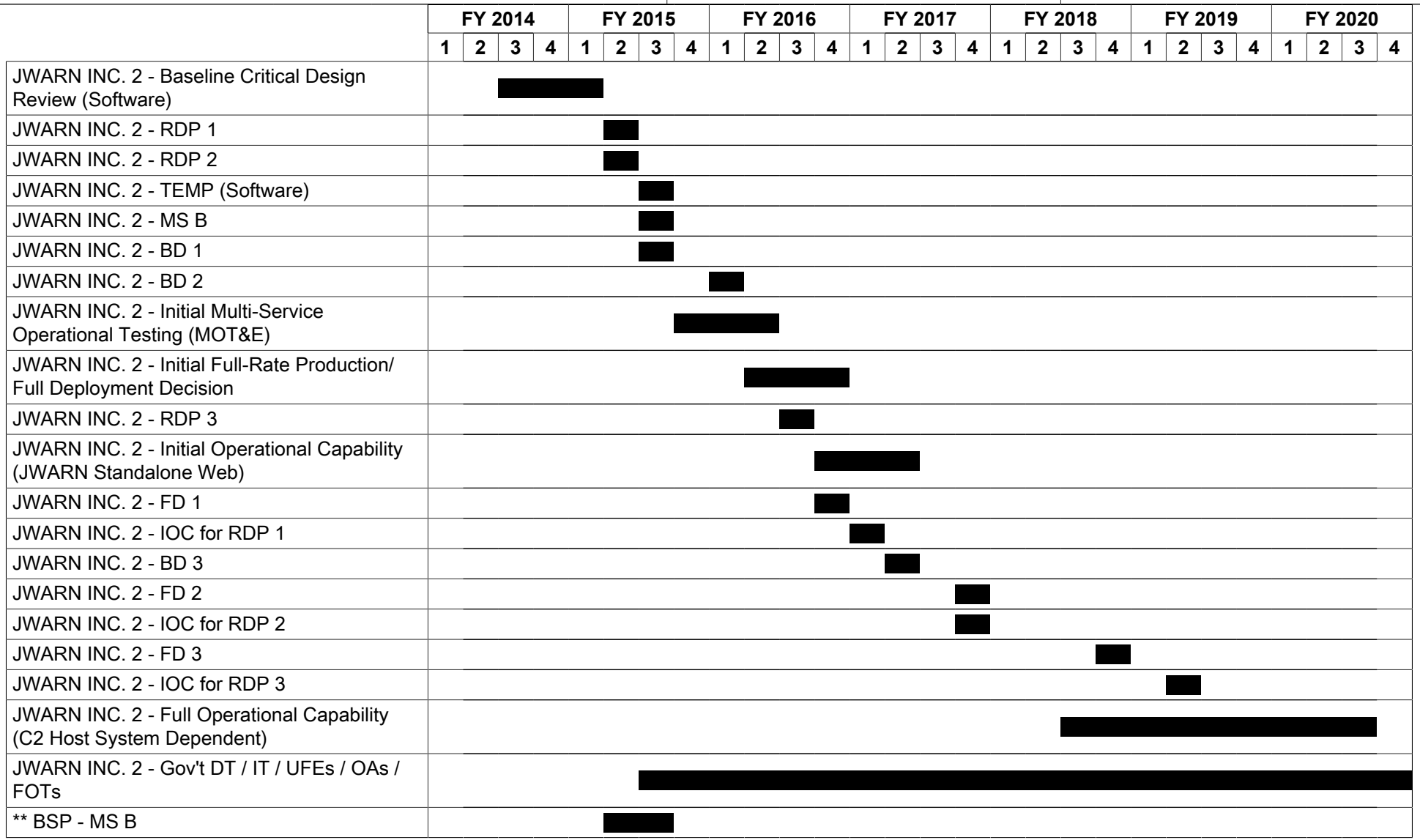

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

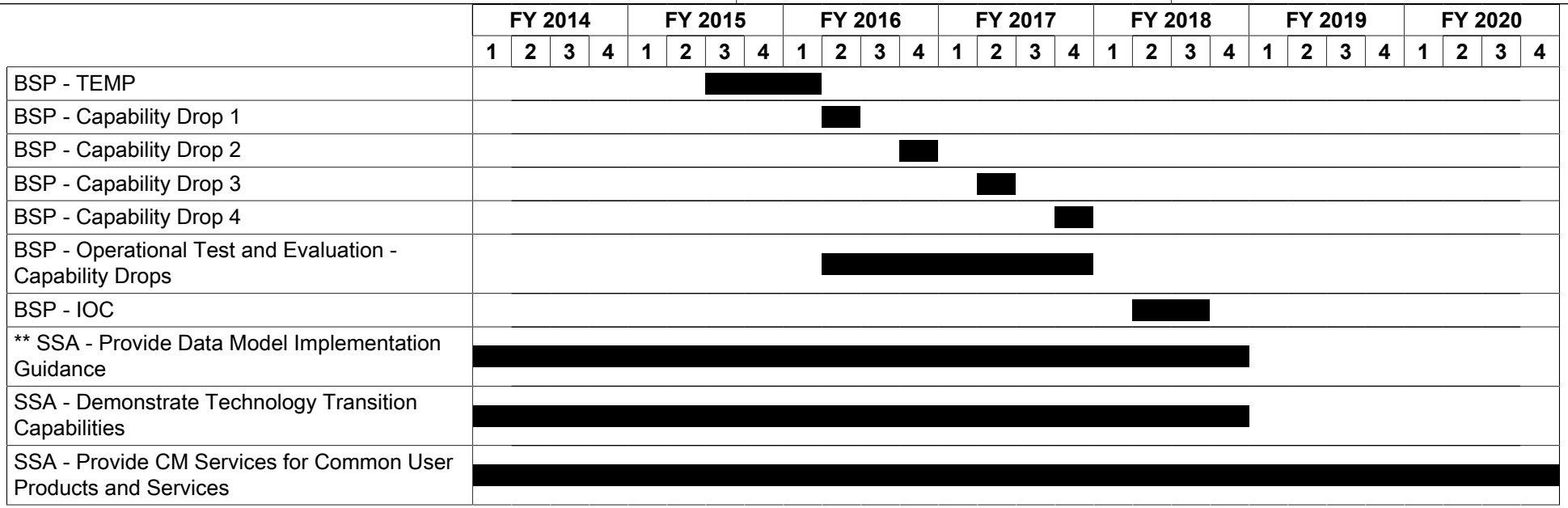

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IS4 / *INFORMATION SYSTEMS (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JEM INC. 2 - Prototype Development and Test (Contractor)	2	2014	3	2014
JEM INC. 2 - Baseline Capability Technology Development	2	2014	4	2014
JEM INC. 2 - Prototype and Baseline Capability Developmental Testing	2	2014	3	2017
JEM INC. 2 - RDP 1	2	2014	2	2014
JEM INC. 2 - MS B	4	2014	4	2014
JEM INC. 2 - BD 1	1	2015	1	2015
JEM INC. 2 - RDP 2	1	2015	1	2015
JEM INC. 2 - BD 2	2	2015	2	2015
JEM INC. 2 - FD 1	4	2015	4	2015
JEM INC. 2 - RDP 3	4	2015	4	2015
JEM INC. 2 - IOC Standalone	1	2016	1	2016
JEM INC. 2 - BD 3	2	2016	2	2016
JEM INC. 2 - FD 2	4	2016	4	2016
JEM INC. 2 - RDP 4	1	2017	1	2017
JEM INC. 2 - FD 3	4	2017	4	2017
JEM INC. 2 - FD 4	4	2018	4	2018
JEM INC. 2 - C2 Integration Development Test	1	2016	2	2020
JEM INC. 2 - Gov't DT / IT / V&V	3	2014	4	2020
** JWARN INC. 2 - Information System Initial Capability Document	3	2014	3	2014
JWARN INC. 2 - Baseline Preliminary Design Review (Software)	3	2014	3	2014
JWARN INC. 2 - Baseline Critical Design Review (Software)	3	2014	1	2015
JWARN INC. 2 - RDP 1	2	2015	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JWARN INC. 2 - RDP 2	2	2015	2	2015
JWARN INC. 2 - TEMP (Software)	3	2015	3	2015
JWARN INC. 2 - MS B	3	2015	3	2015
JWARN INC. 2 - BD 1	3	2015	3	2015
JWARN INC. 2 - BD 2	1	2016	1	2016
JWARN INC. 2 - Initial Multi-Service Operational Testing (MOT&E)	4	2015	2	2016
JWARN INC. 2 - Initial Full-Rate Production/Full Deployment Decision	2	2016	4	2016
JWARN INC. 2 - RDP 3	3	2016	3	2016
JWARN INC. 2 - Initial Operational Capability (JWARN Standalone Web)	4	2016	2	2017
JWARN INC. 2 - FD 1	4	2016	4	2016
JWARN INC. 2 - IOC for RDP 1	1	2017	1	2017
JWARN INC. 2 - BD 3	2	2017	2	2017
JWARN INC. 2 - FD 2	4	2017	4	2017
JWARN INC. 2 - IOC for RDP 2	4	2017	4	2017
JWARN INC. 2 - FD 3	4	2018	4	2018
JWARN INC. 2 - IOC for RDP 3	2	2019	2	2019
JWARN INC. 2 - Full Operational Capability (C2 Host System Dependent)	3	2018	3	2020
JWARN INC. 2 - Gov't DT / IT / UFEs / OAs / FOTs	3	2015	4	2020
** BSP - MS B	2	2015	3	2015
BSP - TEMP	3	2015	1	2016
BSP - Capability Drop 1	2	2016	2	2016
BSP - Capability Drop 2	4	2016	4	2016
BSP - Capability Drop 3	2	2017	2	2017
BSP - Capability Drop 4	4	2017	4	2017
BSP - Operational Test and Evaluation - Capability Drops	2	2016	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
BSP - IOC	2	2018	3	2018
** SSA - Provide Data Model Implementation Guidance	1	2014	4	2018
SSA - Demonstrate Technology Transition Capabilities	1	2014	4	2018
SSA - Provide CM Services for Common User Products and Services	1	2014	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program			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
MB4: *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	-	132.696	106.380	81.916	-	81.916	49.207	28.642	16.949	7.710	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Advanced Component Development and Prototypes (ACD&P) Project supports:

The Medical Countermeasure Test and Evaluation (MCM T&E) Capability performs T&E and provides the essential data packages to support US Food and Drug Administration approval of leading biodefense medical countermeasure candidates to protect the Warfighter and the Nation. This capability provides dedicated capacity for DoD to conduct biosafety level-4 (BSL-4) Good Laboratory Practice (cGLP) T&E studies to meet programmatic needs following all applicable regulatory, biosurety, and safety standards.

Biosurveillance (BSV) actively gathers, analyzes, and interprets collected information that includes biosphere data that relate to disease activity and threats to human or animal health in order to achieve early warning of health threats, early detection of health events, and overall situational awareness of disease activity. BSV will align the biosurveillance efforts across DoD and national strategies. BSV will scope and influence BSV capabilities as products to meet Warfighter requirements through innovative management of key BSV initiatives. BSV requirements address medical and physical CBRN mission needs spanned in over 11 requirements documents and through Combatant Commander (COCOM) identified needs. BSV funds will support Joint US Forces Korea (USFK) Portal and Integrated Threat recognition (JUPITR) ATD/BSV ATD which will find, demonstrate, transition, and transfer the best operational concepts and technology solutions in support of a holistic approach to countering biological threats from the laboratory to operational use and theater confirmation of a Biological Event. JUPITR ATD will consist of four legs; Early Warning (EW), Biological Identification Capabilities Sets (BICS), Assessment of Environmental Detectors (AED), and Biosurveillance Portal (BSP). The JUPITR ATD will provide the USFK with a holistic biosurveillance capability to provide early warning, detection, collection, identification, and theater confirmation of a Biological event. The JUPITR ATD consists of filling capability gaps through information sharing and communication systems and detection/diagnostic systems for the USFK. Outputs will focus on proving component, CONOPS, and subsystem transition into programs of record (PORs) and/or integration into existing PORs. Excursion for whole system live agent test (WSLAT) of AED units will support JPM NBC CA Mission for Point Biological Detection. The Biosurveillance (BSV) program will transfer from the Medical Countermeasures (MB) Project to the Contamination Avoidance (CA) Project effective FY 2016.

The Countermeasures for Multi-Drug Resistance-Bacterial (CMDR-B) program develops medical countermeasures (MCMs) for Service members for protection against multi-drug resistant (MDR) bacteria, including Biological Warfare Agents (BWAs) and organisms that are genetically modified to be MDR. The resulting products(s) will be US Food and Drug Administration (FDA)-approved to prevent or minimize effects of MDR bacterial exposures. Leveraging collaborative Department of Defense (DoD), United States Government, and industry efforts will reduce program risk, lower program cost, and accelerate the delivery of therapeutics to the Warfighter. The program has established a translational team with the Joint Science and Technology Office for animal model work and pipeline candidates that could transition to CMDR-B for Advanced Development.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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The Emerging Infectious Diseases Therapeutics (EID Tx) program is developing and will deliver a Food and Drug Administration (FDA) approved, broad-spectrum medical countermeasure to the Warfighter for protection against naturally occurring or biologically engineered viruses. EID Tx is pursuing influenza indication as the first step in the development of a broad spectrum antiviral drug due to a clear and established FDA regulatory approval pathway. The drug in development is highly efficacious against multiple influenza viruses, including the 2009 H1N1 pandemic virus, H5N1 avian influenza virus, the most recently identified H7N9 virus from the outbreak in China, and drug resistant strains of influenza viruses. This drug has also demonstrated efficacy against other viruses of concern to the DoD's biodefense program. FDA approval for an influenza treatment is anticipated following completion of the SDD phase. Ongoing EID Tx drug development will be leveraged to demonstrate additional broad-spectrum MCM's against naturally occurring and/or engineered biowarfare threats. To meet the mission need of "one drug, many bugs" EID Tx is testing product efficacy on BWA threats. This will allow the military to leverage a product that will be FDA approved for influenza against other viruses.

The Hemorrhagic Fever Virus (HFV) MCS Acquisition Program develops medical countermeasures (MCMs), using high threat, extremely lethal Biological Warfare Agents (BWAs) of the Filoviridae family agents (Ebola) as a model system. Medical countermeasures will be advanced through the Food and Drug Administration (FDA) licensure/approval via the FDA 'Animal Rule', which allows for the demonstration of efficacy in relevant animal model(s) when human testing is not ethically feasible. HFV will also conduct animal model development and refinement as needed to support the pivotal animal efficacy testing required under the FDA 'Animal Rule'. Completion of Phase I trials, animal model development, and manufacturing scale up are the focus of the ACD&P phase. FDA approval for Filovirus therapeutics are expected following completion of the SDD phase.

The NGDS is an evolutionary acquisition family of systems to provide increments of capability over time across many echelons of the Combat Health Support System. The mission of the NGDS is to provide Chemical, Biological and Radiological (CBR) threat and infectious disease identification and U.S. Food and Drug Administration (FDA)-cleared diagnostics to inform individual patient treatment as defined in the approved NGDS Capabilities Development Document (CDD) and CBR situational awareness and disease surveillance as defined in the Common Analytical Laboratory (CALS) CDD. NGDS Increment 1 (NGDS Inc 1) will significantly improve diagnostic capability for deployable combat health support units (Role 3) while also improving operational suitability and affordability by developing FDA cleared biological warfare agent (BWA) and infectious disease in vitro diagnostic (IVD) assays on existing commercial diagnostic device with a well established FDA regulatory history and pipeline of commercial non-BWA infectious disease diagnostic tests. The NGDS Inc 1 program has a streamlined MS A to MS C - Limited Deployment acquisition strategy. BA4 funds support the NGDS Increment 1 program through the Technology Maturation and Risk Reduction phase to complete competitive prototyping activities, initiate development of six BWA IVDs (Anthrax, Ebola, Marburg, Plague, Tularemia and Q-Fever), initiate the development of BWA environmental surveillance assays, multiservice operational test assessment, and Urgent Material Release of systems and Ebola emergency use diagnostic test in support of the DoD's Ebola Response and Preparedness initiative under Title X. NGDS Increment 2 will complement NGDS Increment 1 by developing diagnostics biological pathogens and toxins, and addressing diagnostics for chemical and radiological exposures, and to provide capability to lower echelons of care. NGDS Increment 2 will also conduct collaborative work with the Defense Advanced Research Project Agency to accelerate development of a ruggedized Ebola detection and diagnostic system for use in austere environments in support of the DoD's Ebola Response and Preparedness initiative under Title X.

The Department of Defense (DoD) funds the technology development phase for vaccines that are directed against validated biological warfare (BW) weapons to include bacteria, viruses, and toxins of biological origin. Effective medical countermeasures to negate the threat of these biological warfare (BW) agents are urgently needed. Vaccines have been identified as the most efficient countermeasure against the validated threat of BW weapons. The multiple Trivalent Filovirus Vaccine (VAC FILO)

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Program will offer protection against the threat of Ebola and Marburg viruses. The current budget supports development and acceleration of two multiple candidates, in response to the Ebola outbreak, to provide an interim fielding capability, through the Technology Development Phase. The DoD anticipates that the Food Drug Administration (FDA) will approve this vaccine using the 'Animal Rule', which allows for the demonstration of efficacy on relevant animal model(s). During this phase a scalable manufacturing process is developed. This process will be used to develop current Good Manufacturing Practices (cGMP) lots suitable for a Phase 1 clinical trial. In addition, animal safety and efficacy studies will be conducted to support an Investigational New Drug (IND) submission to the FDA. These efforts will support a Milestone B decision and entry into the Engineering, Manufacturing, and Development (EMD) phase. The DoD is the Public Health Emergency Countermeasures lead for the advanced development of the Filovirus Vaccine.

The Ricin toxin is a validated bioweapon threat due to its availability and efficiency of production. The program supports one DoD vaccine candidate including manufacturing cGMP lots; and the continuation of animal model and assay development studies. These efforts also include a Phase 1b clinical trial, regulatory integration, and a manufacturing technology transfer to the ADM capability. The DoD is the Public Health Emergency Countermeasures lead for the advanced development of the Ricin Vaccine.

The Western, Eastern, and Venezuelan Equine Encephalitis (VAC WEVEE) Vaccine program initiated competitive candidates in FY13 to reduce program risk, and is developing two candidates through the Technology Development Phase. The efforts to be conducted during this period include: develop pilot scale manufacturing processes and manufacture of cGMP lots to support nonclinical and clinical studies; develop vaccine formulation that meets the logistical requirements of the DoD; conduct non-clinical GLP safety studies; submit Investigational New Drug (IND) applications; and conduct Phase 1 clinical human safety studies. The DoD anticipates that the FDA will approve these products using the 'Animal Rule', which allows for the demonstration of efficacy in relevant animal model(s). These efforts will support a Milestone B decision and entry into the EMD phase. The DoD is the Public Health Emergency Countermeasures lead for the advanced development of the WEVEE Vaccine.

FY 2015 funding includes $89.1 million of base funding and $17.3 million of Ebola emergency funding.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) BSL-4 GLP T&E	5.825	5.806	6.237
FY 2014 Accomplishments: Established new Program Management Office and organizational structure, implemented information technology tools for secure management of data, trained and integrated GLP-qualified staff, and validated supporting technology for conduct of GLP BSL-4 T&E studies.			
FY 2015 Plans: Achieve IOC; continue to provide strategic planning, program management, and scheduling; broaden and expand contract support plans to meet increased customer demand; conduct GLP BSL-4 T&E medical countermeasure studies in a safe and secure environment.			
FY 2016 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue to provide strategic planning, program management, and scheduling for GLP BSL-4 T&E capability, conduct secondary capability assessments, develop and implement CONOPS and plans for transition to new facility, conduct GLP BSL-4 T&E medical countermeasure studies in a safe and secure environment.			
Title: 2) BSV ***FY 2014 Accomplishments:*** Integrated/Fused Chemical/Biological & Force Protection sensors required for Early Warning capability. ***FY 2015 Plans:*** Finalize fusion and integration development for the Early Warning leg.	10.153	4.462	-
Title: 3) BSV ***FY 2014 Accomplishments:*** Awarded contracts to acquire candidate systems for the Assessment of Environmental Detector leg of JUPITR ATD. ***FY 2015 Plans:*** Conduct down-select of the Assessment of Environmental Detector technologies using data from the demonstrations scheduled at Dugway Proving Ground.	4.817	3.966	-
Title: 4) BSV ***FY 2014 Accomplishments:*** Released Biosurveillance Portal software version 2.0. ***FY 2015 Plans:*** Release Biosurveillance Portal Software version 3.0 and initiate CENTCOM and National Capital Region Biosurveillance Portal efforts.	18.196	8.035	-
Title: 5) BSV ***FY 2014 Accomplishments:*** Conducted user feedback events and technical demonstrations utilizing BICS deliverables. ***FY 2015 Plans:*** Transition BICS items to programs of record.	6.097	2.565	-
Title: 6) BSV ***FY 2014 Accomplishments:***	1.243	3.716	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Initiated and conducted overarching JUPITR ATD integration IPT and planned integrated JUPITR dry-run. ***FY 2015 Plans:*** Execute special studies and initiatives to address biosurveillance capability needs across the CBRNE program in alignment with DoD and National Strategies.			
Title: 7) CMDR-B ***FY 2015 Plans:*** Initiate anti-bacterial MCM development efforts to develop a US FDA-approved therapeutic that prevents or minimizes the effects of MDR (Multi-Drug Resistant) bacterial exposures. ***FY 2016 Plans:*** Continue development of anti-bacterial MCM development efforts leveraging whole of government anti-microbial resistant investments. Funded efforts will include pivotal animal studies to determine drug efficacy.	-	4.020	10.447
Title: 8) EID Tx ***FY 2015 Plans:*** Initiate and complete four filo virus (Ebola) proof of concept studies.	-	2.243	-
Title: 9) HFV ***FY 2014 Accomplishments:*** Closed out the Sarepta Ebola effort, completed animal model testing at USAMRIID, completed the multiple ascending dose trial and analytical method validations for the Sarepta Marburg effort, and conducted Phase I Clinical Trials for the Tekmira Ebola effort.	5.000	-	-
Title: 10) NGDS - Increment 1 ***FY 2014 Accomplishments:*** Continued development of the Anthrax and Viral Hemorrhagic Fever in-vitro diagnostic (IVD) assays and clinical trials and prepared and submitted FDA clearance 510(k) package. Initiated development of 22 environmental screening assays required to be on NGDS Increment 1 as the replacement to Joint Biological Agent Identification and Diagnostic System (JBAIDS) and to support the Common Analytical Laboratory Systems (CALS). ***FY 2015 Plans:*** Complete development of Anthrax and Viral Hemorrhagic Fever IVD assays and clinical trials and prepare and submit FDA clearance 510(k) package.	10.877	0.900	-
Title: 11) NGDS - Increment 1	6.000	0.972	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Continued Government Testing and prepared for Operational Assessment under Director of Operational Test & Evaluation (DOT&E) oversight for NGDS Increment 1 limited fielding to the United States Air Force (USAF). ***FY 2015 Plans:*** Continue Developmental Testing and conduct Operational Assessment under DOT&E oversight for NGDS Increment 1 land based diagnostic users.			
Title: 12) NGDS Increment 2 ***FY 2014 Accomplishments:*** Prepared for and conducted MS A/B for NGDS Increment 2. Assembled Program Integrated Program Team (IPT) and participating Service/interagency Reps.	1.012	-	-
Title: 13) NGDS - Increment 2 ***FY 2015 Plans:*** Initiate CBR diagnostic assay development and purchase of handheld systems/assays for competitive evaluation and early operational testing.	-	5.390	-
Title: 14) NGDS Inc 1 ***FY 2015 Plans:*** Initiate and complete emergency fielding of NGDS Inc 1 systems and Ebola emergency use assays in support of the DoD's Ebola Response and Preparedness under Title X.	-	5.100	-
Title: 15) NGDS Inc 2 ***FY 2015 Plans:*** Continue and complete collaborative development with DARPA to accelerate development of a ruggedized Ebola detection and diagnostic system capable for use in austere environments in support of the DoD's Ebola Response and Preparedness initiative under Title X.	-	2.500	-
Title: 16) VAC FILO ***FY 2014 Accomplishments:*** Continued non-clinical efficacy studies for competitive candidates. ***FY 2015 Plans:***	7.303	8.000	7.500

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue non-clinical efficacy studies and initiate non-clinical safety studies for multiple competitive candidates and acceleration of efforts in response to Ebola outbreak. ***FY 2016 Plans:*** Continue and complete non-clinical efficacy and safety studies for competitive multiple candidates.			
Title: 17) VAC FILO ***FY 2014 Accomplishments:*** Continued small-scale manufacturing process development, assay development, and formulation development for competitive candidates. ***FY 2015 Plans:*** Complete small-scale manufacturing process development and initiate and complete cGMP Pilot Scale Production. Initiate assay qualification and continue formulation development of competitive multiple candidates, as well as, accelerating qualification efforts in response to Ebola outbreak. ***FY 2016 Plans:*** Complete formulation development, assay qualification and cGMP pilot scale production of competitive candidates. Initiate stability testing.	18.322	7.429	11.500
Title: 18) VAC FILO ***FY 2014 Accomplishments:*** Continued to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2015 Plans:*** Continue to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2016 Plans:*** Continue to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	5.098	5.200	4.859
Title: 19) VAC FILO ***FY 2014 Accomplishments:***	5.923	4.500	13.126

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Initiated the preparation of Chemistry Manufacturing & Controls (CMC) section for IND submission for competitive prototypes. Planned for pre-IND meeting with the FDA. ***FY 2015 Plans:*** Conduct one pre-IND meeting with the FDA on first prototype. Initiate the preparation of IND to include nonclinical data and clinical protocol for competitive prototypes. Initiation of in life clinical trials. Initiate and complete clinical trial for monovalent. ***FY 2016 Plans:*** Conduct pre-IND meeting with FDA on second prototype. Finalize and submit IND to the FDA for competitive prototypes. Initiate Phase 1 clinical trials for competitive prototypes. Initiate and complete trivalent Phase 1 clinical trial.			
Title: 20) VAC FILO ***FY 2015 Plans:*** Ebola Response (Title X) funded effort. rVSVDG ZEBOV is one of the three Ebola vaccine candidates identified for expedited development. Funds support GLP toxicology studies (Battelle); Nonhuman primate efficacy studies (USAMRIID); Immunological testing of Phase 1 samples (Battelle/USAMRIID); qualification of Human ELISA (Battelle). These efforts are needed to support the Phase II/III clinical trials and interim fielding capability of this candidate in FY15. Contracts and work plans are in place. This vaccine candidate will only address EBOLA not the core trivalent effort, however, data from these studies will support development and acceleration of the trivalent vaccine. The ELISA efforts are critical to establishing a standardized assay for measuring the immune response across multiple vaccine platforms. Collection of safety and efficacy data in humans has the potential to decrease FDA licensure requirements versus full licensure under the animal rule.	-	9.700	-
Title: 21) VAC RIC ***FY 2014 Accomplishments:*** Continued manufacturing process development. Conducted cGMP Pilot Lot Production. ***FY 2016 Plans:*** Initiate manufacturing technology transfer to the ADM capability.	1.020	-	2.640
Title: 22) VAC RIC ***FY 2014 Accomplishments:*** Continued animal model efficacy studies.	4.891	-	-
Title: 23) VAC RIC ***FY 2014 Accomplishments:***	1.474	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continued assay development and development of serum test samples. Initiated cGMP manufacturing and Phase 1b Human Clinical Trial.			
Title: 24) VAC WEVEE ***FY 2014 Accomplishments:*** Continued non-clinical safety and efficacy studies for competitive candidates. ***FY 2015 Plans:*** Continue non-clinical safety and efficacy studies for competitive candidates. Initiate IND-enabling studies. ***FY 2016 Plans:*** Continue non-clinical safety, efficacy and IND-enabling studies for competitive candidates.	3.500	7.855	8.716
Title: 25) VAC WEVEE ***FY 2014 Accomplishments:*** Continued small-scale manufacturing process development, assay development, and initiated GMP manufacturing for competitive candidates. ***FY 2015 Plans:*** Continue small-scale manufacturing process development, assay development, and GMP manufacturing for competitive candidates. Complete GMP manufacturing for one candidate. ***FY 2016 Plans:*** Continue small-scale manufacturing process development, and initiate GMP manufacturing for second candidate.	12.741	8.463	12.020
Title: 26) VAC WEVEE ***FY 2014 Accomplishments:*** Continued strategic/tactical planning, government system engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, regulatory and technical support. ***FY 2015 Plans:*** Continue strategic/tactical planning, government system engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, regulatory and technical support. ***FY 2016 Plans:*** Continue strategic/tactical planning, government system engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, regulatory and technical support.	3.204	4.139	3.748
Title: 27) VAC WEVEE	-	-	1.123

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2016 Plans: Submit IND for prototype one and initiate clinical trial.			
Title: 28) SBIR/STTR	-	1.419	-
FY 2015 Plans: SBIR/STTR - FY15 - Small Business Innovative Research.			
Accomplishments/Planned Programs Subtotals	132.696	106.380	81.916

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• MB5: *MEDICAL BIOLOGICAL DEFENSE (EMD)*	253.748	179.497	117.881	-	117.881	170.122	209.182	215.905	208.482	Continuing	Continuing
• MB7: *MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)*	0.493	13.414	11.801	-	11.801	10.420	3.137	13.943	12.496	Continuing	Continuing
• JM2222: *BIOSCAVENGER (BSCAV)*	-	-	-	-	-	-	-	4.000	4.000	Continuing	Continuing
• JM6677: *ADVANCED ANTICONVULSANT SYSTEM (AAS)*	-	2.500	11.133	-	11.133	-	-	-	-	-	13.633
• JM8788: *NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS)*	-	12.518	5.300	-	5.300	9.798	15.412	16.014	11.900	Continuing	Continuing
• JX0005: *DOD BIOLOGICAL VACCINE PROCUREMENT (VACCINES)*	0.185	6.412	0.185	-	0.185	0.185	0.185	3.848	10.882	Continuing	Continuing
• JX0210: *CRITICAL REAGENTS PROGRAM (CRP)*	-	2.564	1.005	-	1.005	1.005	1.005	1.005	1.005	Continuing	Continuing
• JX0300: *BIOSURVEILLANCE (BSV)*	2.450	-	-	-	-	-	-	-	-	-	2.450

Remarks

D. Acquisition Strategy

BSL4 GOOD LABORATORY PRACTICES TEST & EVALUATION (BSL4 GLP T&E)

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The MCM T&E Capability is being implemented in three phases. Phase 1 (completed in FY13) established support contracts, agreements, and developed a capability implementation plan to utilize and maintain the existing and planned new US Army Medical Research Institute of Infectious Diseases (USAMRIID) facility and staff. Phase 2 executes the implementation plan, bringing the facility, equipment, personnel, and technical and business processes into a state of readiness to conduct BSL-4 studies under full GLP compliance. In FY14, the capability established a new Program Management Office and organizational structure, implemented information technology tools for secure management of data, trained and integrated GLP-qualified staff, and validated supporting technology for conduct of T&E studies.

After attaining a scheduled Initial Operational Capability (IOC) at the end of FY14 and moving into Phase 3, the focus of FY15 will be on conducting secondary capability assessments and refinements, broadening and adapting contract support plans to meet increased customer demand, updating the Life-Cycle Sustainment Plan, and conducting multiple T&E studies. MCM T&E sustainment costs during Phase 2 and beyond will be offset by costs from specific MCM development programs where possible. The period of FY16 to FY19 will continue secondary capability assessments and refinements and will focus on transition of the capability to the new USAMRIID facility, after which Full Operational Capability (FOC) will be reached.

BIOSURVEILLANCE (BSV)

BSV is a set of capabilities that acquire, integrate, and analyze medical, environmental, and incident management data using existing and next generation systems, medical and non-medical sample collection tools and identifiers/diagnostics; and transition hardware/software tools and devices as residuals from the Biosurveillance Joint United States Force Korea (USFK) Portal and Integrated Threat Recognition (JUPITR) Advanced Technology Demonstration (ATD). Lessons learned from the ATD will be transitioned to the programs of record associated with the CBDP (such as NGDS, TDS & CALS). The acquisition strategy will address the materiel solutions identified out of the multiple Biosurveillance (BSV) related Analysis of Alternatives (AoA's).

COUNTERMEASURES FOR DRUG RESISTANT BACTERIA (CMDR-B)

The CMDR-B program develops MCMs for MDR (multi-drug resistant) bacteria, including BWAs and organisms that are genetically modified to be MDR. The resulting product(s) will be US FDA-approved to prevent or minimize effects of MDR bacterial exposures. CMDR-B will follow an integrated acquisition and regulatory pathway to achieve FDA approval for drug candidates. The CMDR-B Program intends to fund multiple candidates to address competitive prototyping and mitigate drug development risk. In FY13, a Market Survey and RFI were completed assessing current anti-bacterial countermeasure technologies. Results confirmed technologies exist that are of sufficient maturity to enter advanced development. CMDR-B is establishing collaborative relationships with DoD, other USG entities and international partners to reduce program risk, lower program cost, and accelerate delivery of MCMs to the Warfighter. Milestone A is anticipated in FY15.

EMERGING INFECTIOUS DISEASES - THERAPUTIC (EID TX)

The goal of the EID Tx program is to develop a safe and effective MCM against biothreats of interest to the DoD. The first step of the acquisition strategy is to develop an MCM for influenza due to a clear and established FDA regulatory approval pathway. The Phase 2 clinical trial is complete, demonstrating both safety and efficacy in humans. Program was authorized by FDA to move forward at End of Phase 2 meeting on 3 SEP 13. Phase 3 clinical trials for EID Tx against influenza began during

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1QFY14. Following successful FDA approval of the drug against influenza in 3QFY16, EID Tx will utilize an incremental approach to label extensions of this broad spectrum therapeutic. The development strategy for additional label extensions of the antiviral drug consists of detailed characterization of antiviral activities of the broad-spectrum compound against multiple virus families using cell-based and animal model systems. Using the results of the cell-based assays efficacy assessment of the drug against high-priority viruses of biodefense concern will be performed using small animal studies. The results of the proof of concept studies will determine the best candidate to move forward for the Label Extension (LE) starting in FY15.

HEMORRHAGIC FEVER VIRUS (HFV)

The acquisition strategy uses an evaluation of a drug candidate against the lethal Ebola Zaire viruses. Following a successful Milestone B and entry into SDD phase, the program will conduct expanded human clinical safety studies, definitive animal efficacy, and toxicology studies, required for FDA approval. The performer will submit a New Drug Application for the Ebola Zaire therapeutic during the SDD Phase. During the Production and Deployment phase, full rate manufacturing and stockpile production will be pursued. If the FDA mandates post-marketing surveillance studies, they will be conducted during Production and Deployment.

NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS)

The term "Role" is used to describe the stratification of the four tiers in which medical support is organized, on a progressive basis, to conduct treatment, evaluation, resupply, and functions essential to the maintenance of the health of the force. Role 3 support is normally provided at Division or Service equivalent level and includes specialist laboratory resources. The NGDS Inc 1 program has a streamlined MS A to MS C - Limited Deployment acquisition strategy. The NGDS Inc 1 is intended to replace the legacy Joint Biological Agent Identification and Diagnostic System (JBAIDS) beginning in FY17. NGDS Increment 2 (NGDS Inc 2) will complement NGDS Inc 1 by developing diagnostic capabilities for biological pathogens and toxins and address diagnostics for chemical and radiological exposures, and to provide capability to lower echelons of care.

NGDS Increment 2 will conduct technology development FY14-FY16 prior to MS B. The acquisition strategy and capability to be developed will be informed by the results of the Analysis of Alternatives to be completed 4QFY14. NGDS Increment 2 is intended to be complementary to NGDS Increment 1 to expand the breadth and depth of diagnostics to CBR threats, pre-symptomatic diagnostics, and far forward echelons of care.

MB7 funds will support development, testing, and FDA approval of additional assays after system fielding.

FILOVIRUS (VAC FILO)

The Government will develop multiple Filovirus vaccine candidates through a Phase 1 clinical trial. In response to the Ebola outbreak, efforts have been accelerated to provide an interim fielding capability. The Government will serve as the integrator for the Technology Development Phase by managing and coordinating the various vaccine development contracts. At MS B, the best prototype will be selected through a full and open competition to transition to the Engineering & Manufacturing Development (EMD) Phase with delivery of a FDA licensed Filovirus Vaccine. The development contracts will be a mix of Cost Plus and Firm Fixed Price. In addition, the Program Office will partner with DoD agencies and laboratories to include U.S. Army Medical Research Institute of Infectious Diseases. This DoD program is the

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Public Health Emergency Countermeasures lead for the advanced development of this vaccine, and is leveraging expertise across the Federal and International sectors to ensure programmatic success.

RICIN VACCINE (VAC RIC)

A ricin vaccine will protect against exposure to the ricin toxin, an identified BW threat. The Government will serve as the integrator during this phase by managing and coordinating the various vaccine development efforts. Additionally, the Program Office will partner with DoD agencies and laboratories to include U.S. Army Medical Research Institute of Infectious Diseases. FY14 funding will allow the completion of essential efforts. These efforts include manufacturing of cGMP lots, animal model efficacy studies, and assay development. These efforts also include a Phase Ib Clinical Trial to measure the safety and effectiveness of the vaccine in humans. FY14 funds support the Phase 1b clinical study through FY15. FY16 funding will fund the initiation of the manufacturing technology transfer to the ADM capability.

WESTERN EASTERN VENEZUELAN EQUINE ENCEPH VACCINE (VAC WEVEE)

The WEVEE acquisition strategy uses a parallel evaluation of two vaccine candidates through a Phase 1 clinical trial to achieve competitive prototyping in the Technology Development phase. The lead candidate is more mature than the second candidate. Several potential decision points will be used to assess the candidates for possible down select. The schedule is based on a down select to prototype one. The Government will serve as the integrator during this phase by managing and coordinating the various vaccine development efforts. At MS B, the best prototype will be selected through a full and open competition to transition to the Engineering and Manufacturing Development (EMD) phase, with delivery of a FDA-licensed WEVEE vaccine. The development efforts will be a Cost Plus and Firm Fixed Price CLINs. Additionally, the Program Office will partner Health and Human Services/National Institute of Allergies and Infectious Diseases (HHS/NIAID), DoD agencies, and laboratories to include U.S. Army Medical Research Institute of Infectious Diseases (USMRIID). This DoD program is the Public Health Emergency Countermeasures lead for the advanced development of this vaccine and is leveraging expertise across the Federal and International sectors to ensure programmatic success.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSV - SW GFPR - Portal SW Design & Integration	MIPR	Various :	8.173	17.084	Mar 2014	7.828	Mar 2015	-		-		-	Continuing	Continuing	-
SW SB - BICS Portal Hardware Component and consumables	MIPR	Various :	5.391	4.984	Mar 2014	2.360	Mar 2015	-		-		-	Continuing	Continuing	-
BSV - HW SB - AED Hardware, Integration and Consumables	MIPR	Various :	7.566	3.704	Mar 2014	3.760	Mar 2015	-		-		-	Continuing	Continuing	-
HW SB - Early Warning Hardware & Integration	MIPR	Various :	3.481	9.040	Mar 2014	4.257	Mar 2015	-		-		-	Continuing	Continuing	-
** CMDR-B - SW GFPR - MCM Advanced Development - Contract 1	C/CPIF	Various :	0.000	-		3.546	Jan 2015	8.098	Mar 2016	-		8.098	Continuing	Continuing	-
** HFV - SW SB - Conduct Phase I Clinical Trials	C/CPIF	Tekmira Pharmaceuticals Corp. : Vancouver British Columbia, CN	18.460	1.103	Apr 2014	-		-		-		-	Continuing	Continuing	-
HW S - Complete Phase I Clinical Trials and Analytical Method Development	C/CPIF	Serepta : Bothell, WA	31.230	3.468	Apr 2014	-		-		-		-	Continuing	Continuing	-
** NGDS - HW C - Network Integration	MIPR	JPM Information Systems (JPM IS) : San Diego, CA	0.231	0.200	Mar 2014	0.110	Mar 2015	-		-		-	Continuing	Continuing	-
HW C - Begin and continue diagnostic assay optimization for Plague, Q-Fever and Tularemia IVD.	C/CPFF	BioFire Dx : Salt Lake City, UT	0.000	2.000	Mar 2014	0.262	Mar 2015	-		-		-	Continuing	Continuing	-
HW C - Begin development of 22 agent environmental BWA Screening assay panels	C/CPFF	BioFire Dx : Salt Lake City, UT	0.000	4.400	Mar 2014	0.500	Mar 2015	-		-		-	Continuing	Continuing	-

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HW C - Complete development of Anthrax and Viral Hemorrhagic Fever IVD, clinical trials, prepare FDA submission	Various	BioFire Dx : Salt Lake City, UT	0.000	4.400	Mar 2014	0.200	Mar 2015	-		-		-	Continuing	Continuing	-
Inc 2 - HW C - Hardware/ Assay Development	MIPR	Various :	0.000	-		2.190	Jun 2015	-		-		-	Continuing	Continuing	-
HW C - Imitate and complete emergency fielding of systems and Ebola EUA assays	Various	BioFire Dx : Salt Lake City, UT	0.000	-		5.100	Nov 2014	-		-		-	Continuing	Continuing	-
SW GFPR - Complete development of a ruggedized Ebola detection and diagnostic system capability	Various	TBD :	0.000	-		2.500	Feb 2015	-		-		-	Continuing	Continuing	-
** VAC FILO - HW S - Non Clinical Studies	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	4.700	8.986	Dec 2013	3.709	Dec 2014	2.500	Dec 2015	-		2.500	Continuing	Continuing	-
HW S - Manufacturing Process Development Prototype 1	C/CPIF	Paragon Bioservices Inc. : Baltimore, MD	6.184	6.710	Dec 2013	-		-		-		-	Continuing	Continuing	-
SW GFPR - Manufacturing Pilot Scale Prototype 1	C/CPIF	Paragon Bioservices Inc. : Baltimore, MD	1.290	2.500	Mar 2014	0.250	Mar 2015	-		-		-	Continuing	Continuing	-
HW S - Manufacturing Pilot Scale Prototype 1&2	MIPR	Defense Technical Information Center (DTIC) : Fort Belvoir, VA	0.000	1.545	Mar 2014	10.650	Mar 2015	9.785	Mar 2016	-		9.785	Continuing	Continuing	-
** VAC RIC - HW S - cGMP Manufacturing	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	0.500	1.200	Jan 2014	-		-		-		-	Continuing	Continuing	-

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** VAC WEVEE - HW S - Manufacturing and Process Development	MIPR	National Institute of Allergy & Infectious Diseases : Bethesda, MD	5.800	6.973	Dec 2013	3.336	Dec 2014	3.493	Dec 2015	-		3.493	Continuing	Continuing	-
HW S - Manufacturing and Process Development	C/CPIF	Various :	0.000	-		7.627	Dec 2014	6.530	Dec 2015	-		6.530	Continuing	Continuing	-
SW GFPR - Intellectual Property	SS/FFP	Various :	0.000	3.000	Aug 2014	-		-		-		-	Continuing	Continuing	-
		Subtotal	93.006	81.297		58.185		30.406		-		30.406	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSV - ES S - JUPITR System Engineer & System Support	Various	Various :	2.371	2.954	Mar 2014	1.409	Mar 2015	-		-		-	Continuing	Continuing	-
** NGDS - ES C - Studies and WIPT Support	MIPR	Various :	1.995	1.400	Mar 2014	0.700	Mar 2015	-		-		-	Continuing	Continuing	-
** VAC FILO - ES S - Regulatory Integration (Environmental and FDA Documentation) and Delivery System	MIPR	US Army Medical Materiel Development Activity (USAMMDA) : Fort Detrick, MD	2.278	0.200	Jul 2014	0.250	Dec 2014	0.300	Dec 2015	-		0.300	Continuing	Continuing	-
** VAC RIC - ES S - Regulatory Integration	MIPR	US Army Medical Materiel Development Activity (USAMMDA) : Fort Detrick, MD	0.030	0.252	Mar 2014	-		0.160	Dec 2015	-		0.160	Continuing	Continuing	-
ES S - MRMC Support	MIPR	Various :	0.000	0.372	Mar 2014	-		-		-		-	Continuing	Continuing	-
** VAC WEVEE - ES S - Regulatory Integration	MIPR	National Institute of Allergy & Infectious	0.100	2.678	Dec 2013	0.100	Dec 2014	0.100	Dec 2015	-		0.100	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Diseases : Bethesda, MD													
ES S - Regulatory Integration	MIPR	US Army Medical Materiel Development Activity (USAMMDA) : Fort Detrick, MD	0.024	0.023	Nov 2014	0.123	Dec 2014	0.123	Dec 2015	-		0.123	Continuing	Continuing	-
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	TBD :	0.000	-		1.419		-		-		-	Continuing	Continuing	-
		Subtotal	6.798	7.879		4.001		0.683		-		0.683	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSL4 GLP T&E - DTE SB - T&E Facility	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	0.000	5.825	Dec 2013	5.806	Dec 2014	6.237	Dec 2015	-		6.237	Continuing	Continuing	-
** BSV - DTE S - JUPITR Tech Demos AEC	MIPR	Army Test and Evaluation Command (ATEC) : Aberdeen Proving Ground, MD	0.178	0.407	Mar 2014	0.484	Mar 2015	-		-		-	Continuing	Continuing	-
OTHT C - JUPITR Operational Demos OTC	MIPR	Army Test and Evaluation Command (ATEC) : Aberdeen Proving Ground, MD	0.000	-		1.500	Mar 2015	-		-		-	Continuing	Continuing	-
** EID TX - DTE S - Developmental Testing	MIPR	US Army Medical Research Institute of Infectious Disease	0.000	-		1.854	Mar 2015	-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		(USAMRIID) : Fort Detrick, MD													
** HFV - DTE SB - Animal Models	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	3.959	0.429	Apr 2014	-		-		-		-	Continuing	Continuing	-
** NGDS - Inc 1 - - OTHT C - Conduct DT and OT Testing	MIPR	Various :	4.340	2.789	Mar 2014	1.000	Dec 2014	-		-		-	Continuing	Continuing	-
OTHT C - Test Articles	MIPR	Various :	0.987	1.500	Mar 2014	0.900	Dec 2014	-		-		-	Continuing	Continuing	-
Inc 2 - OTHT C - Conduct Increment 2 DT and OT Testing	MIPR	Various :	0.000	-		0.400	Jun 2015	-		-		-	Continuing	Continuing	-
Inc 2 - OTHT C - Test Articles	MIPR	Various :	0.000	-		0.300	Jun 2015	-		-		-	Continuing	Continuing	-
** VAC FILO - OTHT SB - Testing, Evaluation, and Clinical Trials	MIPR	Battelle Memorial Institute : Columbus, OH	14.586	8.000	Mar 2014	3.500	Dec 2014	8.000	Dec 2015	-		8.000	Continuing	Continuing	-
OTE C - Assay Development Prototype 1	C/CPIF	Paragon Bioservices Inc. : Baltimore, MD	2.792	3.000	Dec 2013	2.207	Mar 2015	5.000	Dec 2015	-		5.000	Continuing	Continuing	-
OTE C - Assay Development Prototype 2	C/CPIF	Texas BioMedical Research Institute : San Antonio, TX	1.200	4.300	Mar 2014	1.000	Dec 2014	4.500	Dec 2015	-		4.500	Continuing	Continuing	-
OTHT SB - Testing, Evaluation, and Clinical Trials	SS/CPFF	TBD :	0.000	-		4.700	Mar 2015	-		-		-	Continuing	Continuing	-
OTHT SB - Testing, Evaluation, and Clinical Trials #2	PO	Texas BioMedical Research Institute : San Antonio, TX	0.000	-		3.350	Mar 2015	1.650	Mar 2016	-		1.650	Continuing	Continuing	-
** VAC RIC - OTE C - Assay Development	MIPR	US Army Medical Research Institute of Infectious Disease	0.000	1.450	Jan 2014	-		-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		(USAMRIID) : Fort Detrick, MD													
OTHT C - Phase 1b Clinical Trial	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	0.500	1.401	Jun 2014	-		-		-		-	Continuing	Continuing	-
DTE C - Animal Model Efficacy Studies	MIPR	Battelle Memorial Institute : Columbus, OH	4.000	2.710	Mar 2014	-		-		-		-	Continuing	Continuing	-
DTE C - Manufacturing Tech Transfer	Various	Various :	0.000	-		-		2.480	Jan 2016	-		2.480	Continuing	Continuing	-
** VAC WEVEE - OTE C - Test and Evaluation Assay Development	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	1.054	5.437	Nov 2014	2.435	Dec 2014	5.453	Dec 2015	-		5.453	Continuing	Continuing	-
OTE C - Test and Evaluation Assay Development	MIPR	Battelle Memorial Institute : Columbus, OH	0.748	0.563	Nov 2014	2.920	Dec 2014	5.260	Dec 2015	-		5.260	Continuing	Continuing	-
OTE C - Clinical Trial (Prototype)	MIPR	National Institute of Allergy & Infectious Diseases : Bethesda, MD	0.000	-		-		0.900	Dec 2015	-		0.900	Continuing	Continuing	-
		Subtotal	34.344	37.811		32.356		39.480		-		39.480	-	-	-

Remarks

A contractual mechanism to access the ADM capability is pending.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSV - PM/MS S - Management Support	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	0.180	0.081	Mar 2014	0.065	Mar 2015	-		-		-	Continuing	Continuing	-
PM/MS S - Management Support	MIPR	Various :	0.000	2.252	Mar 2014	1.081	Mar 2015	-		-		-	Continuing	Continuing	-
** CMDR-B - PM/MS SB - Management Support	Allot	JPEO Chem/Bio Defense (JPEO-CBD) : Aberdeen Proving Ground, MD	0.000	-		0.215	Sep 2015	0.548	Sep 2016	-		0.548	Continuing	Continuing	-
PM/MS SB - Management Support	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Belvoir, VA	0.000	-		0.177	Jan 2015	0.792	Jan 2016	-		0.792	Continuing	Continuing	-
PM/MS SB - Management Support #2	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	0.000	-		0.082	Sep 2015	0.209	Sep 2016	-		0.209	Continuing	Continuing	-
PM/MS C - Contractor Systems Engineering/ Program Management Support	C/FP	Various :	0.000	-		-		0.800	Aug 2016	-		0.800	Continuing	Continuing	-
** EID TX - PM/MS SB - Management Support	Allot	JPEO Chem/Bio Defense (JPEO-CBD) : Aberdeen Proving Ground, MD	4.661	-		0.120	Sep 2015	-		-		-	Continuing	Continuing	-
PM/MS SB - Management Support #3	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	0.000	-		0.046	Sep 2015	-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM/MS SB - Management Support #4	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Belvoir, VA	0.554	-		0.223	Jan 2015	-		-		-	Continuing	Continuing	-
** NGDS - PM/MS SB - Product Management Systems Support	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	1.450	0.500	Mar 2014	0.700	Mar 2015	-		-		-	Continuing	Continuing	-
PM/MS S - Product Management Support	Allot	Goldbelt Raven LLC. : Frederick, MD	0.000	0.700	Mar 2014	-		-		-		-	Continuing	Continuing	-
** VAC FILO - PM/MS S - Contractor Support	C/FFP	Various :	0.595	0.605	Jun 2014	-		-		-		-	Continuing	Continuing	-
PM/MS - Joint Vaccine Acquisition Program Management	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	2.440	-		0.700	Dec 2014	0.250	Dec 2015	-		0.250	Continuing	Continuing	-
PM/MS S - Program Management/Program Manager Support	Allot	JPEO Chem/Bio Defense (JPEO-CBD) : Aberdeen Proving Ground, MD	1.993	-		3.813	Dec 2014	5.000	Dec 2015	-		5.000	Continuing	Continuing	-
PM/MS SB - PM/MS S - Contractor Systems Engineering/Program Management Support	C/FFP	Various :	1.700	0.800	Mar 2014	-		-		-		-	Continuing	Continuing	-
PM/MS S - Contractor Support	C/FFP	Battelle Memorial Institute : Columbus, OH	0.000	-		0.700	Jun 2015	-		-		-	Continuing	Continuing	-
** VAC WEVEE - PM/MS S - Program Manager Support	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	0.040	-		3.916	Dec 2014	1.344	Dec 2015	-		1.344	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM/MS S - Contractor Systems Engineering Program Support	C/FFP	Various :	0.116	0.316	Jun 2014	-		1.405	Mar 2016	-		1.405	Continuing	Continuing	-
PM/MS S - Joint Vaccine Acquisition Program Management	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	0.000	0.455	Dec 2013	-		0.999	Dec 2015	-		0.999	Continuing	Continuing	-
		Subtotal	13.729	5.709		11.838		11.347		-		11.347	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	147.877	132.696		106.380		81.916		-		81.916	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

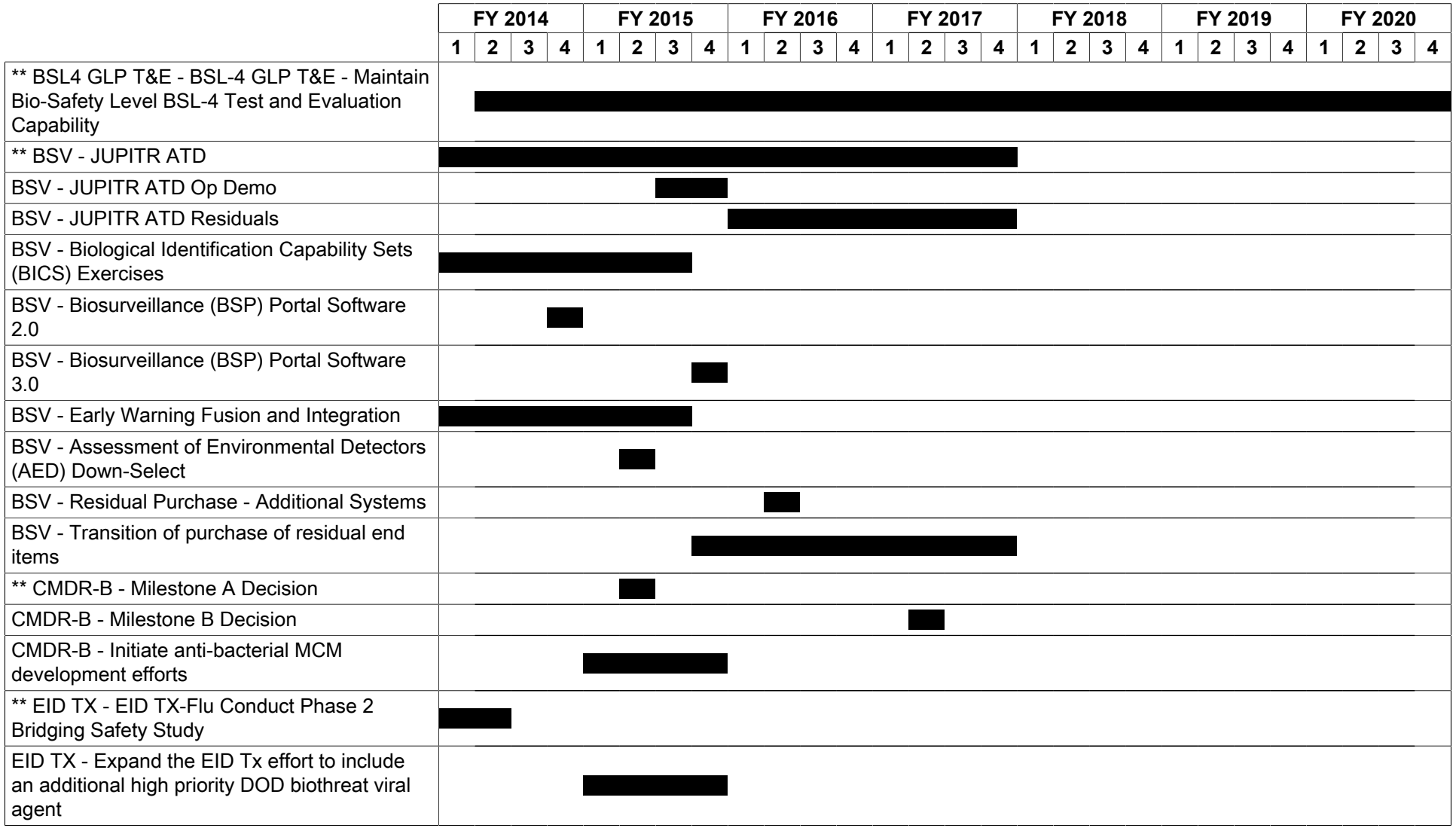

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

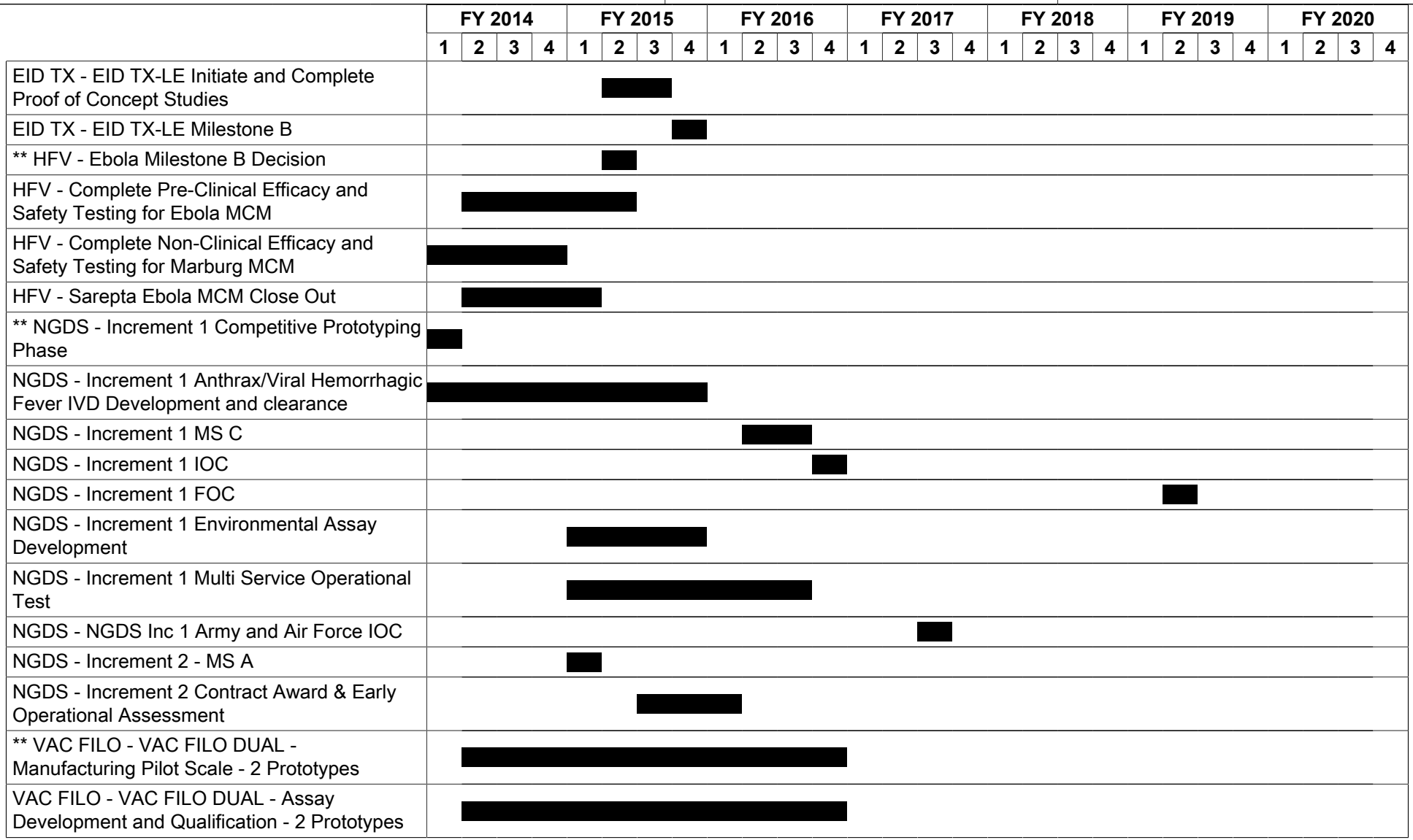

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

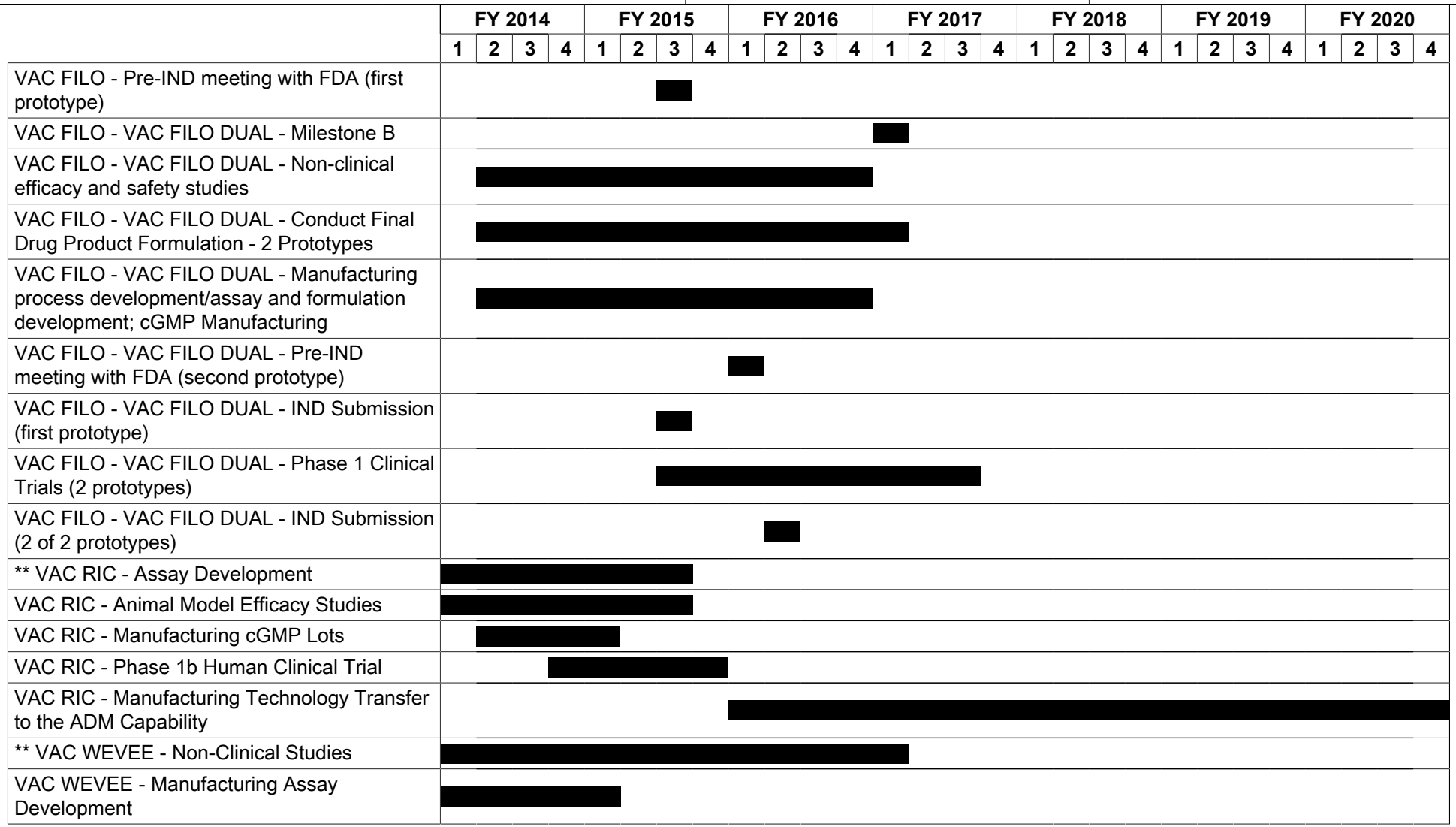

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

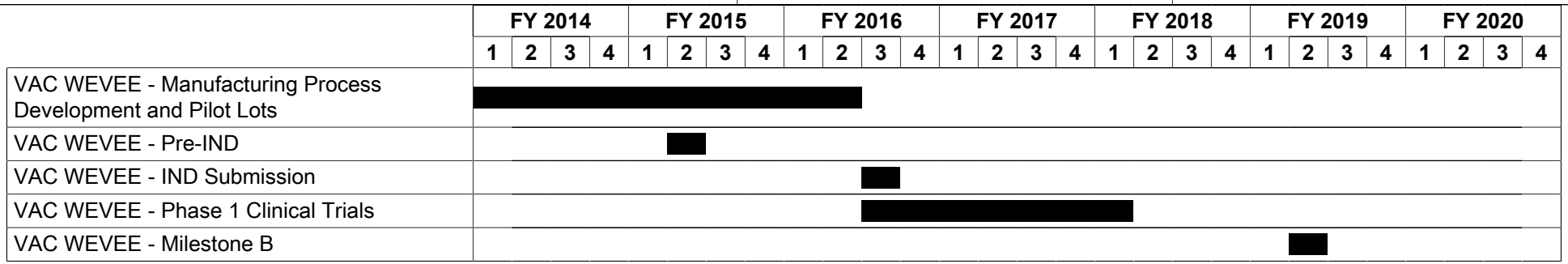

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** BSL4 GLP T&E - BSL-4 GLP T&E - Maintain Bio-Safety Level BSL-4 Test and Evaluation Capability	2	2014	4	2020
** BSV - JUPITR ATD	1	2014	4	2017
BSV - JUPITR ATD Op Demo	3	2015	4	2015
BSV - JUPITR ATD Residuals	1	2016	4	2017
BSV - Biological Identification Capability Sets (BICS) Exercises	1	2014	3	2015
BSV - Biosurveillance (BSP) Portal Software 2.0	4	2014	4	2014
BSV - Biosurveillance (BSP) Portal Software 3.0	4	2015	4	2015
BSV - Early Warning Fusion and Integration	1	2014	3	2015
BSV - Assessment of Environmental Detectors (AED) Down-Select	2	2015	2	2015
BSV - Residual Purchase - Additional Systems	2	2016	2	2016
BSV - Transition of purchase of residual end items	4	2015	4	2017
** CMDR-B - Milestone A Decision	2	2015	2	2015
CMDR-B - Milestone B Decision	2	2017	2	2017
CMDR-B - Initiate anti-bacterial MCM development efforts	1	2015	4	2015
** EID TX - EID TX-Flu Conduct Phase 2 Bridging Safety Study	1	2014	2	2014
EID TX - Expand the EID Tx effort to include an additional high priority DOD biothreat viral agent	1	2015	4	2015
EID TX - EID TX-LE Initiate and Complete Proof of Concept Studies	2	2015	3	2015
EID TX - EID TX-LE Milestone B	4	2015	4	2015
** HFV - Ebola Milestone B Decision	2	2015	2	2015
HFV - Complete Pre-Clinical Efficacy and Safety Testing for Ebola MCM	2	2014	2	2015
HFV - Complete Non-Clinical Efficacy and Safety Testing for Marburg MCM	1	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
HFV - Sarepta Ebola MCM Close Out	2	2014	1	2015
** NGDS - Increment 1 Competitive Prototyping Phase	1	2014	1	2014
NGDS - Increment 1 Anthrax/Viral Hemorrhagic Fever IVD Development and clearance	1	2014	4	2015
NGDS - Increment 1 MS C	2	2016	3	2016
NGDS - Increment 1 IOC	4	2016	4	2016
NGDS - Increment 1 FOC	2	2019	2	2019
NGDS - Increment 1 Environmental Assay Development	1	2015	4	2015
NGDS - Increment 1 Multi Service Operational Test	1	2015	3	2016
NGDS - NGDS Inc 1 Army and Air Force IOC	3	2017	3	2017
NGDS - Increment 2 - MS A	1	2015	1	2015
NGDS - Increment 2 Contract Award & Early Operational Assessment	3	2015	1	2016
** VAC FILO - VAC FILO DUAL - Manufacturing Pilot Scale - 2 Prototypes	2	2014	4	2016
VAC FILO - VAC FILO DUAL - Assay Development and Qualification - 2 Prototypes	2	2014	4	2016
VAC FILO - Pre-IND meeting with FDA (first prototype)	3	2015	3	2015
VAC FILO - VAC FILO DUAL - Milestone B	1	2017	1	2017
VAC FILO - VAC FILO DUAL - Non-clinical efficacy and safety studies	2	2014	4	2016
VAC FILO - VAC FILO DUAL - Conduct Final Drug Product Formulation - 2 Prototypes	2	2014	1	2017
VAC FILO - VAC FILO DUAL - Manufacturing process development/assay and formulation development; cGMP Manufacturing	2	2014	4	2016
VAC FILO - VAC FILO DUAL - Pre-IND meeting with FDA (second prototype)	1	2016	1	2016
VAC FILO - VAC FILO DUAL - IND Submission (first prototype)	3	2015	3	2015
VAC FILO - VAC FILO DUAL - Phase 1 Clinical Trials (2 prototypes)	3	2015	3	2017
VAC FILO - VAC FILO DUAL - IND Submission (2 of 2 prototypes)	2	2016	2	2016
** VAC RIC - Assay Development	1	2014	3	2015
VAC RIC - Animal Model Efficacy Studies	1	2014	3	2015
VAC RIC - Manufacturing cGMP Lots	2	2014	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
VAC RIC - Phase 1b Human Clinical Trial	4	2014	4	2015
VAC RIC - Manufacturing Technology Transfer to the ADM Capability	1	2016	4	2020
** VAC WEVEE - Non-Clinical Studies	1	2014	1	2017
VAC WEVEE - Manufacturing Assay Development	1	2014	1	2015
VAC WEVEE - Manufacturing Process Development and Pilot Lots	1	2014	2	2016
VAC WEVEE - Pre-IND	2	2015	2	2015
VAC WEVEE - IND Submission	3	2016	3	2016
VAC WEVEE - Phase 1 Clinical Trials	3	2016	1	2018
VAC WEVEE - Milestone B	2	2019	2	2019

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*	

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
MC4: *MEDICAL CHEMICAL DEFENSE (ACD&P)*	-	1.970	-	-	-	-	-	-	-	-	-	1.970
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides for the development of medical materiel and other medical equipment items necessary for the Technology Development phase of the acquisition life cycle for the advanced development of medical countermeasures (MCMs) for chemical warfare agents including diagnostic equipment, prophylactic, pre-treatment, and therapeutic drugs, and individual/casualty decontamination compounds. A family-of-systems approach for medical defense against chemical warfare agents is required to provide protection, to sustain performance in a chemical environment, and to provide for self-aid/buddy-aid and medical treatment of chemical casualties. Fielding of prophylactic, pre-treatment, and therapeutic drugs and medical devices requires Food and Drug Administration (FDA) approval. Given the family-of-systems approach for development of chemical MCMs for the treatment of nerve agent intoxication, multiple long-term studies are required to obtain FDA approval to deliver products that effectively integrate with current and projected therapeutic regimens. Efficacy testing of most candidate drugs against chemical warfare agents cannot be conducted in humans; therefore, animal surrogate models must be developed and employed. The program currently funds: Improved Nerve Agent Treatment System (INATS) an enhanced nerve agent treatment regimen consisting of an improved oxime to replace the current fielded oxime 2-pralidoxime chloride (2-PAM), product formulation enhancements to increase survival, and expanded pretreatment indications for the use of pyridostigmine bromide (PB), the active component of Soman Nerve Agent Pretreatment Pyridostigmine (SNAPP).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) INATS ***FY 2014 Accomplishments:*** Continued and completed non-clinical toxicology studies.	1.189	-	-
Title: 2) INATS ***FY 2014 Accomplishments:*** Completed enhanced formulation stability studies and process optimization efforts.	0.511	-	-
Title: 3) INATS ***FY 2014 Accomplishments:*** Continued and completed Phase 1 clinical trial.	0.270	-	-
Accomplishments/Planned Programs Subtotals	1.970	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• MC5: *MEDICAL CHEMICAL DEFENSE (EMD)*	40.973	48.529	42.913	-	42.913	49.322	38.153	25.158	6.371	Continuing	Continuing
• JM6677: *ADVANCED ANTICONVULSANT SYSTEM (AAS)*	-	2.500	11.133	-	11.133	-	-	-	-	-	13.633

Remarks

D. Acquisition Strategy

IMPROVED NERVE AGENT TREATMENT SYSTEM (INATS)

The Improved Nerve Agent Treatment System (INATS) advanced development provides an enhanced capability treatment regimen offering greater protection over a broader spectrum of toxic nerve agent threats. Components of the development include (1) a new and improved oxime (replacing 2-pralidoxime chloride (2-PAM)) to provide protection across current and emerging threats, (2) expanded nerve agent indications for a fielded, single indication, pyridostigmine bromide (PB) product, and (3) insertion of a centrally-acting (CA) anticholinergic agent to the treatment regimen to increase survivability and decrease morbidity. The INATS treatment regimen both improves the performance of, and eventually replaces the Antidote Treatment Nerve Agent Auto-injector (ATNAA), while expanding warfighter pretreatment options.

INATS' evolutionary Acquisition Strategy, recently expanded by the Joint Program Executive Office, Chemical and Biological Defense (JPEO-CBD) to (1) align all Department of Defense nerve agent therapeutics under it, and to (2) insert a centrally-acting (CA) anticholinergic agent, employs an incremental approach to provide independent, and more rapid deliveries of oxime, expanded PB indications, and CA capabilities than in a combined treatment regimen delivery. To accomplish this, separate Milestone B and C reviews for the oxime and CA developments, and decision reviews for PB expansion beyond the combined-development Technology Maturation and Risk Reduction (TM&RR) Phase will be conducted. In the TMRR phase, close collaborations will occur between the Joint Program Manager - Medical Countermeasure Systems (JPM-MCS)), and the science/ technology, and user communities to assess technical viability, capability delivery options, and to refine operational concepts; the Government will be the systems integrator overseeing the conduct of oxime and centrally acting formulation development efforts, nonclinical toxicology and efficacy studies, clinical safety studies, and efficacy studies addressing the PB indication. In the Engineering and Manufacturing Development (EMD) phase for the oxime and CA each capability, the Government will continue as system integrator with integration support from commercial partners to ensure that INATS development and manufacture is in accordance with Food and Drug Administration (FDA) regulations and guidelines; the commercial integration partner(s) will perform a Phase 2 human clinical safety study, nonclinical toxicology studies and definitive animal efficacy studies; the system integrator will also oversee the manufacture of improved oxime and CA formulations and delivery system that is stable under operationally relevant temperatures. The system integrator will submit a New Drug Application and seek FDA approval for the INATS product. In the Production and Deployment (P&D) Phase, the system integrator, with a commercial partner, will pursue full-rate and stockpile production and will conduct any FDA mandated post-marketing surveillance studies; the system integrator will transfer contracting/logistical responsibilities to the Defense Logistics Agency (DLA) while remaining to monitor program performance through disposal as the life-cycle manager.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** INATS - ES S - Regulatory Integration, IND, and NDA Support Efforts	MIPR	Battelle Memorial Institute : Columbus, OH	1.356	0.145	Mar 2014	-		-		-		-	-	1.501	-
		Subtotal	1.356	0.145		-		-		-		-	-	1.501	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** INATS - DTE S - Conduct Enhanced Formulation Stability Studies	C/CPFF	Southwest Research Institute : San Antonio, TX	1.444	0.480	Mar 2014	-		-		-		-	-	1.924	-
INATS - DTE C - Phase 1 Clinical Trial	MIPR	Battelle Memorial Institute : Columbus, OH	2.335	0.250	Dec 2013	-		-		-		-	-	2.585	-
INATS - HW S - Toxicological and Efficacy Studies	MIPR	Battelle Memorial Institute : Columbus, OH	1.045	0.950	Mar 2014	-		-		-		-	-	1.995	-
		Subtotal	4.824	1.680		-		-		-		-	-	6.504	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** INATS - INATS - PM/MS S - Chem Bio Medical Systems	Allot	JPM Medical Countermeasure Systems (JPM MCS) : Fort Detrick, MD	0.815	0.145	Dec 2013	-		-		-		-	-	0.960	-
		Subtotal	0.815	0.145		-		-		-		-	-	0.960	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program			Date: February 2015
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*	

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.995	1.970		-		-		-		-	-	8.965	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*

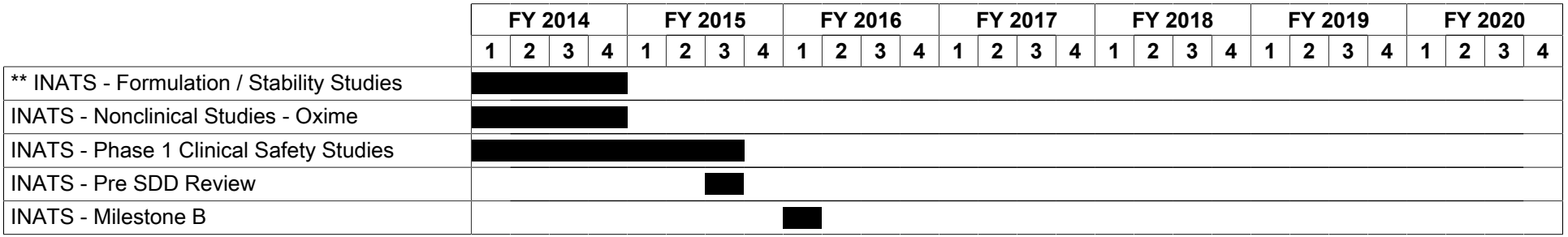

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** INATS - Formulation / Stability Studies	1	2014	4	2014
INATS - Nonclinical Studies - Oxime	1	2014	4	2014
INATS - Phase 1 Clinical Safety Studies	1	2014	3	2015
INATS - Pre SDD Review	3	2015	3	2015
INATS - Milestone B	1	2016	1	2016

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program											Date: February 2015	
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*				Project (Number/Name) TE4 / *TEST & EVALUATION (ACD&P)*			
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**
TE4: *TEST & EVALUATION (ACD&P)*	-	12.106	18.188	17.371	-	17.371	18.836	19.199	18.803	13.717	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This funding supports the Chemical Biological Defense Portfolio (CBDP) Test Equipment, Strategy, and Support (TESS) efforts TESS provides test infrastructure products for testing and evaluating chemical and biological defense systems throughout the life cycle acquisition process. TESS test infrastructure products are aligned in four groups to include: (1) Sense Laboratory (Chemical); (2) Sense Laboratory (Biological); (3) Individual Protection, Collective Protection and Decontamination (Shield and Sustain); and (4) Sense (Field). Additionally, TESS supports the analysis of the infrastructure investment opportunities, system engineering processes and business case analyses.

(1) Sense Laboratory (Chemical): The products for this area is the Non-Traditional Agent Defense Test System (NTADTS) and improvements to the Dynamic Test Chamber (DTC). The NTADTS provides a new capability to conduct chemical defense testing against current and emerging threat agents. The NTADTS supports testing of decontamination, collective protection, individual protection, and contamination avoidance products. The DTC provides a new capability for testing chemical point detection systems against chemical warfare agents in various environmental conditions. The CBD acquisition programs supported are Dismounted Reconnaissance Sets Kits and Outfits (DR SKO), Next Generation Chemical Detector (NGCD), Joint Sensitive Equipment Wipes (JSEW), and Common Analytical Laboratory System (CALS). Future efforts will include the development of test methods and methodologies for additional classes of agents.

(2) Sense Laboratory (Biological): The product for this area is the Joint Ambient Breeze Tunnel (JABT) and the Active Standoff Chamber (ASC), which is currently used for point detection. The JABT and ASC improvements will provide a tech refresh to existing infrastructure and allow for test results to be integrated into the Dugway Proving Ground (DPG) test Data Management System (DMS). The CBD acquisition programs supported are the Joint Biological Tactical Detection System (JBTDS), and the Joint USFK Point and Integrated Threat Recognition (JUPITR) Advanced Technology Demonstration (ATD).

(3) Individual Protection, Collective Protection and Decontamination (Shield and Sustain): This product for this area is the Materials Test Capabilities (MTC). The CBD acquisition programs supported is Uniform Integrated Protective Ensemble - II (UIPE- Increment 2)

(4) Sense (Field): The product for this area is the Test Grid. The Test Grid effort provides a fully instrumented grid for chemical and biological simulant field test capabilities that integrate referee systems; dissemination equipment; cloud tracking equipment; meteorological equipment; and DPG test Data Management System (DMS). The CBD acquisition programs supported are the Joint Expeditionary Collective Protection (JECP), Next Generation Chemical Detector (NGCD), Joint Biological Tactical Detection System (JBTDS), and the Joint USFK Point and Integrated Threat Recognition (JUPITR) Advanced Technology Demonstration (ATD).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: 1) PD TESS - Non-Traditional Agent Defense Test System (NTADTS)	9.137	6.285	5.900

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Completed development of methodologies and assessments for first NTA class. Initiated assessments for worker safety for NTA efforts. ***FY 2015 Plans:*** Initiate methodology development for additional classes of agent. ***FY 2016 Plans:*** Continue methodology development for additional classes of agent.			
Title: 2) PD TESS - Joint Ambient Breeze Tunnel (JABT) ***FY 2015 Plans:*** Initiate component upgrades to JABT. Develop environmental controls for tunnel and component upgrades to include data collection instrumentation, dissemination equipment and referee systems. Conduct software upgrades for the command post systems in preparation for integration into the Dugway Proving Ground (DPG) Data Management System (DMS). ***FY 2016 Plans:*** Continue component upgrades to JABT for integration into the DMS.	-	1.946	1.702
Title: 3) PD TESS - Active Standoff Chamber ***FY 2015 Plans:*** Initiate component hardware and software upgrades to data collection instrumentation, dissemination equipment, referee systems, and command posts for integration into the Dugway Proving Ground (DPG) Data Management System (DMS). ***FY 2016 Plans:*** Continue component upgrades to ASC for integration into the DMS.	-	1.462	1.988
Title: 4) PD TESS - Materials Test Capability (MTC) ***FY 2014 Accomplishments:*** Initiated laboratory revitalization and characterization of candidate systems. ***FY 2015 Plans:*** Complete laboratory revitalization. Initiate test fixture design modifications and integrate into laboratory. Initiate methodology development. ***FY 2016 Plans:***	1.327	3.119	2.063

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Finalize test fixture design modifications and integrate into laboratory. Verify and validate test fixture.			
Title: 5) PD TESS - Test Grid ***FY 2015 Plans:*** Initiate analysis of remaining Test Grid gaps. Initiate integration of Joint Ambient Breeze Tunnel (JABT) and Active Standoff Chamber (ASC) upgraded capabilities. ***FY 2016 Plans:*** Characterize and integrate biological and chemical and dissemination systems.	-	5.094	3.544
Title: 6) PD TESS - Dynamic Test Chamber (DTC) ***FY 2016 Plans:*** Initiate methodology development for upgrades to support Next Generation Chemical Detector test and evaluation.	-	-	2.174
Title: 7) PD TESS - Test Infrastructure Analysis & Requirements (TIA&R) ***FY 2014 Accomplishments:*** Conducted business case analyses. Characterized current capabilities for the Chemical and Biological Defense Program (CBDP) to support decisions for new test infrastructure. Documented CBDP test infrastructure gaps.	1.642	-	-
Title: 8) SBIR/STTR ***FY 2015 Plans:*** SBIR/STTR - FY15 - Small Business Innovative Research.	-	0.282	-
Accomplishments/Planned Programs Subtotals	12.106	18.188	17.371

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• TE5: *TEST & EVALUATION (EMD)*	22.867	9.176	6.053	-	6.053	6.255	6.493	6.311	6.310	Continuing	Continuing
• TE7: *TEST & EVALUATION (OP SYS DEV)*	3.646	5.984	4.091	-	4.091	5.107	5.169	5.376	5.461	Continuing	Continuing

Remarks

D. Acquisition Strategy

TEST EQUIPMENT, STRATEGY & SUPPORT (PD TESS)

Exhibit R-2A, RDT&E Project Justification: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

TESS efforts are supported through competitive contract actions, academia, and other Government agencies. Infrastructure solutions will leverage commercially available systems to provide state-of-the-art capabilities that address current and future CBDP test and evaluation needs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - Test Infrastructure - HW S - NTA Defense Test System Design/Fabrication/ Installation	C/CPFF	MRIGlobal : Kansas City, MO	33.975	0.943	Mar 2014	0.250	Mar 2015	0.250	Mar 2016	-		0.250	Continuing	Continuing	-
Test Infrastructure - HW S - NTA Defense Test System Design/ Fabrication/Installation	MIPR	Various :	9.121	5.105	Mar 2014	4.050	Mar 2015	4.000	Mar 2016	-		4.000	Continuing	Continuing	-
Test Infrastructure - HW S - Test Grid	C/CPFF	ITT Information Systems : Alexandria, VA	1.200	-		1.850	Mar 2015	1.297	Mar 2016	-		1.297	Continuing	Continuing	-
Test Infrastructure - HW S - Joint Ambient Breeze Tunnel Component Upgrade	MIPR	Dugway Proving Ground (DPG) : Dugway, UT	0.000	-		1.000	Mar 2015	1.010	Mar 2016	-		1.010	Continuing	Continuing	-
Test Infrastructure - HW S - Joint Ambient Breeze Tunnel Component Upgrades	C/CPFF	Various :	0.000	-		0.331	Mar 2015	0.360	Mar 2016	-		0.360	Continuing	Continuing	-
Test Infrastructure - HW S - Active Stand-off Chamber Component Upgrades	MIPR	Various :	0.000	-		0.750	Mar 2015	1.675	Mar 2016	-		1.675	Continuing	Continuing	-
Test Infrastructure - HW S - Active Stand-off Chamber Component Upgrades #2	C/CPFF	Various :	0.000	-		0.250	Mar 2015	0.425	Mar 2016	-		0.425	Continuing	Continuing	-
Test Infrastructure - HW S - Test Infrastructure Analysis & Requirements Capability Analyses	C/CPFF	Battelle Memorial Institute : Columbus, OH	0.000	1.088	Mar 2014	-		-		-		-	Continuing	Continuing	-
Test Infrastructure - HW S - Materials Test Capability Design and Modifications	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	0.000	0.525	Mar 2014	0.500	Mar 2015	0.661	Mar 2016	-		0.661	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Infrastructure - HW S - Materials Test Capability Design and Modifications #2	MIPR	Dugway Proving Ground (DPG) : Dugway, UT	0.000	0.475	Mar 2014	1.052	Mar 2015	1.000	Mar 2016	-		1.000	Continuing	Continuing	-
Test Infrastructure - HW S - Materials Test Capability Design and Modifications #3	MIPR	Pine Bluff Arsenal : Pine Bluff, AR	0.000	-		0.300	Mar 2015	-		-		-	Continuing	Continuing	-
Test Infrastructure - HW S - Test Grid Design and Upgrade	MIPR	Various :	0.000	-		1.215	Mar 2015	0.895	Mar 2016	-		0.895	Continuing	Continuing	-
Test Infrastructure - HW S - Test Grid Design and Upgrade #2	C/CPFF	Various :	0.000	-		0.420	Mar 2015	0.661	Mar 2016	-		0.661	Continuing	Continuing	-
Test Infrastructure - HW S - Dynamic Test Chamber Design and Upgrade	MIPR	Various :	0.000	-		-		1.750	Mar 2016	-		1.750	Continuing	Continuing	-
		Subtotal	44.296	8.136		11.968		13.984		-		13.984	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - Test Infrastructure - ES S - Integrated Product Team (IPT) Support	MIPR	Various :	5.102	1.333	Dec 2013	3.178	Dec 2014	2.337	Dec 2015	-		2.337	Continuing	Continuing	-
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	TBD :	0.000	-		0.282		-		-		-	Continuing	Continuing	-
		Subtotal	5.102	1.333		3.460		2.337		-		2.337	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - Test Infrastructure - PM/MS S - Management/Systems/ Engineering Support	MIPR	JPM NBC Contamination Avoidance (JPM NBC CA) : JPEO, Aberdeen Proving Ground, MD	2.564	2.637	Dec 2013	2.760	Dec 2014	1.050	Dec 2015	-		1.050	Continuing	Continuing	-
		Subtotal	2.564	2.637		2.760		1.050		-		1.050	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	51.962	12.106		18.188		17.371		-		17.371	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

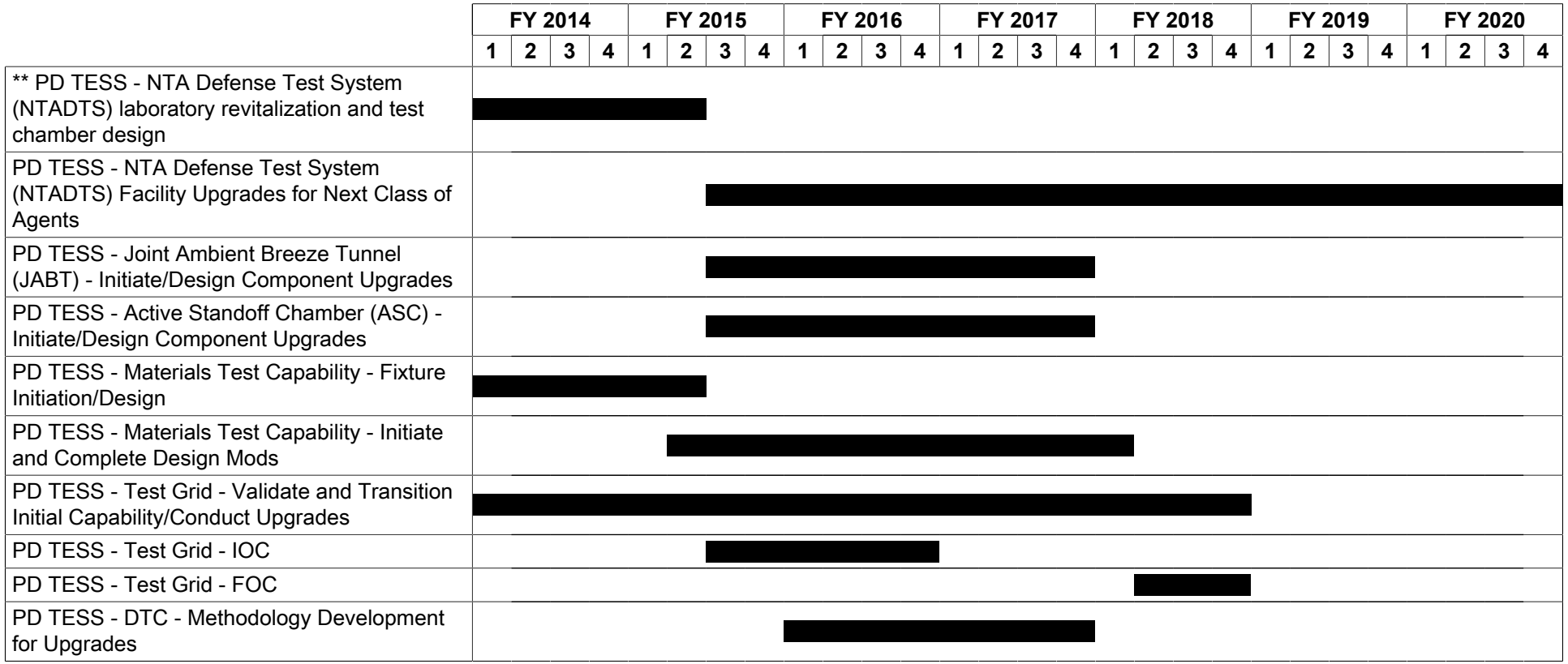

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Chemical and Biological Defense Program		Date: February 2015
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** PD TESS - NTA Defense Test System (NTADTS) laboratory revitalization and test chamber design	1	2014	2	2015
PD TESS - NTA Defense Test System (NTADTS) Facility Upgrades for Next Class of Agents	3	2015	4	2020
PD TESS - Joint Ambient Breeze Tunnel (JABT) - Initiate/Design Component Upgrades	3	2015	4	2017
PD TESS - Active Standoff Chamber (ASC) - Initiate/Design Component Upgrades	3	2015	4	2017
PD TESS - Materials Test Capability - Fixture Initiation/Design	1	2014	2	2015
PD TESS - Materials Test Capability - Initiate and Complete Design Mods	2	2015	1	2018
PD TESS - Test Grid - Validate and Transition Initial Capability/Conduct Upgrades	1	2014	4	2018
PD TESS - Test Grid - IOC	3	2015	4	2016
PD TESS - Test Grid - FOC	2	2018	4	2018
PD TESS - DTC - Methodology Development for Upgrades	1	2016	4	2017