Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
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 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	163.464	189.237	179.236	-	179.236	166.946	114.409	62.408	102.399	Continuing	Continuing
CA4: *CONTAMINATION AVOIDANCE (ACD&P)*	-	5.713	24.853	40.088	-	40.088	34.229	29.355	-	-	-	134.238
CM4: *HOMELAND DEFENSE (ACD&P)*	-	7.490	-	-	-	-	-	-	-	-	-	7.490
DE4: *DECONTAMINATION SYSTEMS (ACD&P)*	-	11.463	14.978	2.900	-	2.900	-	-	-	10.000	-	39.341
IP4: *INDIVIDUAL PROTECTION (ACD&P)*	-	0.550	1.208	6.811	-	6.811	4.680	0.300	-	-	-	13.549
IS4: *INFORMATION SYSTEMS (ACD&P)*	-	15.728	8.199	6.169	-	6.169	3.684	1.637	0.100	0.100	Continuing	Continuing
MB4: *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	-	111.415	122.328	102.080	-	102.080	101.019	60.981	32.683	48.277	Continuing	Continuing
MC4: *MEDICAL CHEMICAL DEFENSE (ACD&P)*	-	-	2.000	-	-	-	-	3.750	10.692	25.089	Continuing	Continuing
MR4: *MEDICAL RADIOLOGICAL DEFENSE (ACD&P)*	-	2.736	-	-	-	-	-	-	-	-	-	2.736
TE4: *TEST & EVALUATION (ACD&P)*	-	5.164	15.671	21.188	-	21.188	23.334	18.386	18.933	18.933	Continuing	Continuing
TT4: *TECHBASE TECHNOLOGY TRANSITION (ACD&P)*	-	3.205	-	-	-	-	-	-	-	-	-	3.205

The FY 2015 OCO Request will be submitted at a later date.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program	Date: March 2014
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)*

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.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program	Date: March 2014
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 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	179.023	196.237	186.892	-	186.892
Current President's Budget	163.464	189.237	179.236	-	179.236
Total Adjustments	-15.559	-7.000	-7.656	-	-7.656
• Congressional General Reductions	-0.237	-			
• Congressional Directed Reductions	-15.513	-7.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.582	-			
• SBIR/STTR Transfer	-2.391	-			
• Other Adjustments	-	-	-7.656	-	-7.656

Change Summary Explanation

Funding: FY13: Reductions of $15.5M delayed technology development phase efforts for medical countermeasures, specifically the Filovirus vaccine program.

FY14: Reductions of $7.0M impact planned technology development for the Next Generation Chemical Detector (NGCD) and Filovirus vaccine.

FY15: Reductions of $7.7M include termination of funding for the Joint Standoff Detection System (JSDS) and the Ricin vaccine program.

Schedule: N/A

Technical: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program												Date: March 2014
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 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
CA4: *CONTAMINATION AVOIDANCE (ACD&P)*	-	5.713	24.853	40.088	-	40.088	34.229	29.355	-	-	-	134.238
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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. Individual efforts are: (1) Joint Biological Tactical Detection System (JBTDS); (2) Joint Chemical Biological Radiological Agent Water Monitor (JCBRAWM) Increment 2; (3) Joint Standoff Detection System (JSDS); and (4) Next Generation Chemical Detector (NGCD).

The Joint Biological Tactical Detection System (JBTDS) is the first lightweight, low cost biological surveillance system that will detect, collect, and identify biological warfare agent aerosols. JBTDS will provide warning through the Joint Warning And Reporting Network (JWARN) and archive sample for follow-on analyses. JBTDS will provide near real-time local audio and visual alarm for use by any Military Occupational Specialty (MOS). JBTDS will be man-portable, battery-operable, and easy to employ. JBTDS will be used to provide notification of a biological hazard and enhanced battle space awareness to protect and preserve the force. When networked, JBTDS will augment existing biological detection systems to provide a theater-wide seamless array capable of biological detection, identification and warning.

The Joint Chemical Biological Radiological Agent Water Monitor (JCBRAWM) Increment 2 efforts will evaluate existing and emerging technologies to provide improvement to chemical detection in water to meet Tri-Service Drinking Water Standards and to detect emerging threats in water.

The Joint Standoff Detection System (JSDS) will provide near real-time detection of chemical and biological attacks/incidents at a standoff distance. The modular system will be tailorable to the Service and can be employed at Aerial Port of Debarkation (APOD)/Sea Port of Debarkation (SPOD), Forward Operating Base (FOB), and on multiple platforms to include: fixed site, aerostat, and ground systems. The system will be networked to allow for cueing of point sensor arrays. Additionally, Unmanned Aerial Vehicle (UAV) (as demonstrated in the WMD Aerial Collection System (WACS) Advanced Technology Demonstration (ATD))/Unmanned Ground Vehicle (UGV) platforms could be integrated for sampling and identification. This schedule has been synchronized with the WACS ATD schedule to facilitate data exchange and possible excursions.

The Next Generation Chemical Detector (NGCD) consists of several detection systems. The variants 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), 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 and reconnaissance, and weapons of mass destruction (WMD) interdiction capabilities. The scope of the project includes detection of agent a few feet away from the detector as well as at the sampling point of the detector.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) Joint Biological Tactical Detection System (JBTDS) ***FY 2013 Accomplishments:*** Completed interferent method development for technology development live agent testing.	0.100	-	-
Title: 2) Joint Biological Tactical Detection System (JBTDS) ***FY 2013 Accomplishments:*** Completed strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, and technical support.	2.987	-	-
Title: 3) Joint Biological Tactical Detection System (JBTDS) ***FY 2013 Accomplishments:*** Initiated and completed user representation and involvement for Technology Development (TD) phase.	1.132	-	-
Title: 4) Joint CBR Agent Water Monitor Increment 2 (JCBRAWM) ***FY 2014 Plans:*** Evaluate existing and emerging technologies to provide improvement to chemical detection in water and to detect emerging threats in water.	-	0.200	-
Title: 5) Joint Standoff Detection System (JSDS) ***FY 2014 Plans:*** Initiate early prototype designs, conduct studies, and perform testing to support evaluation of technology concepts.	-	5.500	-
Title: 6) Joint Standoff Detection System (JSDS) ***FY 2014 Plans:*** Establish program office to conduct strategic, tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, technical support, and milestone documentation.	-	1.500	-
Title: 7) Next Generation Chemical Detector (NGCD) ***FY 2013 Accomplishments:*** Initiated Government program management, systems engineering, and Integrated Product Team (IPT) support and prepared for MS A. ***FY 2014 Plans:*** Continue Government program management, systems engineering and IPT support. ***FY 2015 Plans:***	1.294	5.853	10.433

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue Government program management, systems engineering and IPT support.			
Title: 8) Next Generation Chemical Detector (NGCD) ***FY 2013 Accomplishments:*** Initiated Request For Proposal (RFP) preparation. ***FY 2014 Plans:*** Award multiple contracts to develop prototypes and conduct Integrated Product Reviews (IPR) (9 systems at $100,000 each). ***FY 2015 Plans:*** Develop prototypes and conduct Integrated Product Reviews(IPR) (18 systems at $100,000 each).	0.200	10.450	19.125
Title: 9) Next Generation Chemical Detector (NGCD) ***FY 2014 Plans:*** Initiate and complete the Breadboard testing. ***FY 2015 Plans:*** Initiate and complete the Brassboard testing.	-	1.350	10.530
Accomplishments/Planned Programs Subtotals	5.713	24.853	40.088

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• CA5: *CONTAMINATION AVOIDANCE (EMD)*	21.825	32.766	50.582	-	50.582	76.595	64.248	61.660	18.598	Continuing	Continuing
• JF0100: *JOINT CHEMICAL AGENT DETECTOR (JCAD)*	16.212	47.598	33.685	-	33.685	7.834	7.547	-	-	-	112.876
• JF0104: *NEXT GEN CHEMICAL DETECTOR (NGCD)*	-	-	-	-	-	3.000	3.000	4.356	17.208	Continuing	Continuing
• JN0900: *NON TRADITIONAL AGENT DETECTION (NTAD)*	4.770	8.000	-	-	-	-	-	-	-	-	12.770
• MC0100: *JOINT NBC RECONNAISSANCE SYSTEM (JNBCRS)*	83.215	-	3.600	-	3.600	3.600	3.600	3.600	-	-	97.615

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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)*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MC0101: *CBRN DISMOUNTED RECONNAISSANCE SYSTEMS (CBRN DRS)*	15.080	34.998	113.333	-	113.333	97.399	98.453	95.333	144.289	Continuing	Continuing
• MX0001: *JOINT BIO TACTICAL DETECTION SYSTEM (JBTDS)*	-	-	-	-	-	-	7.530	65.385	69.379	Continuing	Continuing

Remarks

D. Acquisition Strategy

JOINT BIO TACTICAL DETECTION SYSTEM (JBTDS)

The JBTDS is being developed using an evolutionary acquisition strategy. JBTDS will maximize the use of commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) technology. The awards for the Technology Development (TD) phase utilized a best value approach via the competitive CBRNE mission support contract to three contractor teams. Full and open competition will be utilized for the EMD contract with options for Low Rate Initial Production and Full Rate Production. Coordination with other programs (Common Analytical Laboratory System and Next Generation Diagnostic System) is occurring to share information and leverage potential common identification technology solutions to the three programs.

JS CHEM/BIO/RAD AGENT WATER MONITOR (JCBRAWM)

Current effort is being conducted in-house to address emerging threats in water and to enhance chemical detection capabilities to meet current Tri-Service Drinking Water Standards. Initial work focuses on determining viability of enhancements to existing kits through analysis of chemical processes. Results will provide data required to develop viable alternative approaches and to develop performance requirements for the Increment 2 program at MS A.

JOINT STANDOFF DETECTION SYSTEM (JSDS)

JSDS will maximize the use of commercial and government off the shelf mature technologies with an expected start at Milestone B. Full and open competition will be utilized for the SDD phase of the program.

NEXT GENERATION CHEMICAL DETECTOR (NGCD)

The NGCD analysis of alternatives will be used to generate performance specifications that will support contracting for competitive prototype development. The request for proposal was released July 2013. The goal for the initial stage of development will be to award multiple contracts for each variant of the NGCD. Full and open competition will be used to award one contract per variant at Milestone B. Mature technology will be accelerated as appropriate.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

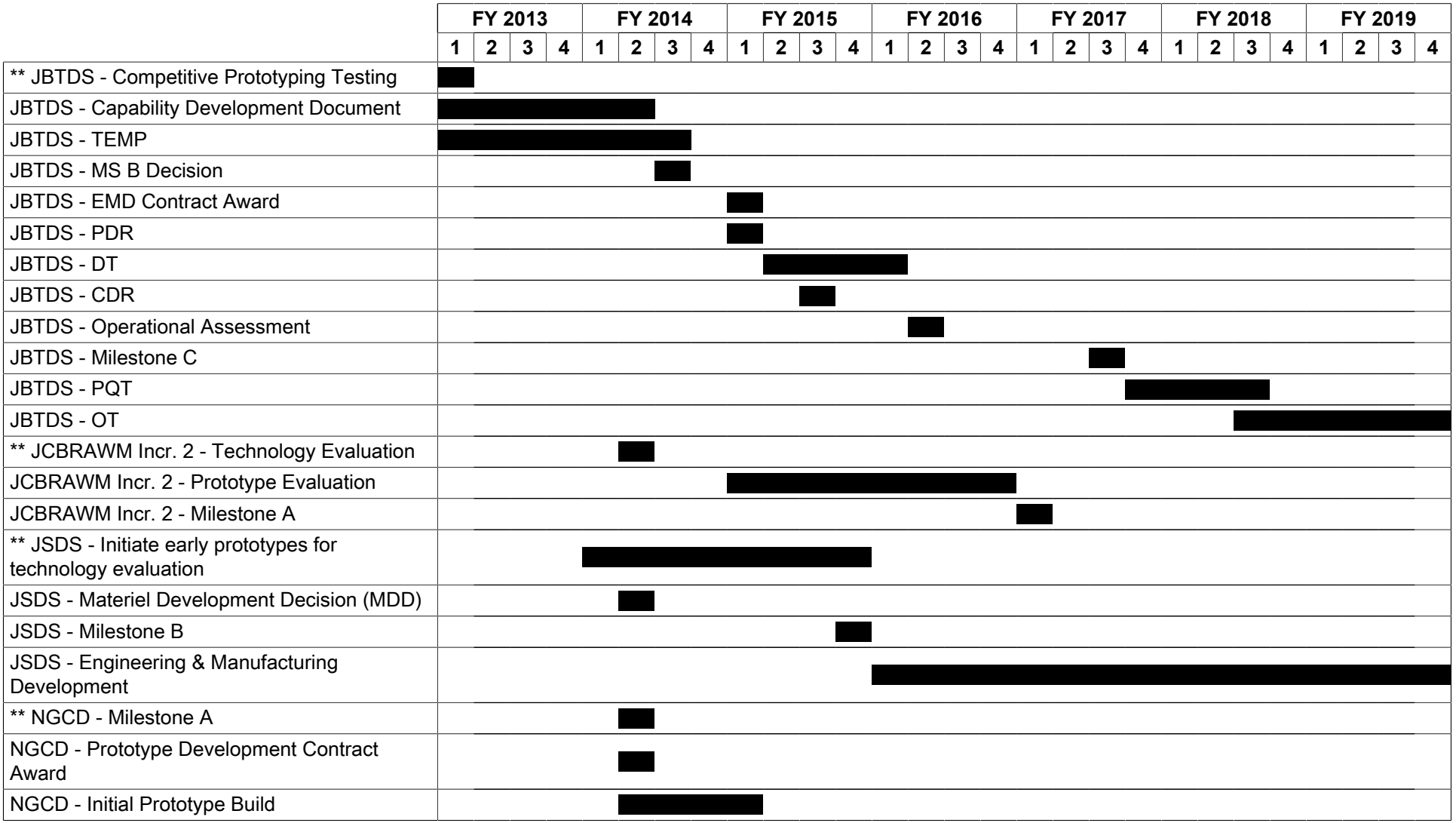

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*

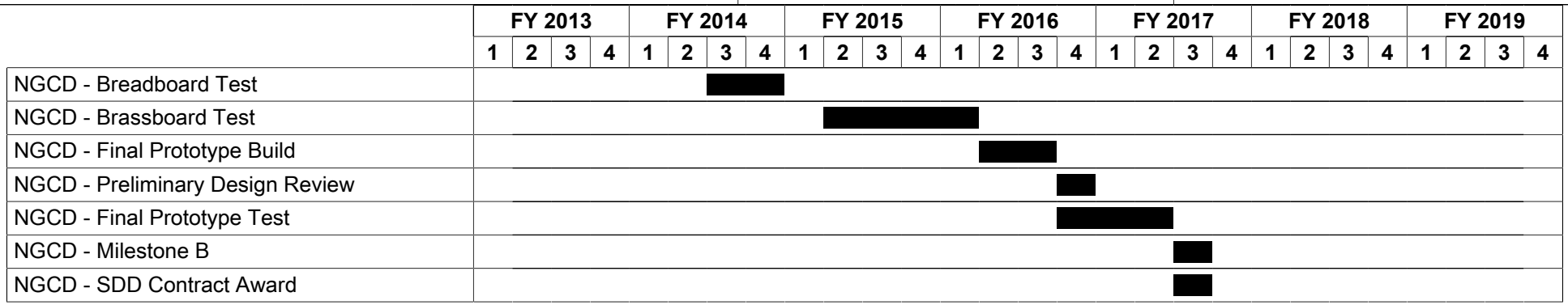

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CA4 / *CONTAMINATION AVOIDANCE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JBTDS - Competitive Prototyping Testing	1	2013	1	2013
JBTDS - Capability Development Document	1	2013	2	2014
JBTDS - TEMP	1	2013	3	2014
JBTDS - MS B Decision	3	2014	3	2014
JBTDS - EMD Contract Award	1	2015	1	2015
JBTDS - PDR	1	2015	1	2015
JBTDS - DT	2	2015	1	2016
JBTDS - CDR	3	2015	3	2015
JBTDS - Operational Assessment	2	2016	2	2016
JBTDS - Milestone C	3	2017	3	2017
JBTDS - PQT	4	2017	3	2018
JBTDS - OT	3	2018	4	2019
** JCBRAWM Incr. 2 - Technology Evaluation	2	2014	2	2014
JCBRAWM Incr. 2 - Prototype Evaluation	1	2015	4	2016
JCBRAWM Incr. 2 - Milestone A	1	2017	1	2017
** JSDS - Initiate early prototypes for technology evaluation	1	2014	4	2015
JSDS - Materiel Development Decision (MDD)	2	2014	2	2014
JSDS - Milestone B	4	2015	4	2015
JSDS - Engineering & Manufacturing Development	1	2016	4	2019
** NGCD - Milestone A	2	2014	2	2014
NGCD - Prototype Development Contract Award	2	2014	2	2014
NGCD - Initial Prototype Build	2	2014	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
NGCD - Breadboard Test	3	2014	4	2014
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 - SDD Contract Award	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
CM4: *HOMELAND DEFENSE (ACD&P)*	-	7.490	-	-	-	-	-	-	-	-	-	7.490
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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) 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.

Included in this Project are: Technology development of the Common Analytical Laboratory System (CALS) to include evaluation and selection of subsystems (analytical detection, laboratory information management, data fusion, engineering controls) as well as development of a set of modular designed configurations for system level prototyping utilizing open system architecture. In addition, it provides for the validation and demonstration of desired functional capabilities. Users of the system will include the National Guard Bureau Civil Support Teams, the Army 20th Support Command, the Army Medical Laboratory, the Air Force and the Navy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) CALS - System Engineering and Program Management ***FY 2013 Accomplishments:*** Continued System Engineering and Program Management to provide engineering support and program and technical guidance to ongoing System Integration Laboratory (SIL) efforts where methods and technologies are developed, evaluated, and tested. Maintained oversight of component test completion, and contract actions in support of modular design concepts and conducted the Preliminary Design Review.	2.332	-	-
Title: 2) CALS - System Integration Laboratory ***FY 2013 Accomplishments:*** Completed efforts to mitigate program risk through the use of a system integration laboratory tool set designed to facilitate the rapid evaluation of technology configuration designs and logistical issues.	0.265	-	-
Title: 3) CALS - Development Engineering - Component Evaluation and Subsystem Design ***FY 2013 Accomplishments:***	4.107	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Completed subsystem component evaluation and design of alternative system modules and system configurations.			
Title: 4) CALS - Production Engineering and Planning	0.786	-	-
FY 2013 Accomplishments: Completed producibility, quality assurance, logistics studies and conducted the preliminary design review required to support development of modules for the CALS.			
Accomplishments/Planned Programs Subtotals	7.490	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• CM5: *HOMELAND DEFENSE (EMD)*	5.193	14.533	16.508	-	16.508	8.910	8.365	15.484	9.344	Continuing	Continuing
• JS0004: *WMD - CIVIL SUPPORT TEAMS (WMD CST)*	23.474	13.314	12.740	-	12.740	5.069	-	-	-	-	54.597
• JS0005: *COMMON ANALYTICAL LABORATORY SYSTEM (CALS)*	-	-	-	-	-	16.245	26.629	17.524	61.664	Continuing	Continuing

Remarks

D. Acquisition Strategy

COMMON ANALYTICAL LABORATORY SYSTEM (CALS)

The Common Analytical Laboratory System (CALS) will follow an incremental approach leveraging COTS/ GOTS solutions designed to address known joint force capability requirements for Chemical, Biological, Radiological and Nuclear (CBRN) field confirmatory and theatre validation analysis which includes Toxic Industrial Chemicals (TICs), Toxic Industrial Materials (TIMs), Chemical Warfare Agents (CWAs), Biological Warfare Agents (BWAs). CALS will address situational awareness by utilizing efforts underway to the extent possible. CALS will accommodate these component requirements within a modular and scalable concept framework.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

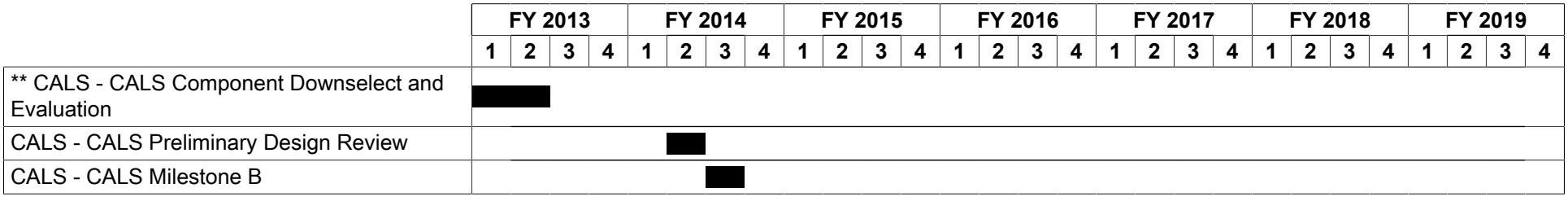

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** CM4 / *HOMELAND DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** CALS - CALS Component Downselect and Evaluation	1	2013	2	2013
CALS - CALS Preliminary Design Review	2	2014	2	2014
CALS - CALS Milestone B	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program												Date: March 2014
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 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
DE4: *DECONTAMINATION SYSTEMS (ACD&P)*	-	11.463	14.978	2.900	-	2.900	-	-	-	10.000	-	39.341
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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.

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, shipboard surfaces, crew-served and individual weapons in hostile and non-hostile environments that may have been exposed to traditional and non-traditional chemical contamination. CIDAS is a new capability for the Joint Forces that will reduce 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.

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.

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 traditional (Nerve and Blister) and non-traditional chemical agents/contamination. In addition, the JSEW program is intended to be a replacement for the Individual Equipment Decontamination Kit (M295).

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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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 2013	FY 2014	FY 2015
Title: 1) DFoS - Non-Traditional Agent (NTA) ***FY 2013 Accomplishments:*** Continued NTA Solid Oxidizer Reformulation and completed accelerated aging studies, Efficacy Design of Experiment (DOE) for chemical decontamination and decontamination equipment wipes NTA efforts.	1.871	-	-
Title: 2) DFoS ***FY 2014 Plans:*** Initiate engineering, testing and logistics planning and contract documentation to support technology development of Coatings in support of Milestone A. Initiate engineering, testing and logistics planning and contract documentation to support technology development of Dial-A-Decon in support of Milestone A. Complete NTA Solid Oxidizer Reformulation effort. Initiate and complete aircraft contamination mitigation demo for thorough decontamination of biological agents.	-	2.377	-
Title: 3) DFoS - CIDAS ***FY 2013 Accomplishments:*** Initiated Technology Demonstrations for the CIDAS program to include indication efficacy and pot life, material compatibility, and accelerated aging tests. Conducted Environmental, Safety, and Occupational Health (ESOH) analysis.	2.173	-	-
Title: 4) DFoS - CIDAS ***FY 2013 Accomplishments:*** Awarded contract to purchase 133 gallons of CIDAS prototype indicator (consisting of three formulations for total of $102,259), five prototype applicators (at $9,556 each) and training and support for the Technology Demonstrations.	0.167	-	-
Title: 5) DFoS - GPD ***FY 2013 Accomplishments:*** Purchased 2,052 gallons of prototype GPDs (at $31 per gallon) for Developmental Testing (DT).	0.212	-	-
Title: 6) DFoS - GPD ***FY 2013 Accomplishments:***	3.857	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Completed Competitive Prototyping Phase I (CP I) and initiated CP II of Developmental Testing for the GPD program to include efficacy (hot/cold/relative humidity) on large panels, IPE Compatibility, detector compatibility, Applicator/Mixing and Packaging Handling Shipping & Transportation (PHS&T) Assessment and conducted Manufacturing Readiness Assessment (MRA).			
Title: 7) DFoS - JSEW ***FY 2013 Accomplishments:*** Completed Competitive Prototyping Phase I (CP I) and initiated CP II of Developmental Testing (DT) for the JSEW program to include pre-studies for coverage area testing accelerated shelf-life, Individual Protective Equipment (IPE) compatibility, Human Factors Assessment (HFA) and conducted a Manufacturing Readiness Assessment	3.026	-	-
Title: 8) DFoS - JSEW ***FY 2013 Accomplishments:*** Purchased 4,656 prototype JSEW systems (at $32 each) for CP II testing.	0.157	-	-
Title: 9) DFoS - CIDAS ***FY 2014 Plans:*** Design and build large scale applicator prototype to meet specific User requirements. Complete 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. Initiate Milestone B and contract documentation.	-	3.921	-
Title: 10) DFoS - CIDAS ***FY 2015 Plans:*** Complete Milestone B and contract documentation.	-	-	0.300
Title: 11) DFoS - GPD ***FY 2014 Plans:*** Complete Competitive Prototyping Phase II and initiate the final phase of Developmental Testing (DT) to include, the System Requirements Review (SRR), expanded chemical and biological efficacy, packaging/Military Standard (MIL-STD) 810G, shelf-life, and decontaminant compatibility.	-	5.915	-
Title: 12) DFoS - GPD ***FY 2014 Plans:*** Purchase 2,142 gallons of prototype GPDs (at $35 per gallon) for the final phase of DT.	-	0.075	-
Title: 13) DFoS - JSEW ***FY 2014 Plans:***	-	2.545	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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 2013	FY 2014	FY 2015
Complete Competitive Prototyping Phase II and initiate Developmental Testing (DT) to include expanded efficacy, materials and detector compatibility as well as additional Individual Protective Equipment (IPE) and shelf-life testing and conduct a Critical Design Review.			
Title: 14) DFoS - JSEW ***FY 2014 Plans:*** Award base contract to purchase 1,000 JSEW test assets (at $17 each) for DT and Contract Data Requirements List (CDRLs)/ Data Item Descriptions (DIDs).	-	0.145	-
Title: 15) JBAD ***FY 2015 Plans:*** Release Request for Proposal (RFP); conduct Technology Readiness Assessment (TRA) and Manufacturing Readiness Assessment (MRA) to ensure candidate technologies can be accelerated to the Engineering Manufacturing and Development (EMD) phase.	-	-	2.600
Accomplishments/Planned Programs Subtotals	11.463	14.978	2.900

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• DE5: *DECONTAMINATION SYSTEMS (EMD)*	7.407	2.412	11.146	-	11.146	16.296	19.151	19.559	7.655	Continuing	Continuing
• JD0050: *DECONTAMINATION FAMILY OF SYSTEMS (DFoS)*	-	-	3.450	-	3.450	9.754	13.937	16.726	18.006	Continuing	Continuing
• JD0063: *CONTAMINATED HUMAN REMAINS POUCH (CHRP)*	-	-	2.865	-	2.865	1.542	-	-	-	-	4.407
• JD0070: *JOINT BIOLOGICAL AGENT DECONTAMINATION SYSTEM (JBAD)*	-	-	-	-	-	-	-	-	18.038	Continuing	Continuing

Remarks

D. Acquisition Strategy

DECONTAMINATION FAMILY OF SYSTEMS (DFoS)

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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 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)

The GPD program employed a Competitive Prototyping (CP) effort to facilitate the evaluation of COTs technologies. Seven contracts were awarded for competing vendors to provide prototype GPDs in support of CP I. A down select occurred based on technical performance and cost and four contracts were awarded to vendors in support of CP II. As the GPD program enters the next acquisition phase, the program will continue following an evolutionary acquisition strategy; employing a verification/validation effort to facilitate the identification and evaluation of mature technologies that can meet the GPD Capabilities Development Document (CPD) requirements satisfying Chemical, Biological, Radiological and Nuclear (CBRN) user needs.

DFoS JOINT SENSITIVE EQUIPMENT WIPE (DFoS JSEW)

JSEW program employed competitive prototyping to facilitate the evaluation of Commercial Off The Shelf (COTS) Technologies during the Technology Development Phase. Candidates were evaluated from competing vendor prototypes to determine optimal JSEW systems. Four contracts were awarded to vendors in support of Competitive Prototyping Phase (CP) II. As the JSEW enters the next acquisition phase, the program will continue following an evolutionary acquisition strategy; employing a verification/validation effort to facilitate the identification and evaluation of mature technologies that can meet the JSEW Capabilities Development Document (CPD) requirements. Follow-on increments of JSEW may include biological agent capability and use on skin.

JOINT BIOLOGICAL AGENT DECONTAMINATION SYSTEM (JBAD)

The JBAD System program will utilize an evolutionary acquisition strategy 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.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

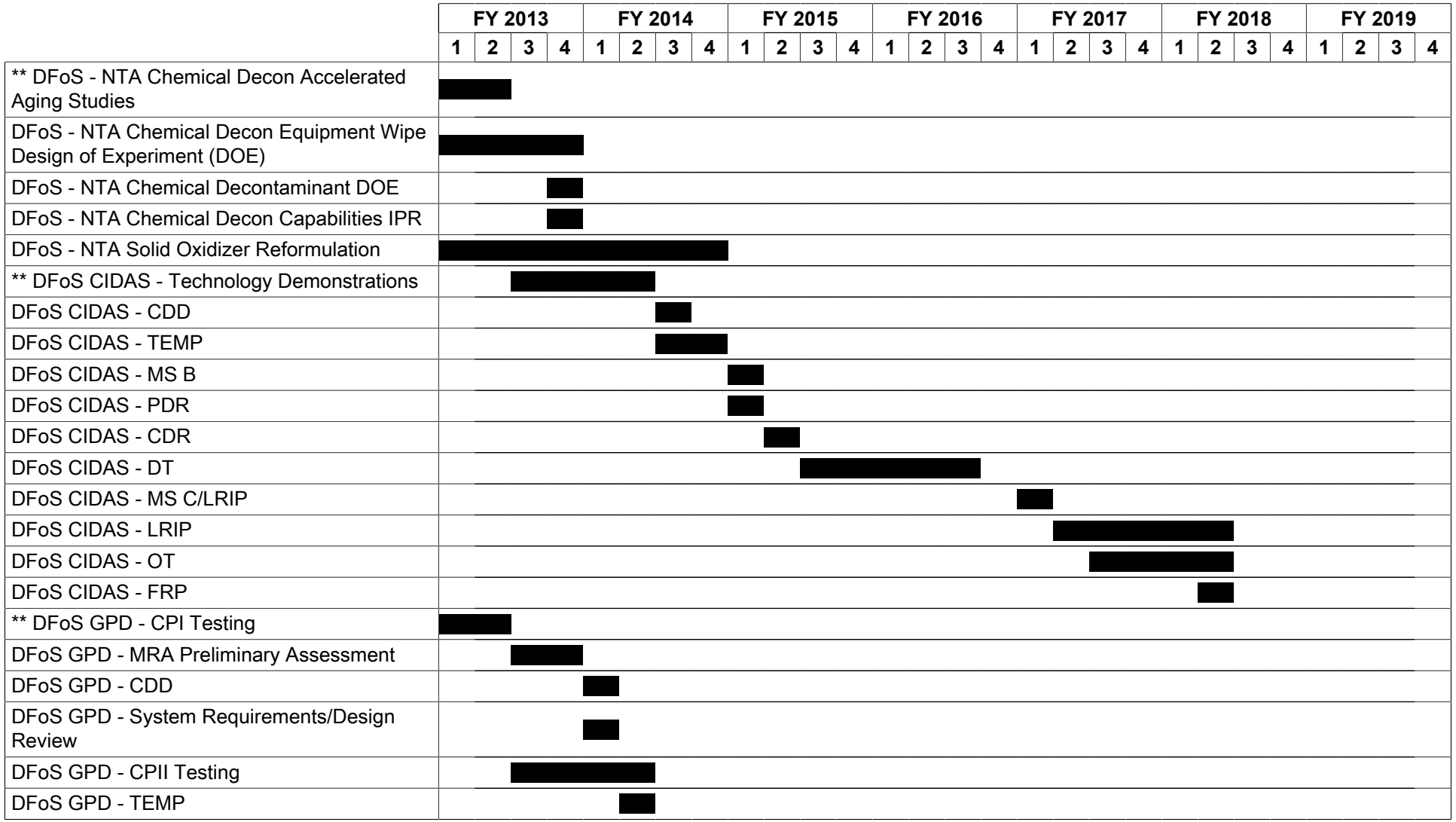

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

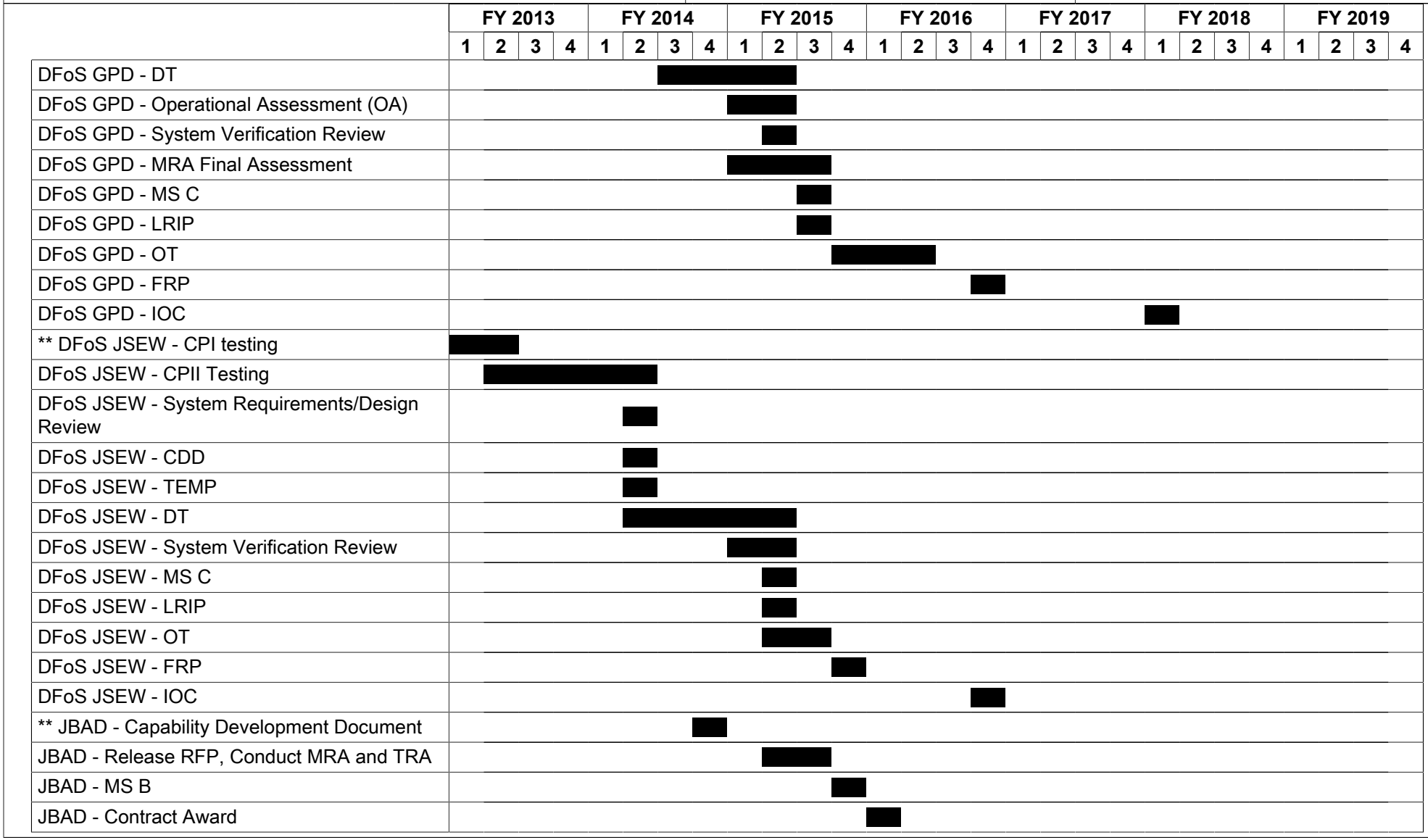

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

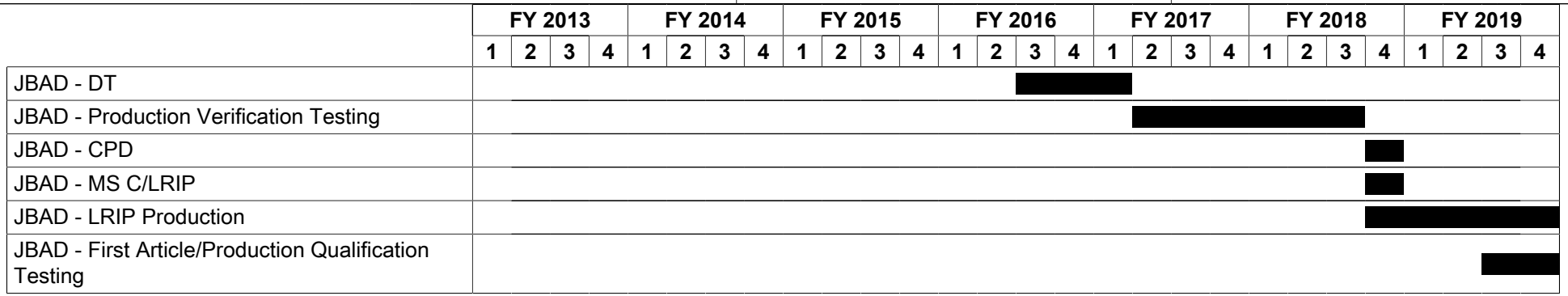

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** DE4 / *DECONTAMINATION SYSTEMS (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** DFoS - NTA Chemical Decon Accelerated Aging Studies	1	2013	2	2013
DFoS - NTA Chemical Decon Equipment Wipe Design of Experiment (DOE)	1	2013	4	2013
DFoS - NTA Chemical Decontaminant DOE	4	2013	4	2013
DFoS - NTA Chemical Decon Capabilities IPR	4	2013	4	2013
DFoS - NTA Solid Oxidizer Reformulation	1	2013	4	2014
** DFoS CIDAS - Technology Demonstrations	3	2013	2	2014
DFoS CIDAS - CDD	3	2014	3	2014
DFoS CIDAS - TEMP	3	2014	4	2014
DFoS CIDAS - MS B	1	2015	1	2015
DFoS CIDAS - PDR	1	2015	1	2015
DFoS CIDAS - CDR	2	2015	2	2015
DFoS CIDAS - DT	3	2015	3	2016
DFoS CIDAS - MS C/LRIP	1	2017	1	2017
DFoS CIDAS - LRIP	2	2017	2	2018
DFoS CIDAS - OT	3	2017	2	2018
DFoS CIDAS - FRP	2	2018	2	2018
** DFoS GPD - CPI Testing	1	2013	2	2013
DFoS GPD - MRA Preliminary Assessment	3	2013	4	2013
DFoS GPD - CDD	1	2014	1	2014
DFoS GPD - System Requirements/Design Review	1	2014	1	2014
DFoS GPD - CPII Testing	3	2013	2	2014
DFoS GPD - TEMP	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DFoS GPD - DT	3	2014	2	2015
DFoS GPD - Operational Assessment (OA)	1	2015	2	2015
DFoS GPD - System Verification Review	2	2015	2	2015
DFoS GPD - MRA Final Assessment	1	2015	3	2015
DFoS GPD - MS C	3	2015	3	2015
DFoS GPD - LRIP	3	2015	3	2015
DFoS GPD - OT	4	2015	2	2016
DFoS GPD - FRP	4	2016	4	2016
DFoS GPD - IOC	1	2018	1	2018
** DFoS JSEW - CPI testing	1	2013	2	2013
DFoS JSEW - CPII Testing	2	2013	2	2014
DFoS JSEW - System Requirements/Design Review	2	2014	2	2014
DFoS JSEW - CDD	2	2014	2	2014
DFoS JSEW - TEMP	2	2014	2	2014
DFoS JSEW - DT	2	2014	2	2015
DFoS JSEW - System Verification Review	1	2015	2	2015
DFoS JSEW - MS C	2	2015	2	2015
DFoS JSEW - LRIP	2	2015	2	2015
DFoS JSEW - OT	2	2015	3	2015
DFoS JSEW - FRP	4	2015	4	2015
DFoS JSEW - IOC	4	2016	4	2016
** JBAD - Capability Development Document	4	2014	4	2014
JBAD - Release RFP, Conduct MRA and TRA	2	2015	3	2015
JBAD - MS B	4	2015	4	2015
JBAD - Contract Award	1	2016	1	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JBAD - DT	3	2016	1	2017
JBAD - Production Verification Testing	2	2017	3	2018
JBAD - CPD	4	2018	4	2018
JBAD - MS C/LRIP	4	2018	4	2018
JBAD - LRIP Production	4	2018	4	2019
JBAD - First Article/Production Qualification Testing	3	2019	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
IP4: *INDIVIDUAL PROTECTION (ACD&P)*	-	0.550	1.208	6.811	-	6.811	4.680	0.300	-	-	-	13.549
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports the ACD&P of the following efforts:

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.

The Uniform Integrated Protective Ensemble (UIPE) Increment 2 will enhance fielded and emerging individual protective equipment as part of a Family of Systems that enables the Warfighter to operate in a contaminated Chemical and Biological (CB) environment with no or minimal degradation in performance. UIPE is supported by an approved Initial Capabilities Document (ICD). UIPE increment 2 will build on and increase capabilities attained in Increment 1. In addition, Increment 2 will seek to address the broader scope of ICD requirements to include the capability to protect warfighters from operationally relevant traditional, non-traditional, and advanced CBRN/TIM threats likely to be encountered during joint force operations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) JSGPM (ARPI)	0.550	1.208	3.906
FY 2013 Accomplishments: Conducted verification of technologies data transition of component base filter media from Tech Base. Conducted verification of TICs criteria and test methodology. Conducted testing of performance specifications. Conducted Bed Design Analysis for first technology.			
FY 2014 Plans: 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. Investigate various applications of nanofiber particulate media.			
FY 2015 Plans: Begin Bed Design Analysis for second technology to be transitioned from Tech Base.			
Title: 2) UIPE Incr 2	-	-	2.905

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2015 Plans: Conduct program planning. Prepare MS A documentation. Complete Request for Information (RFI). Conduct baseline assessments to determine trade space around key capabilities.			
Accomplishments/Planned Programs Subtotals	0.550	1.208	6.811

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• IP5: *INDIVIDUAL PROTECTION (EMD)*	23.952	26.296	15.435	-	15.435	16.832	9.411	8.522	10.053	Continuing	Continuing
• JI0002: *JS AIRCREW MASK (JSAM)*	5.742	10.552	11.526	-	11.526	31.500	54.050	68.924	38.343	Continuing	Continuing
• JI0003: *JOINT SERVICE GENERAL PURPOSE MASK (JSGPM)*	51.199	85.343	61.131	-	61.131	54.146	59.340	49.026	-	-	360.185
• MA0401: *CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)*	10.376	13.772	6.948	-	6.948	11.101	11.101	11.101	11.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

JS GENERAL PURPOSE MASK (JSGPM)

The JSGPM 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.

CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)

The UIPE Increment 2 will enhance fielded and emerging individual protective equipment as part of a Family of Systems that enables the Warfighter to operate in a contaminated Chemical and Biological (CB) environment with no or minimal degradation in performance. UIPE is supported by an approved Initial Capabilities Document (ICD). UIPE increment 2 will build on and enhance capabilities attained in Increment 1. In addition, Increment 2 will seek to address the broader scope of ICD requirements to include the capability to protect warfighters from operationally relevant traditional, non-traditional, and advanced CBRN/TIM threats likely to be

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

encountered during joint force operations. UIPE Increment 2 acquisition strategy will be defined to address material requirements identified in CDD utilizing both COTS and Government-owned design to attain increased capabilities.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

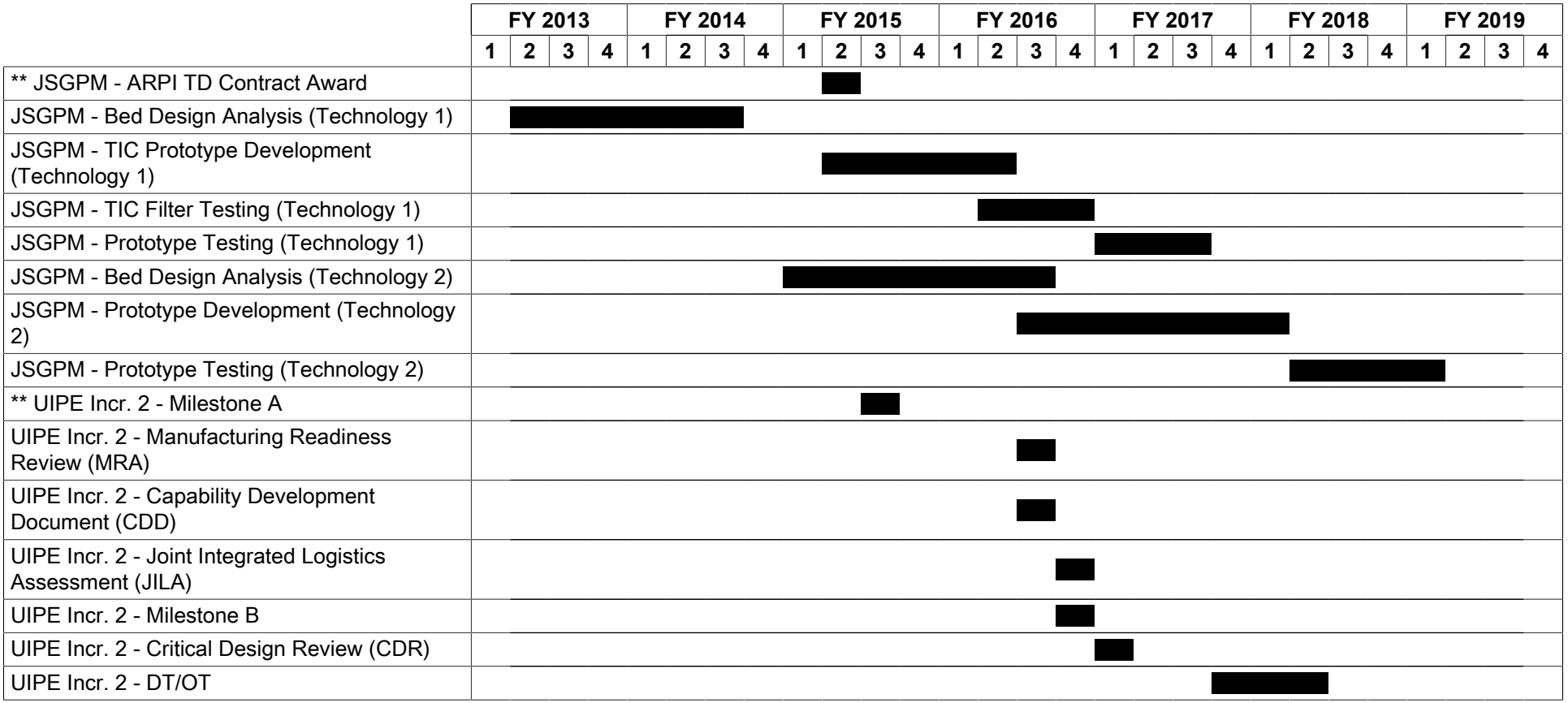

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** IP4 / *INDIVIDUAL PROTECTION (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JSGPM - ARPI TD Contract Award	2	2015	2	2015
JSGPM - Bed Design Analysis (Technology 1)	2	2013	3	2014
JSGPM - TIC Prototype Development (Technology 1)	2	2015	2	2016
JSGPM - TIC Filter Testing (Technology 1)	2	2016	4	2016
JSGPM - Prototype Testing (Technology 1)	1	2017	3	2017
JSGPM - Bed Design Analysis (Technology 2)	1	2015	3	2016
JSGPM - Prototype Development (Technology 2)	3	2016	1	2018
JSGPM - Prototype Testing (Technology 2)	2	2018	1	2019
** UIPE Incr. 2 - Milestone A	3	2015	3	2015
UIPE Incr. 2 - Manufacturing Readiness Review (MRA)	3	2016	3	2016
UIPE Incr. 2 - Capability Development Document (CDD)	3	2016	3	2016
UIPE Incr. 2 - Joint Integrated Logistics Assessment (JILA)	4	2016	4	2016
UIPE Incr. 2 - Milestone B	4	2016	4	2016
UIPE Incr. 2 - Critical Design Review (CDR)	1	2017	1	2017
UIPE Incr. 2 - DT/OT	4	2017	2	2018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
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COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
IS4: *INFORMATION SYSTEMS (ACD&P)*	-	15.728	8.199	6.169	-	6.169	3.684	1.637	0.100	0.100	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Project provides for Advanced Component Development and Prototypes (ACD&P).

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

JEM and JWARN will utilize the Joint Capabilities Integration and Development System (JCIDS) Manual prescribed Agile Information Technology Box "IT Box" construct for managing requirements for the follow-on increments of capability development. Use of the "IT Box" acquisition approach increases flexibility and will expedite fielding of Information System products through a series of Build Decisions (BDs) versus less frequent traditional DoD Milestone B and C decisions. Each program will use an Information Systems Initial Capabilities Document (IS ICD) to describe the required operational capabilities for the development effort. JEM's IS ICD was approved by the Joint Staff J8 Joint Requirements Office for Chemical, Biological, Radiological and Nuclear Defense (JRO-CBRND) in September 2013 and JWARN's IS ICD will be reviewed for approval in 2QFY14. After the IS ICD is approved, more detailed requirements will be captured in Requirements Definition Packages (RDP) and will be approved at the Functional Capability Board (FCB) level. In order to support an agile incremental approach, each program will ensure that the "IT Box" describes the entire IT program and not just a single increment. The supporting BDs will ensure incorporation of mature technology and development efforts culminating in incremental deliveries of capability to Joint and Service Command and Control (C2) architectures. These limited fielding efforts are based on providing capabilities with the most value to the operators based on Warfighter priorities/needs, maturation of the technology being incorporated and available resources supporting the effort. As software-intensive systems both JEM and JWARN have no separately identifiable unit production components. Both are designated 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.

JEM Increment 2, using IT Box Acquisition Strategy, adds capability to JEM Increment 1 including modeling of missile intercepts and improved modeling of hazard events in urban and littoral terrain. It also includes improved architecture called Common CBRN Modeling Interface (CCMI). Together, CCMI and IT Box enable more rapid and less costly integration of Science and Technology updates, aligning with the S&T provider to provide the most current capability to the warfighter. Battlespace commanders and first responders must have a CBRN hazard prediction capability in order to make decisions that will minimize risks of CBRN contamination and enable them to continue mission operations. JEM operates in an integrated fashion with operational and tactical Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, and in a standalone mode. JEM interfaces and communicates with the other programs such as JWARN, weather systems, intelligence systems, and various databases.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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JWARN Increment 2 will provide an expansion of sensors that will connect to JWARN, increased automation of message handling, improved false alarm filtering, integration of route-planning calculator, and interoperability with additional Command and Control (C2), medical information and evolving Bio-Surveillance systems. JWARN will be located in Command and Control Centers at the appropriate level and will be employed by CBRN defense specialists and other designated personnel to improve the efficiency of limited CBRN personnel assets. This employment will transfer data automatically from existing sensors and to and from the future sensors to provide commanders with the capability to support operational decision making in a CBRN environment. JWARN will integrate existing sensors into a sensor network or host C2 system, but does not provide the sensors that will be employed in the operating environment. JWARN will transition from a Command and Control (C2) platform specific implementation to a Web-based Service Oriented Architecture (SOA) meeting the DoD's evolution to a more comprehensive Common Operating Environment (COE) and will operate as a standalone capability. Activities include: logistical elements, support equipment, manuals and training required to operate and support the system.

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 2013	FY 2014	FY 2015
Title: 1) JEM IT Box Prototyping and Development	4.301	1.103	1.249
FY 2013 Accomplishments: Award contract option to winner of competitive down select and develop JEM IT BOX software baseline.			
FY 2014 Plans: Complete competitive prototyping down-select and award option for development and integration of JEM IT BOX capabilities. Prepare for 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: Prepare for second Milestone Decision Authority build decision by integrating mature Science and Technology capabilities identified during the development of FY15 software capability drops with software baseline from FY14 build decision.			
Title: 2) JEM IT Box Test & Evaluation (T&E)	1.626	0.646	1.551
FY 2013 Accomplishments:			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiated governmental development testing in support of competitive prototypes. Prepared T&E documentation for the Preliminary Design Review (PDR) and down-select decision. ***FY 2014 Plans:*** Complete governmental development testing in support of competitive prototyping contract and down-select. Prepare T&E documentation for the Preliminary Design Review (PDR) and down-select decision. Prepare and submit 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:*** Continue governmental development testing in support of JEM IT BOX software. Prepare and conduct Multi-Service Operational Test and Evaluation (MOT&E). Prepare and submit for approval update to IT BOX Test and Evaluation Master Plan to support second IT BOX build decision in current year.			
Title: 3) JEM IT Box Management Support ***FY 2013 Accomplishments:*** Provided program planning, financial management, contracting, schedule, and acquisition oversight support. Updated JEM Integrated Master Schedule to reflect change from incremental capability release to agile IT BOX concept, concurrently developing and releasing . Coordinated Preliminary Design Review (PDR) with Army, Navy, Air Force, Marine Corps, SOCOM, and National Guard stakeholders to develop requirements for the competitive prototype contracts. ***FY 2014 Plans:*** Provide 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:*** Continue to provide program planning, financial management, contracting, schedule, and acquisition oversight support. Coordinate System Verification Review/Operational Test Readiness Review (SVR/OTRR), Requirements Definition Package (RDP) Development and Approval and Capability Drops with stakeholders, and Initial Operational Capability (IOC) for JEM IT BOX. Coordinate Critical Design Review (CDR) of FY16 capability drops, and first JEM IT BOX Milestone Decision Authority build decision with stakeholders.	1.341	0.307	0.257
Title: 4) JEM IT Box Technical Support ***FY 2013 Accomplishments:***	0.994	0.472	0.368

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Prepared technical documentation to support the Preliminary Design Review (PDR). Developed Verification and Validation Plan for capability drops of JEM IT BOX scheduled to begin 1QTR FY15. Provided technical support during the competitive prototyping phase and requirements analysis processes. ***FY 2014 Plans:*** Prepare and review of technical documentation to support competitive prototyping contract down-select decision and the Milestone Decision Authority build decision. Finalize Verification and Validation Plan for the capability drops of JEM scheduled to begin 1QTR FY15. Provide technical support during the competitive prototyping phase and technical assessment. ***FY 2015 Plans:*** Complete Verification, Validation, and Accreditation (VV&A) package for JEM IT BOX.			
Title: 5) JEM IT Box Bio-Surveillance ***FY 2013 Accomplishments:*** Conducted market analysis to identify mature models that were available for use within industry and government. Integrated and adapted existing infectious disease prediction models for incorporation into future capability drops of JEM IT BOX as well as the Bio-Surveillance Portal (BSP). Conducted analysis to ensure scientific validity and potential technology readiness levels (TRL) of existing infectious disease models.	2.665	-	-
Title: 6) JWARN ***Description:*** Analysis of Alternatives (AoA) - Support and Analysis of Technical Alternatives (ATA) Evaluation. ***FY 2013 Accomplishments:*** Completed evaluation of the AoA/ATA results and initiated analysis on impacts of implementing the emerging technologies into the JWARN architecture. ***FY 2014 Plans:*** Complete analysis on impacts of implementing the emerging technologies into the JWARN architecture.	0.669	0.218	-
Title: 7) JWARN ***Description:*** Prototyping. ***FY 2014 Plans:*** Conduct prototyping contracting efforts for JWARN to select candidate(s) for baseline development. ***FY 2015 Plans:***	-	1.607	1.353

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue contracting efforts supporting JWARN Sensor Connectivity Capability (SCC) baseline development.			
Title: 8) JWARN IT BOX Program Development ***Description:*** Technology Demonstrations and User Assessments. ***FY 2014 Plans:*** Conduct 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:*** 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).	-	0.598	0.167
Title: 9) JWARN IT BOX Test and Evaluation (T&E) ***FY 2013 Accomplishments:*** Conducted evaluation, testing, and analysis of components and subsystems, to include Technology Readiness Assessments (TRAs), of Science and Technology (S&T) capabilities targeted for the next increment of JWARN software. Initiated development of the Test and Evaluation Master Plan (TEMP) with the Test and Evaluation (T&E) Working Integrated Product Team (WIPT). ***FY 2014 Plans:*** Initiate 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:*** 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. Complete development of the Test and Evaluation Master Plan (TEMP).	0.890	0.225	0.337
Title: 10) JWARN Software Contract ***FY 2013 Accomplishments:***	0.892	0.843	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Completed proposal evaluations, drafted and finalized technical evaluation report for contract award supporting follow-on software prototyping efforts utilizing the IT BOX construct and Agile Software development processes. ***FY 2014 Plans:*** Awarded contract to conduct follow-on software efforts.			
Title: 11) JWARN IT BOX Program Management Support ***FY 2013 Accomplishments:*** Conducted 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 2014 Plans:*** Continue 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:*** Continue 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.	1.037	1.074	0.443
Title: 12) JWARN IT BOX Technical Support ***FY 2013 Accomplishments:*** Conducted requirements and engineering analysis and technical support for JWARN development efforts under the IT BOX construct and Agile Software development processes. ***FY 2014 Plans:*** Conduct 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:*** Continue 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.	1.313	1.006	0.344
Title: 13) SSA Integrated Architecture ***FY 2014 Plans:***	-	0.100	0.100

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate required modifications to the integrated Architecture on host platforms and document the infrastructure and technical standards. Examine 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.			
Accomplishments/Planned Programs Subtotals	15.728	8.199	6.169

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• IS5: *INFORMATION SYSTEMS (EMD)*	1.869	9.267	10.340	-	10.340	9.208	16.302	17.508	20.646	Continuing	Continuing
• IS7: *INFORMATION SYSTEMS (OP SYS DEV)*	9.590	6.518	4.091	-	4.091	7.835	11.995	13.034	11.019	Continuing	Continuing
• G47101: *JOINT WARNING & REPORTING NETWORK (JWARN)*	2.646	1.112	0.766	-	0.766	-	4.589	1.522	0.533	Continuing	Continuing
• JC0208: *JOINT EFFECTS MODEL (JEM)*	-	-	1.141	-	1.141	3.316	5.069	3.086	3.031	Continuing	Continuing

Remarks

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 away from an incremental delivery approach. This effort is being acquired through a Request for Proposal (RFP) to Industry under full and open competition. The program plans to award multiple development contracts in a competitive prototyping phase prior to downselecting a single JEM developer and integrator.

JOINT WARNING & REPORTING NETWORK (JWARN)

JWARN Increment 2 acquisition will utilize 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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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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).

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. (BA5 - System Development and Demonstration). 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. (BA7 - Operational Systems Development).

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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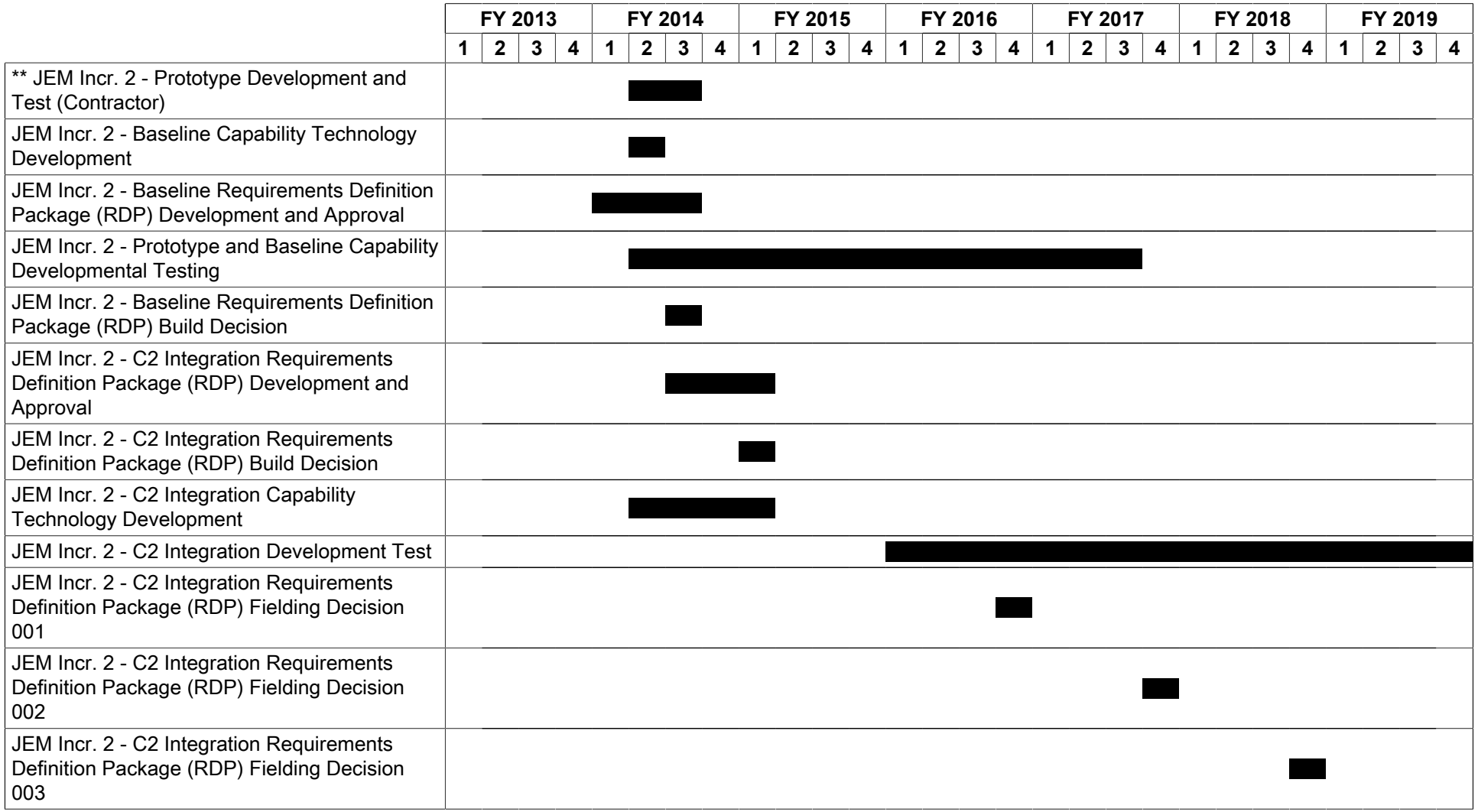

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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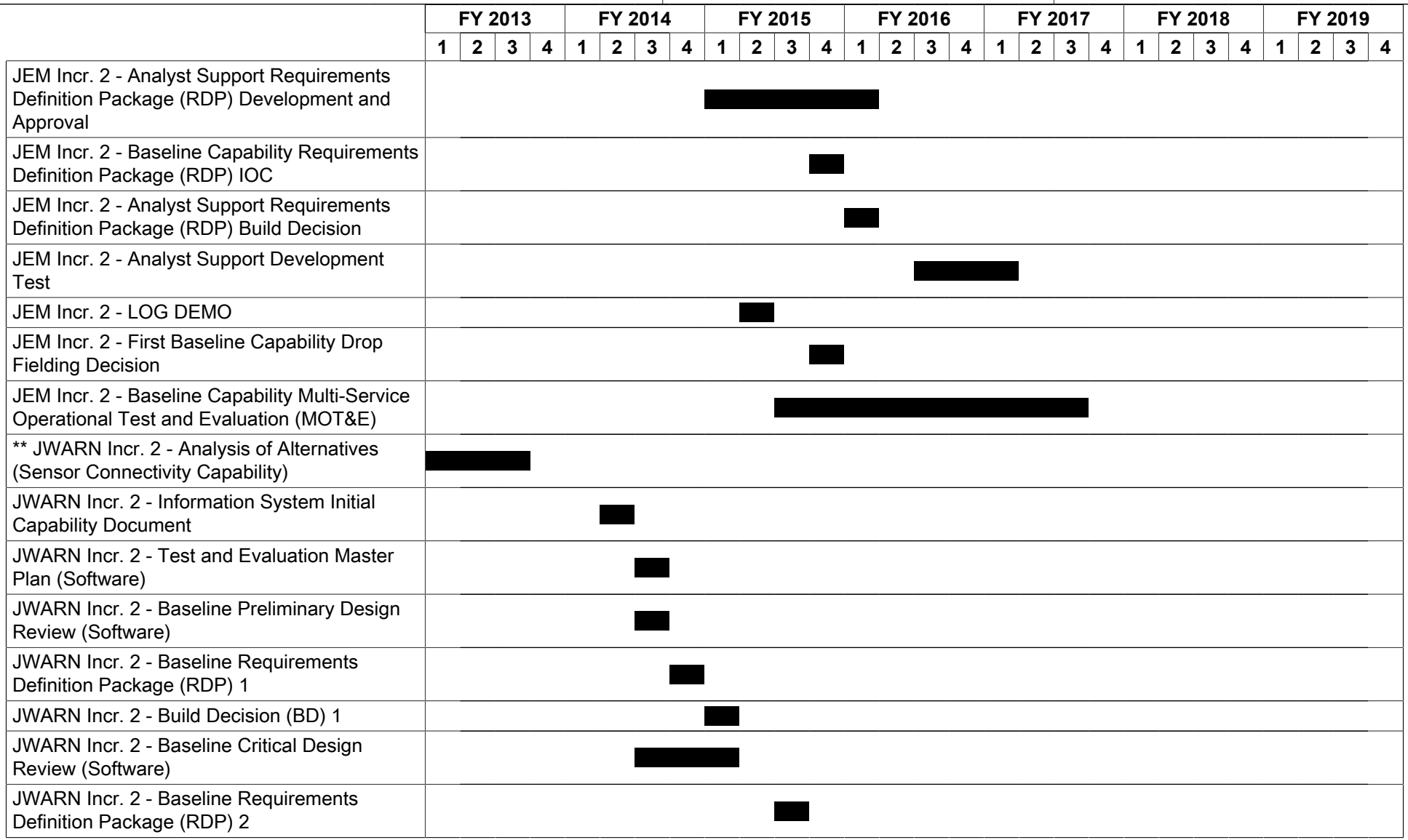

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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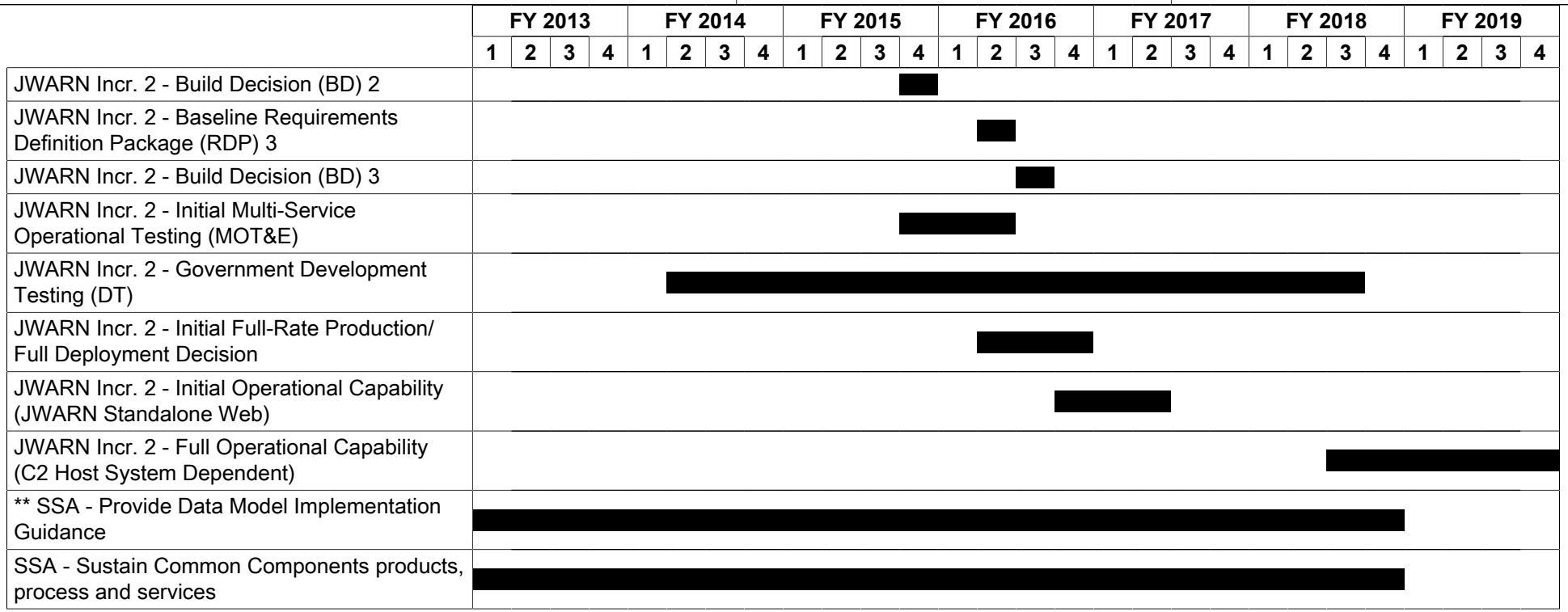

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JEM Incr. 2 - Prototype Development and Test (Contractor)	2	2014	3	2014
JEM Incr. 2 - Baseline Capability Technology Development	2	2014	2	2014
JEM Incr. 2 - Baseline Requirements Definition Package (RDP) Development and Approval	1	2014	3	2014
JEM Incr. 2 - Prototype and Baseline Capability Developmental Testing	2	2014	3	2017
JEM Incr. 2 - Baseline Requirements Definition Package (RDP) Build Decision	3	2014	3	2014
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Development and Approval	3	2014	1	2015
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Build Decision	1	2015	1	2015
JEM Incr. 2 - C2 Integration Capability Technology Development	2	2014	1	2015
JEM Incr. 2 - C2 Integration Development Test	1	2016	4	2019
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Fielding Decision 001	4	2016	4	2016
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Fielding Decision 002	4	2017	4	2017
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Fielding Decision 003	4	2018	4	2018
JEM Incr. 2 - Analyst Support Requirements Definition Package (RDP) Development and Approval	1	2015	1	2016
JEM Incr. 2 - Baseline Capability Requirements Definition Package (RDP) IOC	4	2015	4	2015
JEM Incr. 2 - Analyst Support Requirements Definition Package (RDP) Build Decision	1	2016	1	2016
JEM Incr. 2 - Analyst Support Development Test	3	2016	1	2017
JEM Incr. 2 - LOG DEMO	2	2015	2	2015
JEM Incr. 2 - First Baseline Capability Drop Fielding Decision	4	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JEM Incr. 2 - Baseline Capability Multi-Service Operational Test and Evaluation (MOT&E)	3	2015	3	2017
** JWARN Incr. 2 - Analysis of Alternatives (Sensor Connectivity Capability)	1	2013	3	2013
JWARN Incr. 2 - Information System Initial Capability Document	2	2014	2	2014
JWARN Incr. 2 - Test and Evaluation Master Plan (Software)	3	2014	3	2014
JWARN Incr. 2 - Baseline Preliminary Design Review (Software)	3	2014	3	2014
JWARN Incr. 2 - Baseline Requirements Definition Package (RDP) 1	4	2014	4	2014
JWARN Incr. 2 - Build Decision (BD) 1	1	2015	1	2015
JWARN Incr. 2 - Baseline Critical Design Review (Software)	3	2014	1	2015
JWARN Incr. 2 - Baseline Requirements Definition Package (RDP) 2	3	2015	3	2015
JWARN Incr. 2 - Build Decision (BD) 2	4	2015	4	2015
JWARN Incr. 2 - Baseline Requirements Definition Package (RDP) 3	2	2016	2	2016
JWARN Incr. 2 - Build Decision (BD) 3	3	2016	3	2016
JWARN Incr. 2 - Initial Multi-Service Operational Testing (MOT&E)	4	2015	2	2016
JWARN Incr. 2 - Government Development Testing (DT)	2	2014	3	2018
JWARN Incr. 2 - Initial Full-Rate Production/Full Deployment Decision	2	2016	4	2016
JWARN Incr. 2 - Initial Operational Capability (JWARN Standalone Web)	4	2016	2	2017
JWARN Incr. 2 - Full Operational Capability (C2 Host System Dependent)	3	2018	4	2019
** SSA - Provide Data Model Implementation Guidance	1	2013	4	2018
SSA - Sustain Common Components products, process and services	1	2013	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
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COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
MB4: *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	-	111.415	122.328	102.080	-	102.080	101.019	60.981	32.683	48.277	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

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

The Advanced Development and Manufacturing (ADM) capability provides core and drug development services to include the establishment, commissioning, validation, and attainment of Current Good Manufacturing Practice (cGMP)/Current Good Laboratory Practice (cGLP) for a Medical Countermeasure (MCM) ADM capability for the Department of Defense (DoD).

The ADM effort is being executed in two phases. Phase 1 is for the establishment, commissioning, and validation of the ADM capability. This project funds the establishment of a capability to be located in Alachua, Florida. Two ADM cGMP suites, capable of operating at Bio Surety Level (BSL) 3 will be established during the base contract period. There are contract options to incrementally increase capacity, if needed. Upon attainment of cGMP capability Phase 2 begins. During Phase 2, the contractor team will support and maintain the capability in a state of readiness to support MCM development (to include cGMP manufacturing) and assist in training personnel in its use. The second phase includes transition and integration of new technologies to support MCM development activities, from pre-Investigational New Drug Application phase through FDA licensure. Phase 1 and 2 contract was awarded in March 2013 to Nanotherapeutics, Inc., Alachua, FL. The ADM capability sustainment costs during Phase 2 will originate from MCM programs.

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.

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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 product(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 delivery of therapeutics to the Warfighter. The program will advance MCM candidates against MDR bacterial diseases such as anthrax and plague through the Technology Development phase.

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, EID-Flu MCM, 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. Ongoing EID Tx drug development will be leveraged to demonstrate additional broad-spectrum MCM's against naturally occurring and/or engineered biowarfare threats. Initial testing to support FY15 down-select for follow-on label extension programs has begun. FDA approval for an influenza treatment is anticipated in FY16 following completion of the SDD phase.

The Hemorrhagic Fever Virus (HFV) medical countermeasure acquisition program develops medical countermeasures (MCMs), using high threat, extremely lethal Biological Warfare Agents (BWAs) of the Filoviridae family agents (Ebola and Marburg) as model systems. 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 HFV therapeutics are expected in FY18 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 CBRN threat identification and FDA-cleared diagnostics to inform individual patient treatment and CBRN situational awareness and disease surveillance. NGDS Increment 1 Deployable Component will significantly improve diagnostic capabilities for deployable combat health support units (role 3) while also improving operational suitability and affordability. 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, evacuation, 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. NGDS Increment 2 is intended to provide advanced diagnostics for biological pathogens and toxins, diagnostics for chemical and radiological exposures, and to provide capability to lower echelons of care.

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 Trivalent Filovirus Vaccine (VAC FILO) Program will offer protection against the threat of Ebola and Marburg viruses. The current budget supports development of two prototypes 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; proof of concept nonclinical efficacy studies and assay development. These efforts also include a Phase 1b clinical trial and regulatory integration. 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 Ricin Vaccine.

The DoD initiated the Western, Eastern, and Venezuelan Equine Encephalitis (VAC WEVEE) Vaccine program in FY13. To satisfy the competitive prototyping requirement and to reduce program risk, the DoD will develop two prototypes 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.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) ADM - Bridging Studies	2.905	-	-
FY 2013 Accomplishments: Continued studies and manufacturing to support single use, flexible, and modular manufacturing technologies. Performed advanced process development activities for selected medical countermeasures to be manufactured in the ADM.			
Title: 2) ADM - Program Management and Contract Administration	0.458	-	-
FY 2013 Accomplishments: Maintained a Government Program Management Office that includes Government and contractor personnel with expertise in flexible, modular, single use system technologies. Identified, hired, and retained Government personnel to oversee the MCM ADM. Initiated and maintained contract support to oversee the MCM ADM capability.			
Title: 3) BSL-4 GLP T&E	-	5.899	5.899
FY 2014 Plans:			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Maintain a Bio-Safety Level BSL-4 Test and Evaluation (T&E) capability to develop medical countermeasures in a safe environment. ***FY 2015 Plans:*** Continue to maintain a Bio-Safety Level BSL-4 Test and Evaluation (T&E) capability to develop medical countermeasures in a safe environment.			
Title: 4) BSV ***FY 2013 Accomplishments:*** Initiated and completed table top exercise (TTX) planning efforts for the Early Warning leg of the JUPITR ATD. ***FY 2014 Plans:*** Integrate/Fuse sensors required for Early Warning capability. ***FY 2015 Plans:*** Finalize fusion and integration development for the Early Warning leg.	2.848	8.033	5.215
Title: 5) BSV ***FY 2013 Accomplishments:*** Defined technologies for the Assessment of Environmental Detector (AED) leg of JUPITR ATD. ***FY 2014 Plans:*** Award 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 for Dugway Proving Ground.	8.525	6.838	2.154
Title: 6) BSV ***FY 2013 Accomplishments:*** Released Biosurveillance Portal (BSP) software version Beta 1.0. ***FY 2014 Plans:*** Release Biosurveillance Portal software version 2.0. ***FY 2015 Plans:***	7.051	7.606	9.580

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Release Biosurveillance Portal Software version 3.0 and initiate CENTCOM and National Capital Region Biosurveillance Portal efforts.			
Title: 7) BSV ***FY 2013 Accomplishments:*** Planned exercises utilizing Biological Identification Capability Sets (BICS) deliverables. ***FY 2014 Plans:*** Conduct exercises utilizing BICS deliverables. ***FY 2015 Plans:*** Transition BICS items to programs of record.	6.359	3.910	2.270
Title: 8) BSV ***FY 2013 Accomplishments:*** Initiated special studies and initiatives to address biosurveillance capability needs across the CBRNE program in alignment with DoD and National Strategies. ***FY 2014 Plans:*** Initiate and conduct overarching JUPITR ATD table top exercise (TTX) ***FY 2015 Plans:*** Execute special studies and initiatives to address biosurveillance capability needs across the CBRNE program in alignment with DoD and National Strategies.	3.288	1.243	3.716
Title: 9) CMDR-B ***FY 2015 Plans:*** Support Milestone A Decision to issue Request for Proposal (RFP), award a MCM advanced development contract, initiate a six month Integrated Baseline Review (IBR) and initiate Phase 1 work in MCM development.	-	-	4.098
Title: 10) EID Tx ***FY 2013 Accomplishments:*** Completed activities supporting a successful Milestone B decision and conducted a Phase 2 Bridging Safety Study required by the FDA for transition to Phase 3 Clinical Trials. ***FY 2015 Plans:***	0.554	-	2.286

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate an EID Label Extension (EID LE) program against a high priority DOD biothreat viral agent. Target agent selection and down-select will be based on broad-spectrum efficacy data.			
Title: 11) HFV ***FY 2013 Accomplishments:*** Completed Phase 1 Trials for MCMs against the Marburg Virus. Conducted Alternate Route feasibility studies. Continued activities required to exit the ACD&P phase for the MCM against the Marburg Virus, in preparation for entry into the SDD Phase in 1QFY14.	8.576	-	-
Title: 12) HFV ***FY 2013 Accomplishments:*** Supported Special Operations Command (SOCOM) hand held detection capabilities for high priority biological Threats.	1.396	-	-
Title: 13) HFV ***FY 2013 Accomplishments:*** Continue pre-clinical efficacy and safety testing for the MCM against Ebola Zaire Virus, and initiated Phase 1 Clinical Trial.	15.837	-	-
Title: 14) HFV ***FY 2013 Accomplishments:*** Continued non-human primate animal model development for aerosolized HFV.	3.959	-	-
Title: 15) NGDS - Increment 1 Deployable Component ***FY 2013 Accomplishments:*** Conducted Competitive Prototyping to include procurement of 18 prototype systems from each of the three Competitive prototyping vendors, contractor studies and Government Early Operational assessment and Development testing (i.e., Mil-Std 810, Mil-Std 461, etc.).	6.391	-	-
Title: 16) NGDS - Increment 1 Deployable Component ***FY 2013 Accomplishments:*** Initiated Anthrax Environmental surveillance assay development and completed environmental assay configuration studies for three Competitive Prototyping vendors.	2.500	-	-
Title: 17) NGDS - Increment 1 Deployable Component ***FY 2013 Accomplishments:***	4.000	11.110	1.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiated Anthrax and Viral Hemorrhagic Fever (VHF) In Vitro Diagnostic (IVD) assay development and completed IVD assay configuration studies for three Competitive Prototyping vendors to include optimization and FDA pre-submission application submittal. ***FY 2014 Plans:*** Continue development of the Anthrax and Viral Hemorrhagic Fever in-vitro diagnostic (IVD) assays and clinical trials and prepare and submit FDA clearance 510(k) package. Initiate development of 22 environmental screening assays required to be on NGDS Incr. 1 as the replacement to joint Biological Agent Identification and Diagnostic System (JBAIDS) and to support the Common Analytical Laboratory System (CALS). ***FY 2015 Plans:*** Continue development of the IVD assays and clinical trials and prepare and submit FDA clearance 510(k) package. Continue development of 22 environmental screening assays required to be on NGDS Incr. 1 as the replacement to JBAIDS and to support the CALS.			
Title: 18) NGDS - Increment 1 Deployable Component ***FY 2014 Plans:*** Conduct Multi Service Operational Test and Evaluation under DOT&E oversight for NGDS Incr. 1 land-based diagnostic users. Initiate development of remaining threshold BWA IVD assays (Plague, Tularemia, Q-Fever). ***FY 2015 Plans:*** Continue Multi Service Operational Test and Evaluation under DOT&E oversight for NGDS Incr. 1 land-based diagnostic users. Initiate development of remaining threshold BWA IVD assays (Plague, Tularemia, Q-Fever).	-	7.200	1.110
Title: 19) NGDS Increment 2 ***FY 2014 Plans:*** Prepare for and Conduct MS A for NGDS Increment 2. Assemble Program IPT and participating Service/interagency Reps.	-	1.012	-
Title: 20) NGDS - Increment 2 ***FY 2015 Plans:*** Award initial CBRN diagnostic capability development contracts and conduct Early Operational Assessments.	-	-	5.390
Title: 21) VAC FILO ***FY 2013 Accomplishments:*** Continued non-clinical efficacy studies. ***FY 2014 Plans:***	8.343	12.817	8.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue non-clinical efficacy studies. ***FY 2015 Plans:*** Complete non-clinical efficacy studies and initiate non-clinical safety studies.			
Title: 22) VAC FILO ***FY 2013 Accomplishments:*** Continued small-scale manufacturing process development for two prototypes. ***FY 2014 Plans:*** Continue small-scale manufacturing process development and initiate cGMP Pilot Scale Production for one prototype. ***FY 2015 Plans:*** Complete small-scale manufacturing process development. Initiate cGMP Pilot Scale Production for second prototype.	3.699	5.964	7.407
Title: 23) VAC FILO ***FY 2013 Accomplishments:*** Initiated manufacturing process development/cGMP manufacturing to include assay development and qualification for two prototypes. ***FY 2014 Plans:*** Continue manufacturing process development/cGMP manufacturing to include assay development and qualification for two prototypes. ***FY 2015 Plans:*** Complete manufacturing process development/cGMP manufacturing to include assay development and qualification for two prototypes.	3.000	6.854	6.000
Title: 24) VAC FILO ***FY 2013 Accomplishments:*** Initiated manufacturing process development/cGMP manufacturing to include drug product formulation for two prototypes. ***FY 2014 Plans:*** Continue manufacturing process development/cGMP manufacturing to include drug product formulation for two prototypes. ***FY 2015 Plans:*** Complete final drug product formulation for two prototypes.	1.200	3.004	2.000
Title: 25) VAC FILO	5.245	5.098	5.200

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Continued to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2014 Plans:*** Continue 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.			
Title: 26) VAC FILO ***FY 2013 Accomplishments:*** Continued preparation for pre-IND meeting with the FDA for two vaccine prototypes. Conducted quality audits of manufacturing facilities. ***FY 2014 Plans:*** Conduct one pre-IND meeting with the FDA on first prototype. Initiate the preparation of Chemistry Manufacturing & Controls (CMC) section for IND submission for one prototype. ***FY 2015 Plans:*** Conduct pre-IND meeting with the FDA on second prototype. Initiate the preparation of Chemistry Manufacturing & Controls (CMC) section for IND submission for second prototype.	1.997	5.923	4.000
Title: 27) VAC RIC ***FY 2013 Accomplishments:*** Conducted Milestone A. ***FY 2014 Plans:*** Initiated manufacturing process development. Conduct cGMP Pilot Lot Production.	0.500	1.020	-
Title: 28) VAC RIC ***FY 2013 Accomplishments:*** Initiated non-clinical safety and efficacy studies. ***FY 2014 Plans:***	3.522	3.500	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue non-clinical safety and efficacy studies.			
Title: 29) VAC RIC ***FY 2013 Accomplishments:*** Initiated non-clinical assay development. ***FY 2014 Plans:*** Continued assay development,and development of serum test samples. Initiated cGMP manufacturing and Phase I Human Clinical Trial.	1.008	1.474	-
Title: 30) VAC RIC ***FY 2013 Accomplishments:*** Initiated strategic/tactical planning, government system engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2014 Plans:*** Continue to conduct strategic/tactical planning, government system engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	0.500	0.800	-
Title: 31) VAC WEVEE ***FY 2013 Accomplishments:*** Conducted Milestone A. Initiated non-clinical safety and efficacy studies for competitive prototypes. ***FY 2014 Plans:*** Continue non-clinical safety and efficacy studies for competitive prototypes. ***FY 2015 Plans:*** Continue non-clinical safety and efficacy studies for competitive prototypes.	1.801	3.500	6.955
Title: 32) VAC WEVEE ***FY 2013 Accomplishments:*** Initiated small-scale manufacturing process development and assay development for competitive prototypes. ***FY 2014 Plans:*** Continue small-scale manufacturing process development, assay development, and initiate GMP manufacturing for competitive prototypes. ***FY 2015 Plans:***	5.672	16.051	14.761

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue small-scale manufacturing process development, assay development, and GMP manufacturing for competitive prototypes.			
Title: 33) VAC WEVEE ***FY 2013 Accomplishments:*** Initiated strategic/tactical planning, government system engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, regulatory and technical support. ***FY 2014 Plans:*** Continue 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.	0.281	3.472	4.139
Title: 34) VAC WEVEE ***FY 2015 Plans:*** Conduct one pre-IND meeting with the FDA.	-	-	0.900
Accomplishments/Planned Programs Subtotals	111.415	122.328	102.080

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MB5: *MEDICAL BIOLOGICAL DEFENSE (EMD)*	173.505	246.436	169.497	-	169.497	138.224	154.851	179.989	168.644	Continuing	Continuing
• MB7: *MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)*	0.490	0.499	13.414	-	13.414	14.551	9.816	7.277	16.496	Continuing	Continuing
• JM2222: *BIOSCAVENGER (BSCAV)*	-	-	-	-	-	-	-	9.354	14.522	Continuing	Continuing
• JM5597: *HEMORRHAGIC FEVER VIRUS (HFV)*	-	-	-	-	-	-	-	2.725	5.400	Continuing	Continuing
• JM6677: *ADVANCED ANTICONVULSANT SYSTEM (AAS)*	1.566	-	2.500	-	2.500	-	-	-	-	-	4.066

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JM8788: *NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS)*	14.999	-	3.861	-	3.861	4.632	8.593	8.495	13.900	Continuing	Continuing
• JX0005: *DOD BIOLOGICAL VACCINE PROCUREMENT*	0.185	0.185	6.412	-	6.412	6.606	12.108	3.406	6.801	Continuing	Continuing
• JX0210: *CRITICAL REAGENTS PROGRAM (CRP)*	1.012	1.011	1.011	-	1.011	-	-	-	-	-	3.034
• JX0300: *BIOSURVEILLANCE (BSV)*	-	1.000	-	-	-	-	-	-	-	-	1.000

Remarks

D. Acquisition Strategy

ADVANCED DEVELOPMENT & MANUFACTURING (ADM)

The ADM capability awarded a competitive ten (10) year [two base years with four 2 year options] Cost Plus Fixed fee (CPFF) contract to Nanotherapeutics, Inc., Alachua, FL.

BIOSURVEILLANCE (BSV)

BSV is the delivery of a set of capabilities to 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 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. 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 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. The CMDR-B Program acquisition strategy is to employ a full and open competition approach with an anticipated Cost Plus Incentive Fee (CPIF) contract. 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. Upon Milestone A approval, the program will advance MCM candidates against MDR bacterial diseases (e.g., anthrax and plague) through the Technology Development phase. In FY16-17 CMDR-B will initiate and complete Phase I clinical studies. CMDR-B anticipates an FY17 Milestone B decision to continue toward a New Drug Application (NDA) and FDA approval/licensure.

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 1QFY14. Following successful FDA approval of the drug against influenza, 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 small animal testing will determine the best candidate to move forward for the Label Extension starting in FY15.

HEMORRHAGIC FEVER VIRUS (HFV)

The acquisition strategy uses a parallel evaluation of drug candidates against the lethal Ebola Zaire and Marburg 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(s) will submit a New Drug Application(s) for the Ebola Zaire and Marburg therapeutics 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 Next Generation Diagnostics System (NGDS) will develop and field a family of enhanced CBRN analytical and diagnostic systems to the Joint force through an evolutionary acquisition strategy. NGDS Increment 1 Deployable Component will develop FDA cleared Biological Warfare Agent (BWA) in vitro diagnostic (IVD) assays for an existing Commercial diagnostic device with a well established FDA regulatory history and a pipeline of commercial non-BWA infectious disease diagnostic tests. Additional DoD-unique BWA diagnostic and environmental surveillance capabilities will be added to the downselected instrument after MS C. BA4 funds are used for NGDS Incr 1 throughout the FY12-15 Technology Development phase in accordance with the streamlined MS A to MS C acquisition strategy. Specifically, NGDS Incr 1 BA4 funds are used to conduct competitive prototyping, early operational assessments, development of 6 BWA IVD assays (Anthrax, Ebola, Marburg, Plague, Tularemia and Q-Fever), 22 BWA surveillance assays and multiservice operational test prior to MS C.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

NGDS Increment 2 will use BA4 funds FY14-16 to conduct technology development prior to MS B. The acquisition strategy and capability to be developed will be determined by the results of the Analysis of Alternatives to be completed 2QFY14. NGDS Incr 2 is intended to be complementary to NGDS Incr 1 to expand the breath of diagnostics to CBRN threats, pre-symptomatic diagnostics and far forward echelons of care.

FILOVIRUS (VAC FILO)

The Government will develop two Filovirus vaccine candidates through a Phase 1 clinical trial. 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 Department of Defense 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.

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. FY13-FY14 funding will allow the completion of essential efforts needed to support a Milestone B decision. These efforts include manufacturing of cGMP lots, proof of concept efficacy studies, and assay development. These efforts also include a Phase I Clinical Trial to measure the safety and effectiveness of the vaccine in humans. IND submission and Phase 1b Clinical Trial are the final requirements for a Milestone B

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 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 Department of Defense 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-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

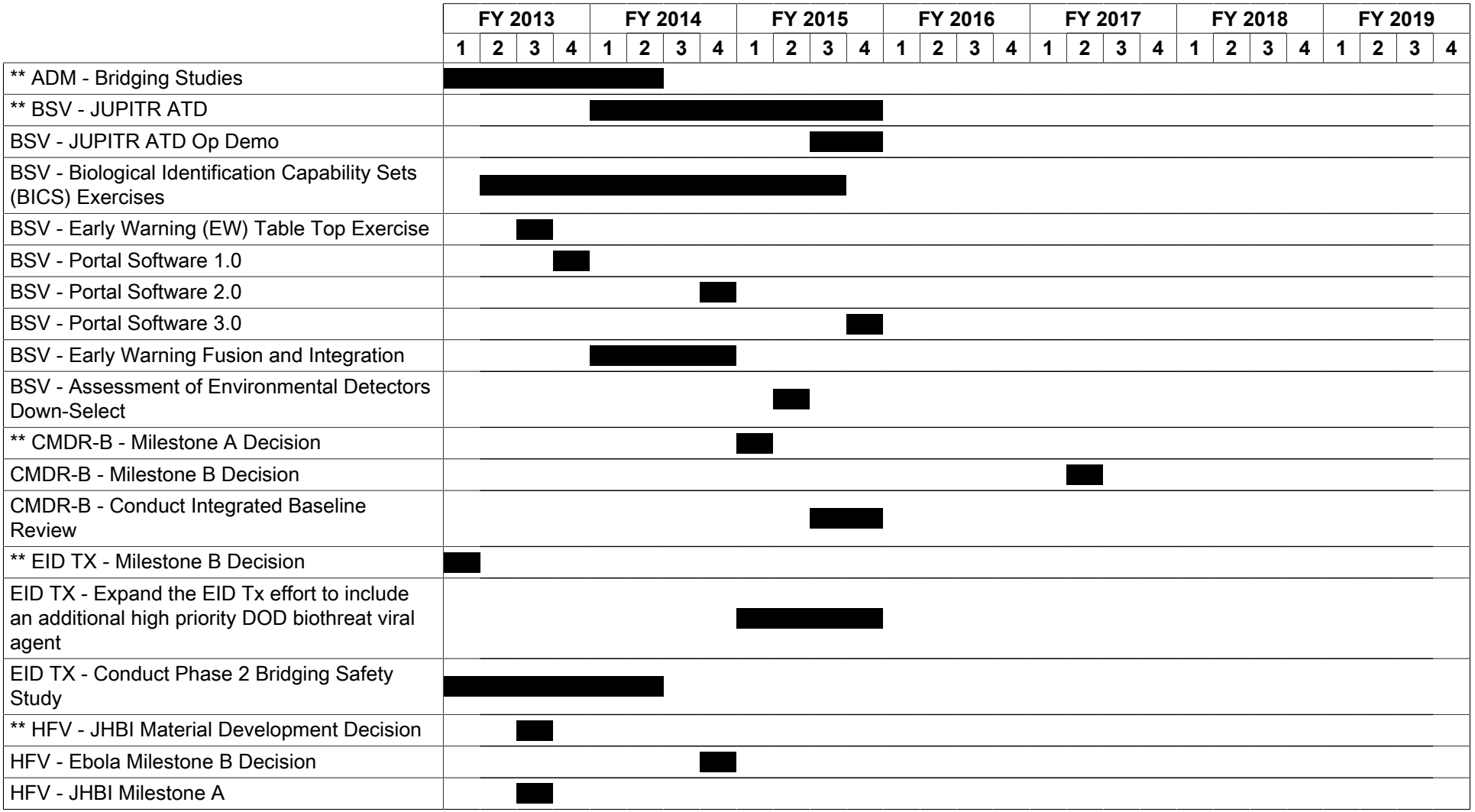

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

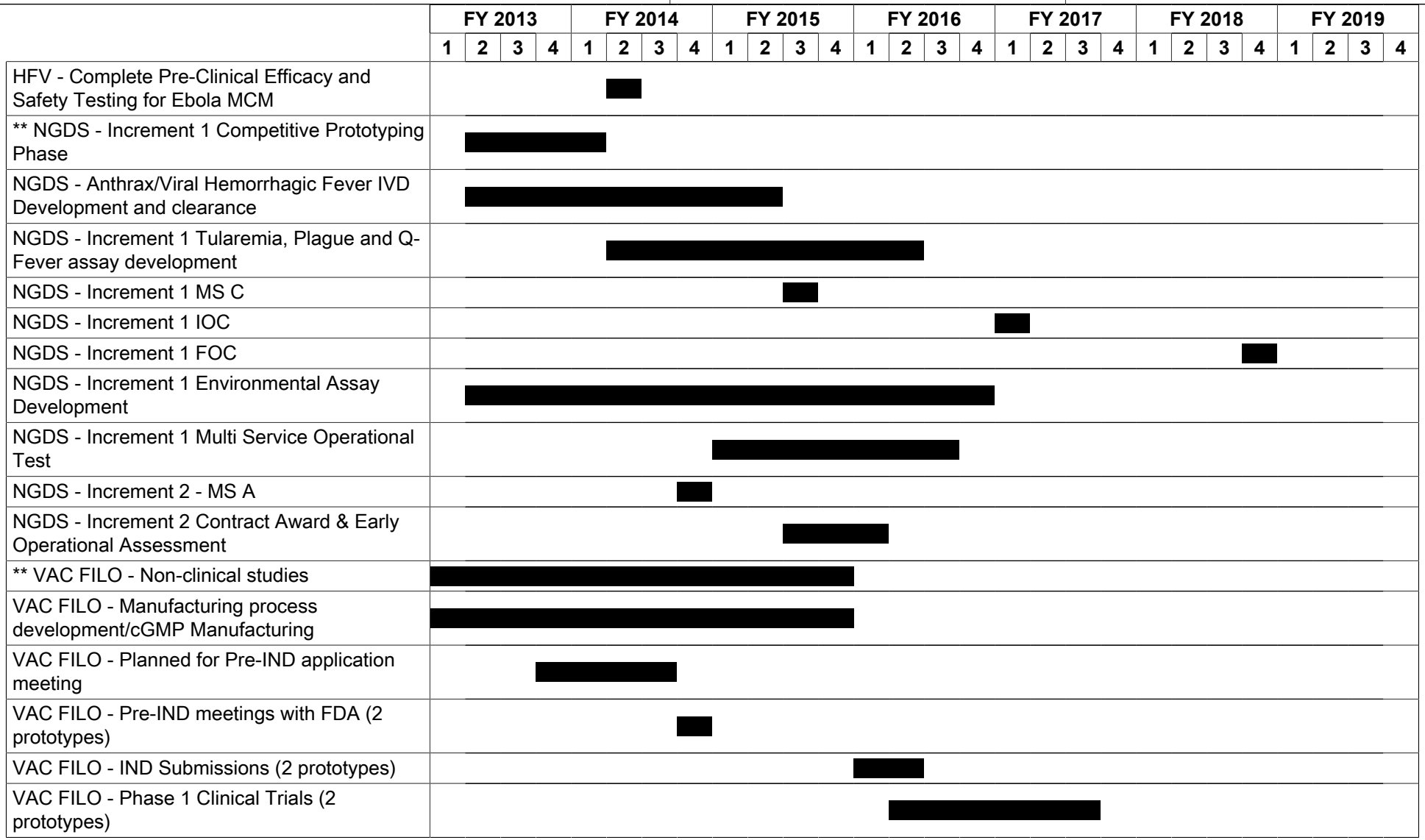

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

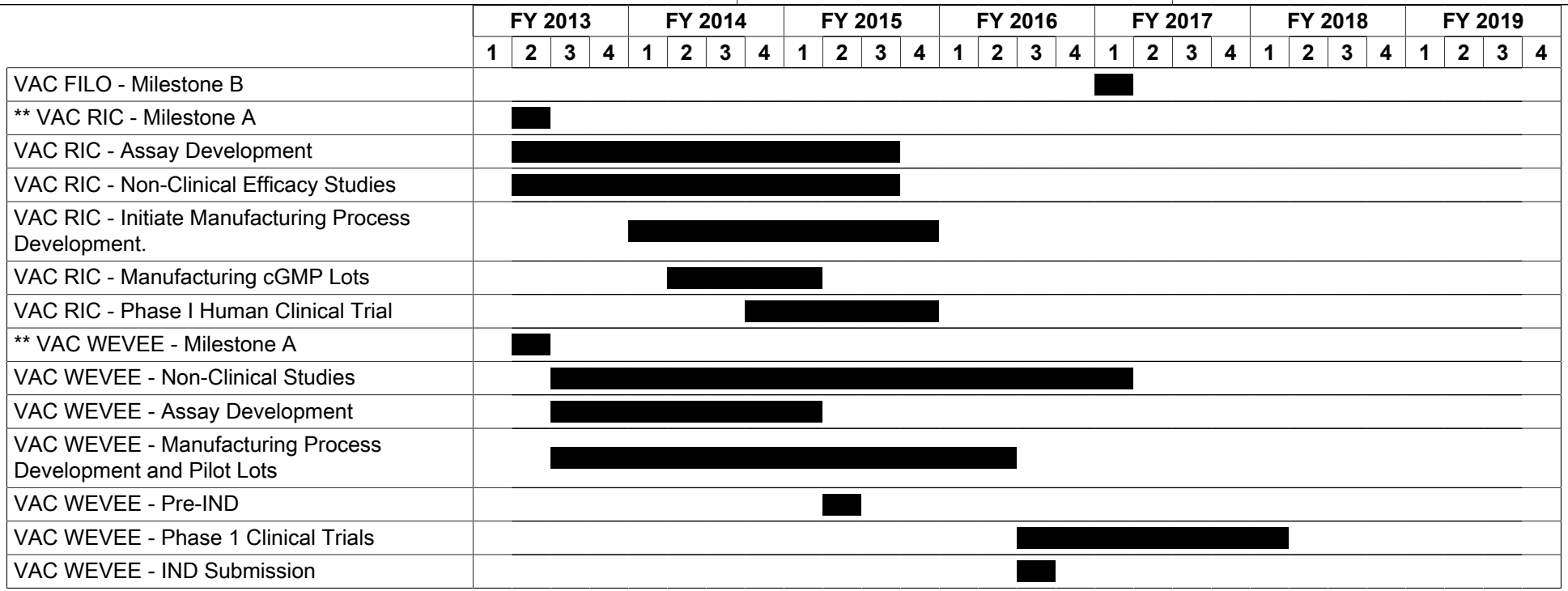

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MB4 / *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** ADM - Bridging Studies	1	2013	2	2014
** BSV - JUPITR ATD	1	2014	4	2015
BSV - JUPITR ATD Op Demo	3	2015	4	2015
BSV - Biological Identification Capability Sets (BICS) Exercises	2	2013	3	2015
BSV - Early Warning (EW) Table Top Exercise	3	2013	3	2013
BSV - Portal Software 1.0	4	2013	4	2013
BSV - Portal Software 2.0	4	2014	4	2014
BSV - Portal Software 3.0	4	2015	4	2015
BSV - Early Warning Fusion and Integration	1	2014	4	2014
BSV - Assessment of Environmental Detectors Down-Select	2	2015	2	2015
** CMDR-B - Milestone A Decision	1	2015	1	2015
CMDR-B - Milestone B Decision	2	2017	2	2017
CMDR-B - Conduct Integrated Baseline Review	3	2015	4	2015
** EID TX - Milestone B Decision	1	2013	1	2013
EID TX - Expand the EID Tx effort to include an additional high priority DOD biothreat viral agent	1	2015	4	2015
EID TX - Conduct Phase 2 Bridging Safety Study	1	2013	2	2014
** HFV - JHBI Material Development Decision	3	2013	3	2013
HFV - Ebola Milestone B Decision	4	2014	4	2014
HFV - JHBI Milestone A	3	2013	3	2013
HFV - Complete Pre-Clinical Efficacy and Safety Testing for Ebola MCM	2	2014	2	2014
** NGDS - Increment 1 Competitive Prototyping Phase	2	2013	1	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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**
NGDS - Anthrax/Viral Hemorrhagic Fever IVD Development and clearance	2	2013	2	2015
NGDS - Increment 1 Tularemia, Plague and Q-Fever assay development	2	2014	2	2016
NGDS - Increment 1 MS C	3	2015	3	2015
NGDS - Increment 1 IOC	1	2017	1	2017
NGDS - Increment 1 FOC	4	2018	4	2018
NGDS - Increment 1 Environmental Assay Development	2	2013	4	2016
NGDS - Increment 1 Multi Service Operational Test	1	2015	3	2016
NGDS - Increment 2 - MS A	4	2014	4	2014
NGDS - Increment 2 Contract Award & Early Operational Assessment	3	2015	1	2016
** VAC FILO - Non-clinical studies	1	2013	4	2015
VAC FILO - Manufacturing process development/cGMP Manufacturing	1	2013	4	2015
VAC FILO - Planned for Pre-IND application meeting	4	2013	3	2014
VAC FILO - Pre-IND meetings with FDA (2 prototypes)	4	2014	4	2014
VAC FILO - IND Submissions (2 prototypes)	1	2016	2	2016
VAC FILO - Phase 1 Clinical Trials (2 prototypes)	2	2016	3	2017
VAC FILO - Milestone B	1	2017	1	2017
** VAC RIC - Milestone A	2	2013	2	2013
VAC RIC - Assay Development	2	2013	3	2015
VAC RIC - Non-Clinical Efficacy Studies	2	2013	3	2015
VAC RIC - Initiate Manufacturing Process Development.	1	2014	4	2015
VAC RIC - Manufacturing cGMP Lots	2	2014	1	2015
VAC RIC - Phase I Human Clinical Trial	4	2014	4	2015
** VAC WEVEE - Milestone A	2	2013	2	2013
VAC WEVEE - Non-Clinical Studies	3	2013	1	2017
VAC WEVEE - Assay Development	3	2013	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
VAC WEVEE - Manufacturing Process Development and Pilot Lots	3	2013	2	2016
VAC WEVEE - Pre-IND	2	2015	2	2015
VAC WEVEE - Phase 1 Clinical Trials	3	2016	1	2018
VAC WEVEE - IND Submission	3	2016	3	2016

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MC4: *MEDICAL CHEMICAL DEFENSE (ACD&P)*	-	-	2.000	-	-	-	-	3.750	10.692	25.089	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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 2013	FY 2014	FY 2015
Title: 1) INATS ***FY 2014 Plans:*** Continue non-clinical toxicology studies.	-	1.189	-
Title: 2) INATS ***FY 2014 Plans:*** Complete enhanced formulation stability studies and process optimization efforts.	-	0.541	-
Title: 3) INATS ***FY 2014 Plans:*** Continue and complete Phase 1 clinical trial.	-	0.270	-
Accomplishments/Planned Programs Subtotals	-	2.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MC5: *MEDICAL CHEMICAL DEFENSE (EMD)*	17.396	55.087	58.529	-	58.529	65.966	40.880	33.205	1.550	Continuing	Continuing
• JM6677: *ADVANCED ANTICONVULSANT SYSTEM (AAS)*	1.566	-	2.500	-	2.500	-	-	-	-	-	4.066

Remarks

D. Acquisition Strategy

IMPROVED NERVE AGENT TREATMENT SYSTEM (INATS)

Improved Nerve Agent Treatment Systems (INATS) is an enhanced nerve agent treatment regimen designed to replace and provide improved product performance over the Antidote Treatment Nerve Agent Auto-injector (ATNAA). The components of the INATS program include: 1) development of a broad spectrum oxime that is effective against emerging threats to replace the fielded currently fielded oxime 2-pralidoxime chloride (2-PAM); 2) product formulation enhancements to increase survival; and 3) expanded pretreatment indications for pyridostigmine bromide (PB). During the Technology Development Phase, the system integrator will oversee conduct of formulation development efforts, nonclinical toxicology and efficacy studies, Phase 1 human clinical safety studies as well as nonclinical studies to obtain FDA approval for expanding the indications for PB. Following a successful Milestone B and entry in to the Engineering and Manufacturing (EMD) Phase, the system integrator will continue to exercise management oversight with system integration support from a commercial partner or partners to ensure that the development and manufacture of the INATS is in accordance with Food and Drug Administration (FDA) regulations and guidelines. Prior to FDA licensure, the commercial partner(s) will perform a Phase 2 human clinical safety study, nonclinical toxicology studies and definitive animal efficacy studies. The system integrator will also manufacture an improved oxime formulation and autoinjector 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. During the Production and Deployment Phase, the system integrator, in conjunction 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 and logistical responsibilities to the Defense Logistics Agency during the Operations and Support Phase however, as the total life-cycle manager the system integrator will monitor program performance through disposal.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

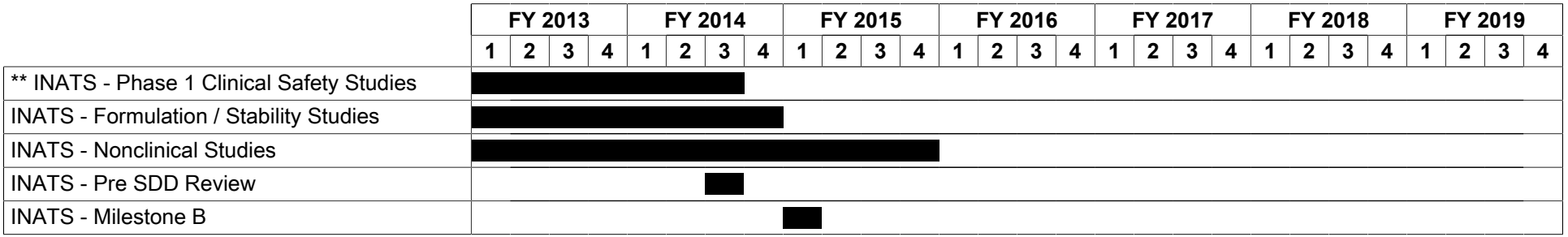

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MC4 / *MEDICAL CHEMICAL DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** INATS - Phase 1 Clinical Safety Studies	1	2013	3	2014
INATS - Formulation / Stability Studies	1	2013	4	2014
INATS - Nonclinical Studies	1	2013	4	2015
INATS - Pre SDD Review	3	2014	3	2014
INATS - Milestone B	1	2015	1	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*				Project (Number/Name) MR4 / *MEDICAL RADIOLOGICAL DEFENSE (ACD&P)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
MR4: *MEDICAL RADIOLOGICAL DEFENSE (ACD&P)*	-	2.736	-	-	-	-	-	-	-	-	-	2.736
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Operational forces have an immediate need to survive, safely operate, and sustain operations in a radiological/nuclear (R/N) threat environment across a continuum of global, contingency, special operations/low intensity conflict, homeland defense, and other high-risk missions.

Exposure to ionizing radiation causes acute radiation syndrome (ARS) which includes damage to blood-forming cells (hematopoietic system), gastrointestinal system, and central nervous system. Treatment of R/N casualties depends on effective use of multiple medical capabilities in an integrated manner. There are currently no FDA-approved prophylactic, therapeutic, or biodosimetry capabilities against ARS. Thus, this program supports the development of medical radiological countermeasures (MRADC) using a family-of-systems approach to provide a full spectrum medical capability including prophylactics, therapeutics, and biodosimetry to protect Warfighters against the radiation threat and to mitigate the medical consequences of exposure to ionizing radiation.

MRADC efforts include development of multiple countermeasures to prevent, limit, or reverse the myriad of injuries caused by exposure to radiation resulting in increased survival, decreased incapacity, and sustained operational effectiveness of U.S. Forces. In addition, MRADC will be effective against a broad range of ionizing radiation sources and types and will be useable throughout the full spectrum of healthcare operations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) MRADC ***FY 2013 Accomplishments:*** Conducted development of Department of Health and Human Services (HHS) prototypes for DoD requirements.	1.750	-	-
Title: 2) MRADC ***FY 2013 Accomplishments:*** Conducted preliminary PK studies to test HHS prototypes for DoD requirements.	0.986	-	-
Accomplishments/Planned Programs Subtotals	2.736	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MR4 / *MEDICAL RADIOLOGICAL DEFENSE (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

MEDICAL RADIOLOGICAL COUNTERMEASURES (MRADC)

The DoD is synchronizing its investments and harmonizing its portfolio with the Department of Health and Human Services (HHS) which also has a radiation countermeasure program. DoD investments will focus on DoD-unique requirements. In support of the Integrated National Biodefense Portfolio, a Memorandum of Understanding (MOU) was established between HHS and DoD to prevent duplication of efforts and create synergies in the development of MRADC. In support of the MOU, the DoD has entered into Interagency Agreements (IAAs) with the Biomedical Advanced Research and Development Authority (BARDA), HHS's advanced developer, to promote the development of MRADC and the Strategic National Medical Radiation Countermeasures Portfolio. Each contract performer whose work is supported through these IAAs will sponsor its drug to the FDA and hold all approvals and or licenses. In accordance with the MRADC revised acquisition strategy, the DoD will harmonize DoD investments with HHS investments. The DoD will invest via IAAs in HHS prototypes focusing on DoD-unique requirements as HHS, in its role as the lead developer for the Technology Development phase in a whole-of-government approach, matures the prototypes to support a DoD down-select at Milestone B.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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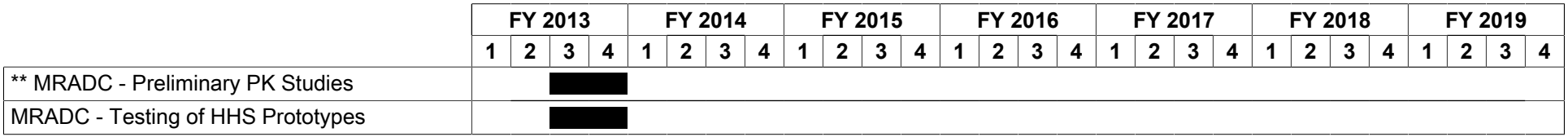

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** MR4 / *MEDICAL RADIOLOGICAL DEFENSE (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** MRADC - Preliminary PK Studies	3	2013	4	2013
MRADC - Testing of HHS Prototypes	3	2013	4	2013

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
TE4: *TEST & EVALUATION (ACD&P)*	-	5.164	15.671	21.188	-	21.188	23.334	18.386	18.933	18.933	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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 in support of the Milestone Decision Authority (MDA), Joint Project Managers, and the Test and Evaluation (T&E) community. TESS test infrastructure products are aligned in three groups to include: (1) Sense Laboratory (Chemical); (2) Sense Laboratory (Biological); (3) Individual Protection, Collective Protection and Decontamination (Shield and Sustain); and (4) Field Simulant (Sense).

(1) Sense Laboratory (Chemical): The product for this area is the Non-Traditional Agent Defense Test System (NTADTS). The NTADTS provides a new capability at the Edgewood Chemical Biological Center (ECBC) to conduct chemical defense testing using new, emerging threat agents. The NTADTS supports testing of decontamination, collective protection, individual protection, and contamination avoidance products. The CBD acquisition programs supported are Dismounted Reconnaissance Sets Kits and Outfits (DR SKO), Next Generation Chemical Detector (NGCD), Decon Family of Systems (DFoS), 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). The JABT and ASC improvements will provide a tech refresh to existing infrastructure and allow for test results to be integrated into the Test Grid data management system.

(3) Individual Protection, Collective Protection and Decontamination (Shield and Sustain): The product for this area is the Chemical Biological Agent Resistance Test Fixture (CBART). Defense Threat Reduction Agency is continuing to mature this technology prior to transition to the T&E community. Projected location for this T&E capability is Dugway Proving Ground (DPG), Utah. CBART provides a state of the art material swatch test fixture for individual and collective protection systems.

(4) Field Simulant (Sense): The product for this area is the Test Grid. The Test Grid capability demonstrates test methodologies for chem and bio aerosols and advanced technologies. The Test Grid effort provides a fully instrumented 20 km by 40 km field chemical and biological simulant test capability that integrates cloud tracking equipment; meteorological equipment; and test data network. The CBD acquisition programs supported are the Joint Expeditionary Collective Protection (JECP), Next Generation Chemical Detector (NGCD), Joint Biological Point Detection System (JBPDS) and the Joint Biological Tactical Detection System (JBTDS).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) TESS - Non-Traditional Agent Defense Test System (NTADTS)	3.190	5.387	5.669

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Initiated methodologies to safely, repeatedly and accurately test against future threats. ***FY 2014 Plans:*** Continue to develop methodologies and assessments for additional classes of agent. ***FY 2015 Plans:*** Complete methodology development for additional classes of agent.			
Title: 2) TESS - Joint Ambient Breeze Tunnel (JABT) ***FY 2015 Plans:*** Transition mature technology from the Chemical Biological community into existing Joint Ambient Breeze Tunnel (JABT). Initiate component upgrades to dissemination and referee systems for integration with the Test Grid Data Management System (DMS).	-	-	1.886
Title: 3) TESS - Active Standoff Chamber ***FY 2015 Plans:*** Transition mature technology from the Chemical Biological community into existing Active Standoff Chamber. Initiate component upgrades for integration into the Test Grid Data Management System.	-	-	1.418
Title: 4) TESS - Chemical Biological Agent Resistance Test Fixture (CBART) ***FY 2013 Accomplishments:*** Conducted BCA for transition of technology from Tech Base efforts for integration into CBART fixture and conducted studies. ***FY 2014 Plans:*** Initiate laboratory revitalization and design test fixture. ***FY 2015 Plans:*** Complete laboratory revitalization. Complete test fixture design and integrate into laboratory.	0.397	7.279	7.276
Title: 5) TESS - Test Grid ***FY 2013 Accomplishments:*** Conducted component level demonstration to reduce verification risk and operator training. ***FY 2014 Plans:*** Finalize system design and integration of system components for Initial Operational Capability. Complete specification update for reflex and design. Conduct verification test planning. ***FY 2015 Plans:***	1.577	3.005	4.939

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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 2013	FY 2014	FY 2015
Initiate capability upgrade to include expansion to 5 km by 5 km grid and safari capability. Integration of Joint Ambient Breeze Tunnel (JABT) and Active Standoff Chamber (ASC) upgraded capabilities. Transition of full operational capability to Dugway Proving Ground.			
Accomplishments/Planned Programs Subtotals	5.164	15.671	21.188

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• TE5: *TEST & EVALUATION (EMD)*	6.726	26.202	9.176	-	9.176	2.753	5.978	6.311	6.311	Continuing	Continuing
• TE7: *TEST & EVALUATION (OP SYS DEV)*	3.730	3.690	5.984	-	5.984	4.881	5.118	5.174	5.381	Continuing	Continuing

Remarks

D. Acquisition Strategy

TEST EQUIPMENT, STRATEGY & SUPPORT (PD TESS)

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-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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)*

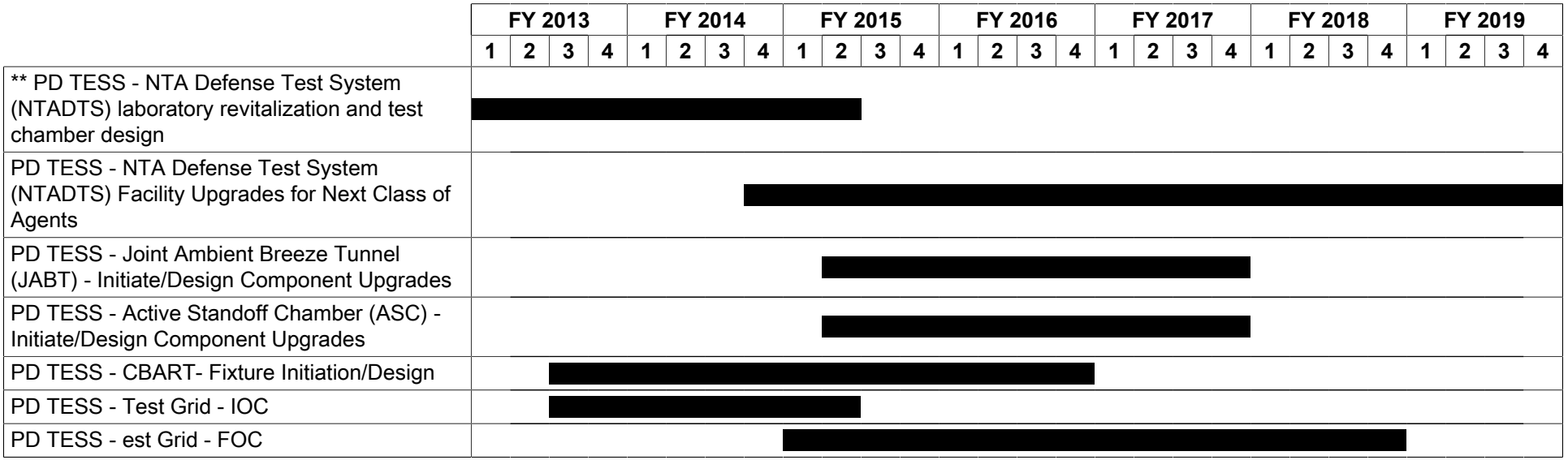

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TE4 / *TEST & EVALUATION (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** PD TESS - NTA Defense Test System (NTADTS) laboratory revitalization and test chamber design	1	2013	2	2015
PD TESS - NTA Defense Test System (NTADTS) Facility Upgrades for Next Class of Agents	4	2014	4	2019
PD TESS - Joint Ambient Breeze Tunnel (JABT) - Initiate/Design Component Upgrades	2	2015	4	2017
PD TESS - Active Standoff Chamber (ASC) - Initiate/Design Component Upgrades	2	2015	4	2017
PD TESS - CBART- Fixture Initiation/Design	3	2013	4	2016
PD TESS - Test Grid - IOC	3	2013	2	2015
PD TESS - est Grid - FOC	1	2015	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	Project (Number/Name) TT4 / *TECHBASE TECHNOLOGY TRANSITION (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
TT4: *TECHBASE TECHNOLOGY TRANSITION (ACD&P)*	-	3.205	-	-	-	-	-	-	-	-	-	3.205
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project (TT4) validates high-risk/high-payoff technologies, concepts-of-operations, and reconnaissance and surveillance platforms that could significantly improve Warfighter capabilities in preparation for transition of mature technologies to advanced development programs requiring chemical and biological (CB) defense technologies. These programs offer an opportunity to identify and efficiently mature emerging technologies from laboratory experiments to acquisition programs through risk reduction, engineering and integration. These demonstrations and programs seek to demonstrate the potential for enhanced military operational capability and/or cost effectiveness. Upon conclusion of the technical and operational demonstrations, the user or sponsor provides a determination of the military utility and operational impact of the technology and capability demonstrated. Successfully demonstrated technologies with proven military utility can either be left in place for extended user evaluations, accepted into advanced stages of the formal acquisition process, proceed directly into limited or full-scale production or be returned to the technical base for further development. This project funds three family of products areas (one of which is a new thrust areas to address DoD emphasis on an interagency collaboration for biological detection, surveillance, recovery and resilience and is annotated as such below): Hazard Mitigation, Early Warning, and Biological Resiliency. Hazard Mitigation addresses Chemical, Biological, and Radiological (CBR) remediation and decontamination processes and demonstrates technologies and methods to restore assets such as mobile equipment, fixed sites, critical infrastructures, personal, and equipment to operational status as a result of having reduced or eliminated CBR contamination. The Early Warning family of products achieve enhanced command and control decision making capabilities as a result of a combined and orchestrated family of chemical and biological defense systems deployed on various platforms in remote locations. Biological Resiliency efforts are targeted to reduce biological threats by: (1) improving DoD access to the life sciences to combat infectious disease regardless of its cause; (2) establishing and reinforcing DoD concept of operations (CONOPS) against the misuse of the life sciences; and (3) instituting a suite of coordinated DoD and interagency activities that collectively will help influence, identify, inhibit, and/or interdict those who seek to misuse the life sciences.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) TECHTRAN - TaCBRD	3.205	-	-
Description: Transatlantic Collaborative Biological Recovery Demonstration (TaCBRD)			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiated Coalition Warfare Program S&T efforts with international partner in EUCOM Area Of Responsibility (AOR). Conducted persistent agent fate and contagious bio agent information systems studies, technical demonstrations and exercises. Initiated bio-resiliency planning efforts in a second AOR.			
Accomplishments/Planned Programs Subtotals	3.205	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• TT3: *TECHBASE TECHNOLOGY TRANSITION*	-	5.917	5.768	-	5.768	7.358	8.225	7.858	7.662	Continuing	Continuing

Remarks

D. Acquisition Strategy

TECHBASE TECH TRANSITION (TECHTRAN)

The Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations (JCTDs) exploit mature and maturing technologies to solve important military problems. ATDs and JCTDs emphasize technology assessment and integration rather than technology development. The goal is to provide a prototype capability to the Warfighter and to support in the evaluation of that capability. The Warfighters evaluate the capabilities in real military exercises and at a scale sufficient to fully assess military utility. When possible, the ATDs will leverage results from existing chemical and biological science and technology (S&T) efforts and prior ATDs. Market research/baselining is performed prior to ATD initiation to determine if a suitable solution exists or whether a solicitation/sole source is required to develop a solution. The ATDs are typically managed by DoD, Federally Funded Research Development Centers (FFRDCs) or University Affiliated Research Centers (UARCs). This is done through the Military Interdepartmental Purchase Request (MIPR) or the Interagency Cost Reimbursable Order (IACRO) in accordance with the Economy Act. In addition, the ATDs utilize the Defense Threat Reduction Agency (DTRA) Broad Area Announcement process to fund promising technologies between Technology Readiness Level (TRL) 4 and TRL 6. The ATD manager, who is typically responsible for total system development, can subcontract industry, academia, or other government agencies to perform individual component development.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TT4 / *TECHBASE TECHNOLOGY TRANSITION (ACD&P)*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
** TECHTRAN - TT DEMO TaCBRD ATD	[redacted]																											

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *CHEMICAL/BIOLOGICAL DEFENSE (ACD&P)*	**Project (Number/Name)** TT4 / *TECHBASE TECHNOLOGY TRANSITION (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** TECHTRAN - TT DEMO TaCBRD ATD	1	2013	4	2014