Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Chemical and Biological Defense Program	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603884BP *I Chemical and Biological Defense Program - Dem/Val*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	133.902	252.010	316.853	0.000	316.853	271.959	181.440	188.011	187.385	Continuing	Continuing
UN4: *Understand (ACD&P)*	-	0.000	52.708	61.638	0.000	61.638	64.399	48.874	41.264	38.169	Continuing	Continuing
PT4: *Protect (ACD&P)*	-	0.000	175.219	179.158	0.000	179.158	135.096	107.341	123.538	139.376	Continuing	Continuing
MT4: *Mitigate (ACD&P)*	-	0.000	17.302	28.785	0.000	28.785	20.885	15.433	13.369	0.000	Continuing	Continuing
EN4: *Enabling Investments (ACD&P)*	-	0.000	6.781	47.272	0.000	47.272	51.579	9.792	9.840	9.840	Continuing	Continuing
CA4: *Contamination Avoidance (ACD&P)*	-	37.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.189
DE4: *Decontamination (ACD&P)*	-	14.747	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.747
IP4: *Individual Protection (ACD&P)*	-	4.748	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.748
MB4: *Medical Biological Defense (ACD&P)*	-	46.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	46.791
TM4: *Techbase Medical Defense (ACD&P)*	-	29.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	29.687
TT4: *Technology Transition (ACD&P)*	-	0.740	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.740

A. Mission Description and Budget Item Justification

This program element (PE) resources Advanced Component Development and Prototypes across the Understand, Protect, Mitigate, and Enabling Investments portfolios. Program efforts validate high-risk/high-payoff technologies and their respective concepts of operations for significant improvement to Warfighter capabilities in preparation for the transition of mature technologies to advanced development programs requiring chemical and biological (CB) defense technologies. Chemical Biological Defense Program (CBDP) investments provide an integrated, layered capability to enable Countering Weapons of Mass Destruction (CWMD) missions ranging from combat operations to Department of Defense (DoD) support to domestic incident prevention and response. The Projects in this PE support component and subsystem maturity prior to integration in major, complex systems and may involve risk reduction initiatives and include technology demonstrations. This effort facilitates transitions of Integrated Early Warning and Integrated Layered Defense products. FY24 funding accelerates characterization and situational awareness of emerging biothreats and accelerates delivery of improved protection from and mitigation of biothreats, including rapid repurposing of available therapeutics and development of new vaccines.

Individual Projects include:

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Chemical and Biological Defense Program	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603884BP *I Chemical and Biological Defense Program - Dem/Val*

- Understand (UN4): Maintain effort in distinguishing between bacterial, viral, and toxin diagnostics. Update detector libraries for relevant detection and identification systems. Continue efforts to integrate detection capabilities into Service combat platforms. Develop detection and diagnostic technologies with compatibility to receive and transmit sensor data on Service networks. Identify Service concepts for Integrated Early Warning (IEW) and maintain cyber compliance of fielded Chemical Biological Radiological and Nuclear (CBRN) information systems.

- Protect (PT4): Continued efforts to unencumber the warfighter by delivering improved personal protection capabilities that incorporate inherent survivability into Service equipment and platforms and which offer protection against the diverse threat agents that near-peer adversaries are developing. Develop capability for next-generation individual protective equipment. In collaboration with Biomedical Advanced Research and Development Authority (BARDA), develops and tests monoclonal antibody medical countermeasures through Phase 1 clinical trials as an accelerated antibodies program. Develops a robust computational toolset/prototype database intended to decrease product development risk throughout the drug development life cycle, accelerate candidate development, and enable preemptive preparedness and rapid response. Leveraging the Advanced Development Manufacturing Network, delivers the ability to rapidly develop Medical Countermeasures (MCMs) against emerging or known chemical/biological threats by establishing mature platform technologies that allow for rapid response. Develops plague monoclonal antibody-based medical countermeasure prototype through Phase 1 clinical testing. Continues work to deliver prototype nucleic acid-based vaccines for three CBRN and two potential pandemic threats through non-clinical and human Phase I clinical trials.

- Mitigate (MT4): Sustain efforts in antiviral therapeutics. Develop capabilities to incorporate the use of in silico and Machine Learning/Artificial Intelligence technologies for drug discovery and development. Increase efforts regarding platform technologies. Development of repurposing pharmaceuticals that enable a rapid response capability to combat emerging threats. Supports the development of robot decontamination platform systems. Completes prototype development for a sprayable slurry Science & Technology (S&T) transition to decontaminate hardened and sensitive equipment, such as weapon system optics, electronic equipment and spot decontamination on vehicles. Continues prototype development for S&T transitions for tactical temporary coatings that mitigate the effects of a CBRN attack by protecting assets from the effects of chemical warfare agents.

- Enabling Investments (EN4): Development of efforts to evaluate integrated technologies or prototype systems in high fidelity and realistic operating environment, including system-specific efforts that help expedite technology transition from the laboratory to operational use. Increase efforts to improve integration of collective protection into Service major combat platforms.

- Contamination Avoidance (CA4), Decontamination (DE4), Individual Protection (IP4), Medical Biological Defense (MB4), Techbase Medical Defense (TM4) and Technology Transition (TT4) are no longer active FY24 Projects due to budget restructuring.

The projects in this PE support the advanced component technology development phase of the DoD acquisition system and are therefore correctly placed in Budget Activity 4.

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Chemical and Biological Defense Program	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603884BP *I Chemical and Biological Defense Program - Dem/Val*

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	133.945	291.364	261.239	-	261.239
Current President's Budget	133.902	252.010	316.853	-	316.853
Total Adjustments	-0.043	-39.354	55.614	-	55.614
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-39.354			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.700	-			
• SBIR/STTR Transfer	-3.742	-			
• Other Adjustments	-0.001	-	55.614	-	55.614

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: TM4: *Techbase Medical Defense (ACD&P)*		
Congressional Add: *Development of medical countermeasures against novel entities (DOMANE)*	4.500	-
Congressional Add Subtotals for Project: TM4	4.500	-
Congressional Add Totals for all Projects	4.500	-

Change Summary Explanation

Funding: FY 2022 (+$4.500 Million): Congressional Add for development of medical countermeasures against novel entities (DOMANE) is reflected in the Previous President's Budget total.
FY 2022 (+$3.700 Million): Below threshold reprogramming increase supports advanced emerging threat defense and rapid monoclonal antibody development.
FY 2022 (-$3.742 Million): Transfer of funding to support Small Business Innovative Research/Small Business Technology Transfer efforts.

FY 2023 (-$39.354 Million): Congressional Directed Reductions.

FY 2024 ($55.614 Million): Increase for medical countermeasure manufacturing optimization (+$38.100 Million), Departmental inflation rate adjustments (+$1.266 Million); and Compact Vapor Chemical Agent Detector activities in support of MS B, Antiviral Oral Therapeutic natural history study, Reactivating Nerve Agent Treatment System animal model development, and additional enhanced biodefense priority efforts (+$16.248 Million).

Schedule: N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Chemical and Biological Defense Program	Date: March 2023
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Technical: Provides for critical new start programs Advanced Differential Diagnostics (ADD), Automated Decon System (ADS), Antiviral Oral Therapeutic (AVO TX), Botulinum Toxin Treatment program (BOT Tx), Consolidated Nerve Agent Treatment System (CNATS), Colorimetric Indicator (C-IND), Physiological Monitoring Sensor Suite (PM2S), and the Reactivating Nerve Agent Treatment System (RNATS).

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) UN4 / *Understand (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
UN4: *Understand (ACD&P)*	-	0.000	52.708	61.638	0.000	61.638	64.399	48.874	41.264	38.169	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Understand Advanced Component Development and Prototypes (ACD&P) Project provides the Joint Force the ability to continually receive information about the Chemical Biological Radiological and Nuclear (CBRN) situation at a desired time and place by detecting, identifying, and quantifying CBRN hazards in air, water, or on land, and on personnel, equipment or facilities. Efforts also develop a clear understanding of the current and predicted CBRN situation; collect, query, and assimilate information from sensors in real time to inform decisions and provide impacts of CBRN hazards. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. UN4 efforts in FY 2022 remain in Project CA4. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) Advanced Differential Diagnostics (ADD)
(2) Advanced Emerging Threat Defense (AET DEFENSE)
(3) Biological Defense Improvement Program (BDIP)
(4) Non-Targeted Sequencing Identification System (NSIS)
(5) Physiological Monitoring Sensor Suite (PM2S)
(6) Colorimetric Indicator (C-IND)
(7) CBRN Support to Command and Control (CSC2)
(8) Compact Vapor Chemical Agent Detector (CVCAD)
(9) Proximate Chemical Agent Detector (PCAD)
(10) Surveillance and Pathogen Characterization-Enhanced Biodefense (SPCHAR-ENBD)

The Advanced Differential Diagnostics (ADD) is a new start program in FY24 and will determine if an individual has likely been infected and the nature of that infection, during early stages of illness for unknown threats, including biological warfare agents and emerging infectious diseases. ADD will provide timely feedback for disease prevention in operational environments, by quickly identifying warfighters who may have contracted illness. ADD will utilize funding to initiate Technology Maturation and Risk Reduction activities, including the development and assessment of selected candidate prototypes.

The Advanced Emerging Threat Defense (AET DEFENSE) program continues to address the highest priority CBRN gaps and supports the CBDP Strategic Line of Effort to meet current and emerging threats by anticipating CB hazards and identifying capabilities to counter emerging and future threats. The AET DEFENSE program collaborates with the Joint Services, interagency, and international partners to align RDT&E resources to determine readiness against emerging threats, to include Non-Traditional Agents (NTAs), such as Novichoks and Pharmaceutical-Based Agents (PBA) (e.g. synthetic opioids), emerging biological threats, toxins and other

advanced and emerging threats as they are identified across the entire CBDP enterprise portfolio. In FY24, AET Defense activities continue to focus on demonstrating and evaluating technologies to assess performance against emerging threats.

The Biological Defense Improvement Program (BDIP) will enhance the set of biodefense capabilities to significantly improve its ability to rapidly understand, prevent, prepare for, respond to, and recover from a vast array of future biological threats. BDIP will support the Department of Defense (DoD) CBDP mission with rapid prototyping capabilities to understand, and protect against threats. BDIP will address joint and service gaps and priorities related to biodefense, and will develop and execute a biodefense strategy. It considers the Biological Warfare threat and vulnerabilities to give biodefense the agility and speed necessary to provide relevant, effective, affordable, and sustainable capabilities that can be ubiquitously deployed on the battlefield against current, emerging and future biological threat. The DoD with academia, industry and other interagency departments will partner to gain opportunities to accelerate technology, adopt surge capacity and advance consumable and alternative solution across the entire Biodefense portfolio. BDIP transitions efforts to the Non-Targeted Sequencing Identification System (NSIS), Wearable All Hazard Remote Monitoring Program (WARP), Far Forward Biological Sequencing (FFBS), and the Physiological Monitoring Sensor Suite (PM2S) programs in FY24.

The Non-Targeted Sequencing Identification System (NSIS) provides a commercially available, rapid biological sequencing capability with the potential to identify an unlimited number of biological warfare agents (BWA), including emerging, engineered, or enhanced organisms on or near the objective. This reduces unknown identification time from days to hours, enabling decision support to all Command echelons (tactical, operational, strategic) at the speed of need. The NSIS itself is a small, portable device (about the size of tablet) that weighs approximately 5 lbs. It comes equipped with consumables (flow cells) that are small, electronic chips for processing the biological sample. Early testing will include operational demonstrations and user touchpoints with the National Guard Bureau to develop the necessary procedures for processing low- and high-density samples. Unlike traditional identification techniques in the field, NSIS identifies anomalies in Deoxyribonucleic Acid (DNA) and Ribonucleic Acid (RNA) and translates the data on a small computing device, enabling fast and effective mitigation and protection for the force. This capability can determine whether the enemy is using synthetic biology for the purpose of thwarting traditional medical countermeasures or current detection/identification devices. FY24 funding will be used for initial test articles, initial verification and validation of current commercial off-the-shelf (COTS) solutions, and nominal program support costs.

The Physiological Monitoring Sensor Suite (PM2S) is a new start program in FY24 that transitions out of the BDIP effort. It will develop CBRN exposure software algorithms that analyze physiological data collected from wearable sensors. These algorithms will provide commanders with actionable information to maximize warfighter readiness, performance, and enhance resiliency before, during, and after CBRN operations. Capabilities developed will integrate with the Chemical and Biological Wearables - Enhanced Biodefense (CB WEARABLES-ENBD) solution set to enable the Joint force to conduct force-wide monitoring to detect the presence or predict initial onset of CBRN threats under an integrated layered defense approach.

The Colorimetric Indicator (C-IND) is a new start program in FY24 and will provide the General Forces with low-cost, easy to use, higher confidence liquid, solid and vapor hazard detection capabilities for traditional and emerging (e.g. PBAs, NTAs in various states of matter) chemical hazards. The intent of the C-IND program is to provide improved hazard detection and classification performance with reduced false alarm rate, and potential for integration onto unmanned platforms. The C-IND was submitted as a new start pending new requirements to be developed. The C-IND program will provide a significantly better M256 Vapor Card that will address emerging and traditional threats (e.g. PBAs, NTAs in various states of matter) as well as drastically improve the usability/training burden that is associated with current Vapor Card

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

as the recognized chemical unmasking tool. In FY24, C-IND will initiate and conduct table top exercises to inform stakeholder's of requirements and fund technology maturation risk reduction (TMRR) testing activities.

The CBRN Support to Command and Control (CSC2) is the overarching System of Systems (SoS) software that provides for the interoperability and integration of CBRN and non-CBRN sensors to achieve needed situational awareness and understanding to accomplish CBRN integrated layered defense, interdependent with Service Computing Environments. CSC2 will establish Service and Joint All Domain Command and Control (JADC2) compatible CBRN Concept of Employment (COE) architecture and deployment environments. FY24 consolidates Modernization CBRN Information Systems (MOD CBRN IS) with CSC2 for continuous engineering of the currently deployed legacy CBRN information systems and synchronization for the sunset of legacy capabilities with the deployment of CSC2. In FY24, CSC2 will continue software developmental testing and start operational testing to support the continuous development, integration, engineering, and delivery of Minimal Viable Capability Releases (MVCR).

The Compact Vapor Chemical Agent Detector (CVCAD) is designed to be an unobtrusive, low-profile chemical detection capability that will continuously, and autonomously, monitor and alert general and specialized units to an unsafe environment without further burdening the warfighters payload or interfering with the primary mission. The small form factor (less than 2 lbs.) is amenable to both man-worn and unmanned aerial or ground system operations to enable timely personnel protective action and other force protection decisions. In FY24, the CVCAD will continue efforts under UN5 to work engineering manufacturing and development.

The Proximate Chemical Agent Detector (PCAD) will be a handheld standoff, liquid and solid trace chemical agent detector to detect a wide range of chemical threats. The technology will provide detection and location of chemical agents on various surfaces and under a variety of environmental conditions. FY24 funding develops a handheld non-contact prototype for trace chemical detection on various surfaces, supports transition of developed prototypes from the Defense Threat Reduction Agency Joint Science and Technology Office, and conducts developmental testing of breadboard prototypes.

The Surveillance and Pathogen Characterization-Enhanced Biodefense (SPCHAR-ENBD) will utilize Pathogenicity Studies to investigate development of disease of CBRN threat agents and verify usefulness of these disease models. Results from these studies will be utilized to identify targets for MCM (Medical Countermeasures) development, testing, and identify groups of CBRN threat agents that can be treated by broad-spectrum MCMs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) ADD	-	-	9.987
Description: Product development and product management.			
FY 2024 Plans: Issue Request for Project Proposals, award Other Transaction Authority project agreements, and initiate development and evaluation of prototype solutions.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Program/project is new start effort in FY 2024.			
Title: 2) AET DEFENSE	-	2.792	6.629
Description: AET Defense activities will focus on demonstrating and evaluating technologies to assess performance against emerging threats. ***FY 2023 Plans:*** Continue efforts to address emerging biological threats and Pharmaceutical Based Agents (PBAs). Update spectral libraries and hazard data management tools to incorporate emerging threat information. Produce additional data to better assess detection and decontamination capabilities against new requirements and inform rapid fielding decisions. Conduct table top exercises to support Joint Service and interagency tactics, techniques, and procedures (TTP) development and gaps analysis for materiel solutions. Monitor market surveys and assessments of technologies for rapid fielding by Chemical Biological Defense Program to mitigate emerging threat gaps as threats are identified. ***FY 2024 Plans:*** Continue efforts to address emerging biological threats and Pharmaceutical Based Agents (PBAs). Begin evaluation and assessment of ability to detect and mitigate three additional threat classes. Update spectral libraries and hazard data management tools to incorporate emerging threat information. Produce additional data to better assess detection and defensive capabilities against new requirements and inform rapid fielding decisions. Conduct three table top exercises on three additional threat materials to support Joint Service and interagency tactics, techniques, and procedures (TTP) development and gap analysis for materiel solutions. Monitor market surveys and assessments of technologies for rapid fielding by the CBDP to mitigate defensive capability gaps as emerging threats are identified. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase due to significant increase in quantity of emerging threats being assessed for impacts simultaneously. Increase also due to a more thorough understanding of all defensive capabilities, not just sensors, against emerging threats within the AET DEFENSE program.			
Title: 3) BDIP	-	2.398	-
Description: Product Development, Program Management, Test and Evaluation and Support. ***FY 2023 Plans:*** Initiate market research and conduct a requirements table top exercise in order to release the Request for Information (RPI) and request for white papers for prototyping plan#1 and Other Transactional Agreements (OTA) Award. ***FY 2023 to FY 2024 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Program/project funding transferred to another funding line. BDIP transitions efforts to the Non-Targeted Sequencing Identification System (NSIS), Wearable All Hazard Remote Monitoring Program (WARP), Far Forward Biological Sequencing (FFBS), and the Physiological Monitoring Sensor Suite (PM2S) programs in FY24.			
Title: 4) NSIS ***Description:*** Test and Evaluation, Product Purchase, and Program Management Support. ***FY 2024 Plans:*** Conduct initial verification and validation of commercial-off-the-shelf genomic sequencing devices, purchase Oxford Nanopore Technologies MinION Mk1C genomic sequencing devices, and assess military utility for the National Guard Bureau, US Navy, and US Marine Corps. Continue user feedback trials with the National Guard Bureau Civil Support Teams. Funds will pay for program labor, office management, and administrative processes to include (but not limited to) program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project funding transferred from another funding line. Program/project funding transferred from BDIP.	-	-	0.653
Title: 5) PM2S ***Description:*** This effort will develop algorithms to detect chemical and biological threats. ***FY 2024 Plans:*** PM2S will develop and conduct software hardening on chemical and biological defense physiological monitoring algorithms to enable capabilities to be deployed on a number of service-sponsored hardware architectures. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.	-	-	1.200
Title: 6) C-IND ***Description:*** Program Development ***FY 2024 Plans:*** Initiate and conduct table top exercises to inform stakeholder's of requirements and fund technology maturation risk reduction (TMRR) testing activities. ***FY 2023 to FY 2024 Increase/Decrease Statement:***	-	-	1.043

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Program/project is new start effort in FY 2024.			
Title: 7) CSC2 ***Description:*** Automated Warning, Reporting, Analysis and Decision Support Tools. Service Common Operating Environment (COE) Convergence. ***FY 2023 Plans:*** Advanced development of next generation warning and reporting capabilities to support operations, planning & execution. Integration of Non CBRN Data source into decision support tools. Initial convergence of CBRN information onto Service Common Operating Environments and Computing Environments (CoEs/CEs) and associated Cyber security requirements. Initial investments in artificial intelligence and machine learning applications and processes, and digital engineering and model-based systems engineering. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Effort consolidated to single effort "CSC2 Execution Phase of Software Acquisition pathway, and Continuous Software Development, Integration, and Delivery" in FY24.	-	18.168	-
Title: 8) CSC2 ***Description:*** Program Management and Support ***FY 2023 Plans:*** Continue Program office management and administration processes to include but not limited to program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Effort consolidated to single effort "CSC2 Execution Phase of Software Acquisition pathway, and Continuous Software Development, Integration, and Delivery" in FY24.	-	2.800	-
Title: 9) CSC2 ***Description:*** Product Development, Integration and Sensor Management ***FY 2023 Plans:*** Continue integration of Chemical Biological Radiological and Nuclear (CBRN) sensor portfolio through a common sensor management system to include data visualization, analysis and movement of data from CBRN sensors to and through service network. ***FY 2023 to FY 2024 Increase/Decrease Statement:***	-	12.380	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Effort consolidated to single effort "CSC2 Execution Phase of Software Acquisition pathway, and Continuous Software Development, Integration, and Delivery" in FY24.			
Title: 10) CSC2 ***Description:*** CSC2 Execution Phase of Software Acquisition pathway, and Continuous Software Development, Integration, and Delivery ***FY 2024 Plans:*** Continue to develop CBRN applications to support: CBRN hazard warning, reporting, analysis, and prediction; CBRN impact modeling: and Decision Support Tools. Continue the development of a Cloud-Native Software architecture for the interoperability between CBRN sensors, CBRN applications, and Service computing environments. Start a software development pipeline using Development, Security, Operations (DevSecOps) leveraging existing DoD DevSecOps infrastructure. Continue cybersecurity testing and operational testing in support of verifying the iterative, agile software to deliver Minimal Viable Capability Releases (MVCR). ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Effort consolidated to single effort "CSC2 Execution Phase of Software Acquisition pathway, and Continuous Software Development, Integration, and Delivery" in FY24.	-	-	28.039
Title: 11) CVCAD ***Description:*** Prototype Advanced Development, Testing & Program Management ***FY 2023 Plans:*** Continue and complete advanced development on prototype systems, conduct down select on competing technologies, prepare for initiation of engineering development. CVCAD will brief Acquisition Steering Panel (ASP) in 2QFY23 to inform milestone decision and prepare for next milestone, Milestone B. Activities will include milestone documentation, developmental testing and program office management and administration processes to include program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2024 Plans:*** Finalization of system design to complete Milestone B. Activities will include milestone documentation, developmental testing and program office management and administration processes to include program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2023 to FY 2024 Increase/Decrease Statement:***	-	13.252	3.600

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Decrease due to fact of life change in the program/project.			
Title: 12) PCAD ***Description:*** Product Development, Test and Evaluation, and Program Management. ***FY 2023 Plans:*** Evaluate prototype development under Science & Technology (S&T) activities, interagency collaboration with Defense Threat Reduction Agency (DTRA), and conduct developmental testing and program management activities. ***FY 2024 Plans:*** Transition breadboard prototypes from DTRA/Joint Science Technology Office to continue in the Technology Maturation Risk Reduction phase. Conduct advanced developmental testing of prototypes to execute an early user feedback assessment to include development testing with troops to support Milestone B plan in FY25. Continue program management and support activities to transition technologies from Science and Technology development to acquisition. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase supports technology maturation risk reduction activities (e.g. user touchpoint events, laboratory and background testing, technology readiness level assessments)and support schedule requirements to meet Milestone B in FY25.	-	0.918	8.487
Title: 13) SPCHAR-ENBD ***Description:*** Pathogenicity Studies. ***FY 2024 Plans:*** Initiate studies to investigate CBRN threat pathogenesis and/or pathogenicity models. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Additional investment in enhanced biodefense and pandemic preparedness.	-	-	2.000
Accomplishments/Planned Programs Subtotals	-	52.708	61.638

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• CA4: *Contamination Avoidance (ACD&P)*	37.189	-	-	-	-	-	-	-	-	0.000	37.189
• CA5: *Contamination Avoidance (SDD)*	84.967	-	-	-	-	-	-	-	-	0.000	84.967

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• UN5: *Understand (SDD)*	-	126.071	182.726	-	182.726	137.991	127.671	108.908	68.088	Continuing	Continuing
• UN7: *Understand (Op Sys Dev)*	-	40.414	50.603	-	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing
• SA0024: *Compact Vapor Chemical Agent Detector (CVCAD)*	-	-	-	-	-	-	0.585	8.200	22.144	Continuing	Continuing
• SA0050: *CBRN Support to C2 (CSC2)*	1.750	11.803	2.186	-	2.186	2.257	2.366	2.451	2.549	Continuing	Continuing
• SA0053: *Bio Defense Improvement Program (BDIP)*	-	-	-	-	-	-	3.917	17.356	31.850	Continuing	Continuing
• SA0054: *Advanced Differential Diagnostics (ADD)*	-	-	-	-	-	-	-	-	4.261	Continuing	Continuing

Remarks

D. Acquisition Strategy

Advanced Differential Diagnostics

The Advanced Differential Diagnostic program will utilize Other Transaction Authorization (OTA) project agreements to identify and mature commercial prototypes deemed technologically viable, and evaluate them in as realistic an operational environment as possible. Successful candidate systems will transition to the Engineering and Manufacturing Development phase to be further developed under the OTA agreement, in order to satisfy military and U.S. Food & Drug Administration (FDA) regulatory requirements for subsequent production and fielding to the Services.

ADVANCED AND EMERGING THREAT DEFENSE (AET DEFENSE)

The AET Defense program will use a variety of acquisition approaches to survey, develop, assess, and rapidly field technologies to inform and fill advanced and emerging threat defense capability gaps. The program will utilize existing Multiple Award Indefinite Delivery Indefinite Quantify Task Order Contracts to provide technical support to studies and assessments of performance against emerging threats. For Program of Record (PoR) systems currently in development that will be assessed for performance against emerging threats, those PoR's existing contracts will be modified to incorporate development engineering and test support for emerging threat capability. The AET Defense program will utilize OTAs for system development and prototyping activities and Government Agencies and Federally Funded Research and Development Centers to provide development, testing and technical support.

BIO DEFENSE IMPROVEMENT PROGRAM (BDIP)

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

BDIP will provide and integrate prototypes in cyclic prototyping plan cycles based on Service requirements. The prototyping plans will use a streamlined hybrid acquisition process in order to keep pace with industry and the rapid advancement of technologies. The BDIP strategy is to utilize the rapid prototyping process in Middle Tier Acquisition (MTA) enabled by the Other Transactional Agreements (OTA) contract vehicle. These prototypes will be demonstrated, evaluated and tested by the Services as well as laboratories and academia. Successful prototypes will be evaluated for transition to the platforms and Services for the next steps in acquisition, production and eventual fielding across the services. Funding provides market research to support the refinement and the building of technologically mature prototypes.

Non-Targeted Sequencing Identification System

The Non-targeted Sequencing Identification System (NSIS) program will utilize transitioned technology from the Defense Threat Reduction Agency (DTRA) Joint Science and Technology Office, as well as the Joint Project Manager Special Operations Forces Far-Forward Biological Sequencer (FFBS) to develop and assess sequencing commercial off-the-shelf (COTS) solutions to determine the most appropriate sequencer for use in Joint Service operations. Program Office will purchase test articles and conduct Developmental Testing with Joint Force end users to evaluate genomic sequencing capabilities.

Physiological Monitoring Sensor Suite

PM2S will follow a presumed software acquisition pathway to harden, test, and evaluate multiple CBRN-focused physiological predictive software algorithms for deployment across the Joint force. The program will leverage a variety of contracting approaches to support algorithm development to include OTAs, FAR based awards and Federally Funded Research and Development Centers.

Colorimetric Indicator

The Colorimetric Indicator (C-IND) program will work with the Defense Threat Reduction Agency on a joint Other Transactional Authority contract to transition technologies from Science and Technology to Acquisition. The program will work with community to refine requirements and development of test fixture to analyze potential capabilities.

CBRN SUPPORT TO C2 (CSC2)

CSC2 is executed through the Software Acquisition Pathway, leveraging existing Information Technology Box requirements and Capability Needs Statements (CNS) furnished through the Services and Combatant Commands. CSC2 is executing a modular contracting approach, where the use of Other Transaction Authorities (OTAs), and indefinite delivery/indefinite quantity (IDIQ) will be used to meet agile software objectives of continuous development, integration, delivery, and engineering. CSC2 will establish a Service and Joint All-Domain Command and Control (JADC2) compatible CBRN Common Operating Environment (COE) architecture and leverage existing enterprise Develop Security Operations (DevSecOps) efforts to facilitate continuous and iterative delivery of capability to the Joint Force through the development of a unified software solution.

COMPACT VAPOR CHEMICAL AGENT DETECTOR (CVCAD)

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

The CVCAD program will use the Combating Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) contract vehicle to transition four technologies from Science & Technology (S&T) into the program of record. This streamlined acquisition approach is broken into four phases; Phase I S&T advanced development, Phase II technology transition maturation evaluation, Phase III competitive prototyping down select and Engineering decision. CVCAD will brief Acquisition Steering Panel (ASP) in 2QFY23 to inform milestone decision and prepare for next milestone, Milestone B or Middle Tier Acquisition (MTA). Phase IV will execute Production and Development for low rate initial production (LRIP) systems. CVCAD will procure full rate production (FRP) items through a follow-on Federal Acquisition Regulation based contract.

PROXIMATE CHEMICAL AGENT DETECTOR (PCAD)

PCAD will leverage the existing S&T CWMD OTA contract in FY24 to procure prototypes for Technology Maturation Risk Reduction (TMRR) phase. This streamlined approach will use one contracting mechanism to transition technology from S&T to acquisition and allow follow-on acquisitions up through Low Rate Initial Production. PCAD will procure full rate production (FRP) items through a follow-on Federal Acquisition Regulation based contract.

SURVEILLANCE AND PATHOGEN CHARACTERIZATION-ENHANCED BIODEFENSE (SPCHAR-ENBD)

SPCHAR ENBD is an investment program that will leverage interagency partners and existing contracts to investigate disease progression and measure biomarkers of selected CBRN threat agents to inform medical defense against biological warfare threats. The tailored acquisition pathway will allow flexibility to counter new an emerging biothreats.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ADD - HW C - Product Management	Various	Various : N/A	-	0.000		0.000		1.938	Dec 2023	-		1.938	Continuing	Continuing	0.000
ADD - HW C - Product Development	C/CPFF	TBD : N/A	-	0.000		0.000		6.950	Mar 2024	-		6.950	Continuing	Continuing	0.000
AET DEFENSE - HW C - Emerging threat detection/ decontamination/protection capability prototyping	MIPR	Various : N/A	-	0.000		0.444	Feb 2023	0.888	Jan 2024	-		0.888	Continuing	Continuing	0.000
AET DEFENSE - HW C - Detection/Decon/ Protection	MIPR	Various : N/A	-	0.000		0.900	May 2023	0.750	Feb 2024	-		0.750	Continuing	Continuing	0.000
AET DEFENSE - SW C - Hazard awareness tool updates	MIPR	Various : N/A	-	0.000		0.500	Apr 2023	0.000		-		0.000	0.000	0.500	0.000
AET DEFENSE - HW C - Emerging Threat Detection	C/CPFF	Johns Hopkins University - Applied Physics Laboratory : Laurel, MD	-	0.000		0.000		0.600	Apr 2024	-		0.600	Continuing	Continuing	0.000
BDIP - HW C - Tabletop Exercise - User Feedback Support	MIPR	Various : N/A	-	0.000		0.368	Oct 2022	0.000		-		0.000	0.000	0.368	0.000
BDIP - HW C - Surveillance and Pathogen Characterization (Genomic Sequencing)	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		1.709	Oct 2022	0.000		-		0.000	0.000	1.709	0.000
NSIS - HW C - COTS Oxford Nanopore MinION Genomic Sequencers and Flow Cells	MIPR	TBD : N/A	-	0.000		0.000		0.215	Dec 2023	-		0.215	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM2S - SW C - Physiological Algorithm Development	Various	Various : N/A	-	0.000		0.000		1.000	Dec 2023	-		1.000	Continuing	Continuing	0.000
C-IND - HW S - Initial Product Planning	Various	Various : N/A	-	0.000		0.000		0.664	Nov 2023	-		0.664	Continuing	Continuing	0.000
CSC2 - SW S - Government Product Development Team Labor	MIPR	Various : N/A	-	0.000		1.963	Oct 2022	2.028	Dec 2023	-		2.028	Continuing	Continuing	0.000
CSC2 - SW S - Operational Capability	C/CPAF	Various : N/A	-	0.000		19.816	Oct 2022	11.869	Dec 2023	-		11.869	Continuing	Continuing	0.000
CSC2 - HW S - Contractor Product Development Team Labor	MIPR	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	0.000		0.491	Oct 2022	1.846	Dec 2023	-		1.846	Continuing	Continuing	0.000
CSC2 - SW S - Service CoE and CE Convergence	MIPR	Various : N/A	-	0.000		4.540	Oct 2022	1.200	Dec 2023	-		1.200	Continuing	Continuing	0.000
CVCAD - HW S - Advanced Prototype Development	C/FFP	Advanced Technologies International : Summerville, SC	-	0.000		6.420	Apr 2023	1.620	Jan 2024	-		1.620	Continuing	Continuing	0.000
PCAD - HW S - Government Team Labor	Various	Various : N/A	-	0.000		0.000		0.581	Nov 2023	-		0.581	Continuing	Continuing	0.000
PCAD - HW S - Advanced Prototype Development	C/FFP	Advanced Technologies International : Summerville, SC	-	0.000		0.000		4.808	Nov 2023	-		4.808	Continuing	Continuing	0.000
SPCHAR-ENBD - Pathogenicity Studies	Various	Various : N/A	-	0.000		0.000		1.678	Dec 2023	-		1.678	Continuing	Continuing	0.000
SPCHAR-ENBD - Direct Product Support	Various	Various : N/A	-	0.000		0.000		0.147	Dec 2023	-		0.147	Continuing	Continuing	0.000
		Subtotal	-	0.000		37.151		38.782		-		38.782	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - ES C - Engineering support to evaluating, assessing, and designing capabilities	MIPR	Various : N/A	-	0.000		0.000		0.465	Jan 2024	-		0.465	Continuing	Continuing	0.000
NSIS - ES C - OGA Matrix Labor	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.000		0.108	Dec 2023	-		0.108	Continuing	Continuing	0.000
C-IND - Program Support Costs	Various	Various : N/A	-	0.000		0.000		0.075	Nov 2023	-		0.075	Continuing	Continuing	0.000
CSC2 - ES C - Contractor Support	C/CPFF	TBD : N/A,	-	0.000		0.885	Oct 2022	0.768	Nov 2023	-		0.768	Continuing	Continuing	0.000
CSC2 - ES C - Support	MIPR	TBD : N/A,	-	0.000		0.775	Feb 2023	4.551	Mar 2024	-		4.551	Continuing	Continuing	0.000
CVCAD - ES S - OGA Support	MIPR	Various : N/A	-	0.000		2.476	Apr 2023	1.000	Jan 2024	-		1.000	Continuing	Continuing	0.000
PCAD - ES S - OGA Support	MIPR	Various : N/A	-	0.000		0.485	Apr 2023	0.750	Nov 2023	-		0.750	Continuing	Continuing	0.000
		Subtotal	-	0.000		4.621		7.717		-		7.717	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - DTE C - Technology Assessments	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center	-	0.000		0.517	Feb 2023	1.750	Jan 2024	-		1.750	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		(CBC) : Aberdeen Proving Ground, MD													
AET DEFENSE - DTE C - Technology Assessments	MIPR	Various : N/A	-	0.000		0.000		0.651	Mar 2024	-		0.651	Continuing	Continuing	0.000
AET DEFENSE - DTE C - Technology Assessments	C/CPFF	Johns Hopkins University - Applied Physics Laboratory : Laurel, MD	-	0.000		0.000		0.650	Apr 2024	-		0.650	Continuing	Continuing	0.000
NSIS - DTE C - Tactics, Techniques & Procedures	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.000		0.265	Dec 2023	-		0.265	Continuing	Continuing	0.000
C-IND - DTE S - Initial Test Fixture	Various	Various : N/A	-	0.000		0.000		0.200	Nov 2023	-		0.200	Continuing	Continuing	0.000
CSC2 - OTE S - Technical/ Operational Demo	MIPR	TBD : N/A,	-	0.000		2.548	Feb 2023	2.801	Dec 2023	-		2.801	Continuing	Continuing	0.000
CVCAD - DTE S - MIL STD/Surety Testing	MIPR	Various : N/A	-	0.000		1.981	Aug 2023	0.620	Jan 2024	-		0.620	Continuing	Continuing	0.000
CVCAD - DTE S - Vapor Testing	MIPR	MRIGlobal : Kansas City, MO	-	0.000		0.700	Apr 2023	0.000		-		0.000	0.000	0.700	0.000
PCAD - DTE S - Technology Readiness Evaluation	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.348	Apr 2023	1.500	Nov 2023	-		1.500	Continuing	Continuing	0.000
		Subtotal	-	0.000		6.094		8.437		-		8.437	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ADD - PM/MS S - Management Services	Various	Various : N/A	-	0.000		0.000		1.099	Dec 2023	-		1.099	Continuing	Continuing	0.000
AET DEFENSE - PM/MS S - IPT Support/Program Management	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.431	Dec 2022	0.875	Dec 2023	-		0.875	Continuing	Continuing	0.000
BDIP - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		0.321	Oct 2022	0.000		-		0.000	0.000	0.321	0.000
NSIS - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		0.000		0.065	Dec 2023	-		0.065	Continuing	Continuing	0.000
PM2S - PM/MS C - Management for Algorithm Development	MIPR	Various : N/A	-	0.000		0.000		0.200	Nov 2023	-		0.200	Continuing	Continuing	0.000
C-IND - PM/MS C - Program Management Support	Various	Various : N/A	-	0.000		0.000		0.104	Nov 2023	-		0.104	Continuing	Continuing	0.000
CSC2 - PM/MS C - Program Management Support	MIPR	Various : N/A	-	0.000		2.330	Oct 2022	2.976	Nov 2023	-		2.976	Continuing	Continuing	0.000
CVCAD - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		1.675	Feb 2023	0.360	Jan 2024	-		0.360	Continuing	Continuing	0.000
PCAD - PM/MS S - Program Management	MIPR	Various : N/A	-	0.000		0.085	Mar 2023	0.848	Nov 2023	-		0.848	Continuing	Continuing	0.000
SPCHAR-ENBD - PM/MS SB - Management Support	Various	Various : N/A	-	0.000		0.000		0.175	Dec 2023	-		0.175	Continuing	Continuing	0.000
		Subtotal	-	0.000		4.842		6.702		-		6.702	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
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	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.000		52.708		61.638		-		61.638	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

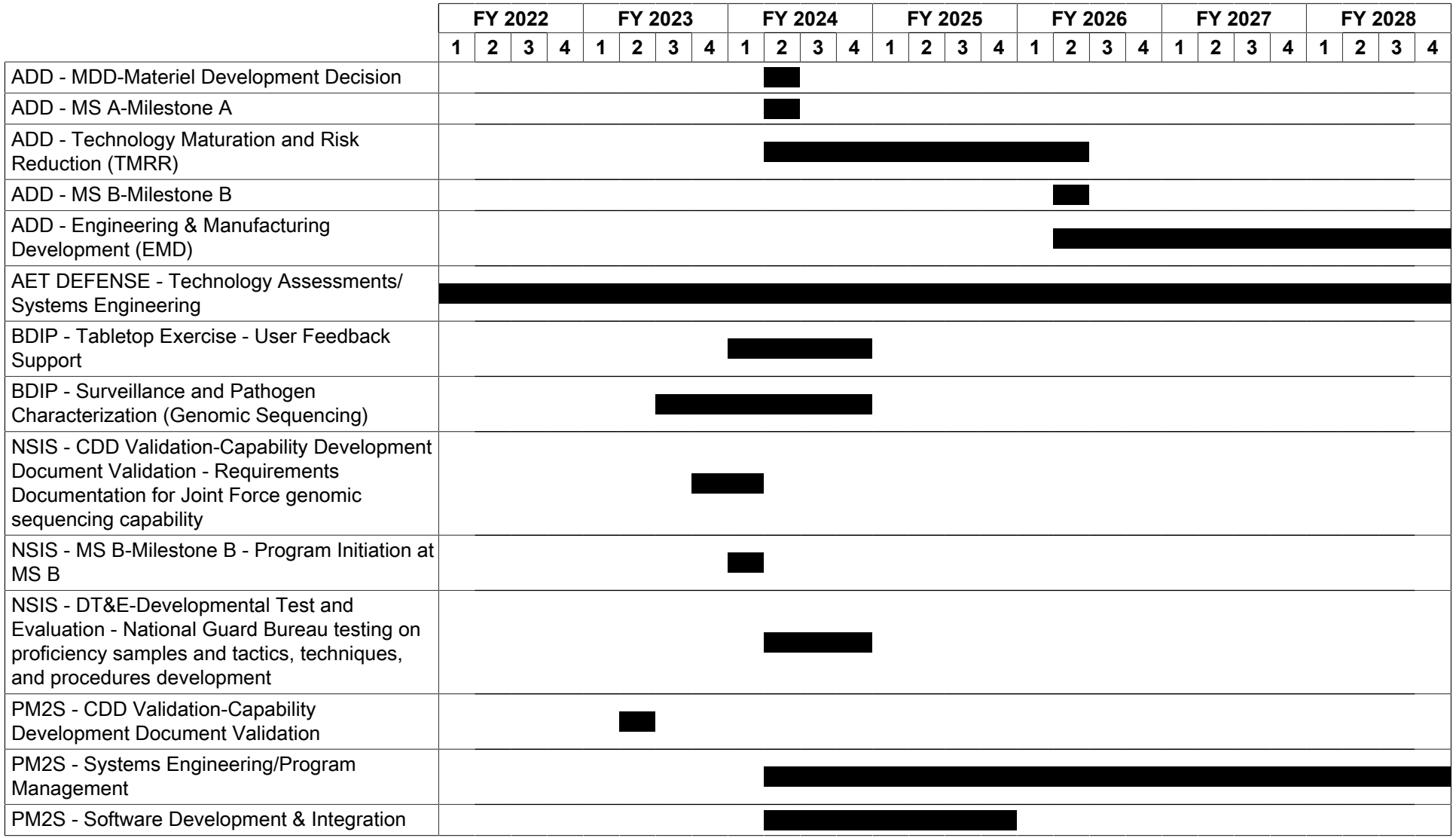

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

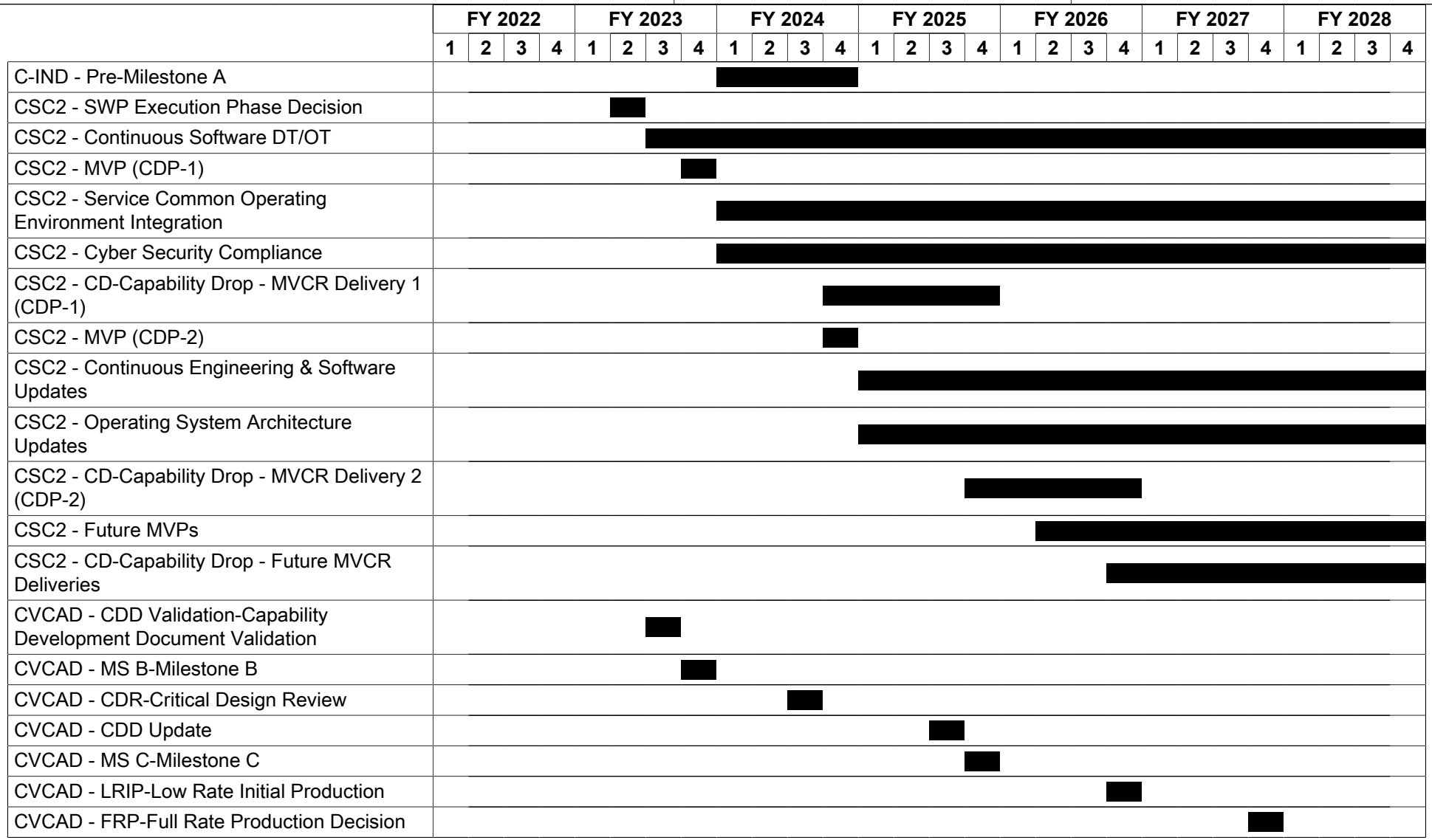

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

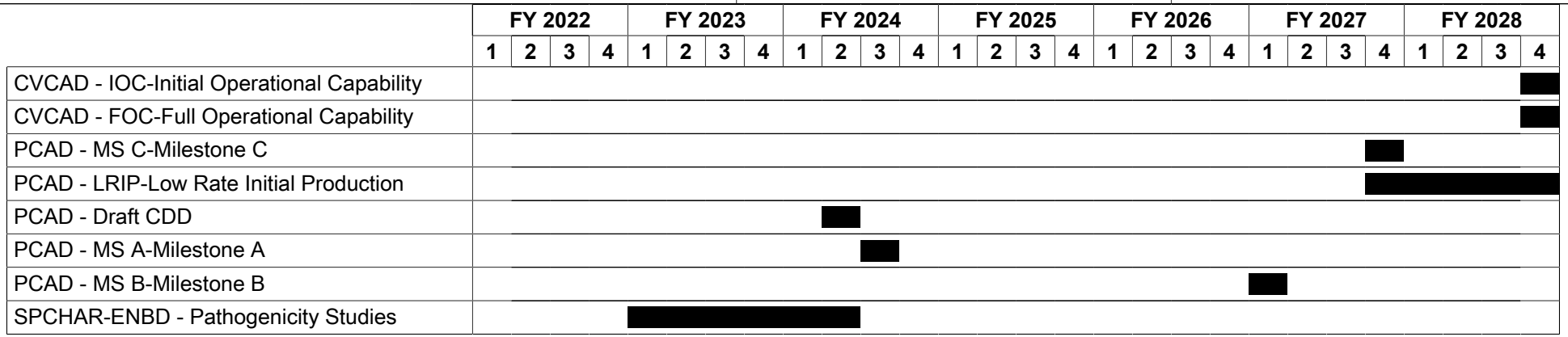

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** UN4 / *Understand (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ADD - MDD-Materiel Development Decision	2	2024	2	2024
ADD - MS A-Milestone A	2	2024	2	2024
ADD - Technology Maturation and Risk Reduction (TMRR)	2	2024	2	2026
ADD - MS B-Milestone B	2	2026	2	2026
ADD - Engineering & Manufacturing Development (EMD)	2	2026	4	2028
AET DEFENSE - Technology Assessments/Systems Engineering	1	2022	4	2028
BDIP - Tabletop Exercise - User Feedback Support	1	2024	4	2024
BDIP - Surveillance and Pathogen Characterization (Genomic Sequencing)	3	2023	4	2024
NSIS - CDD Validation-Capability Development Document Validation - Requirements Documentation for Joint Force genomic sequencing capability	4	2023	1	2024
NSIS - MS B-Milestone B - Program Initiation at MS B	1	2024	1	2024
NSIS - DT&E-Developmental Test and Evaluation - National Guard Bureau testing on proficiency samples and tactics, techniques, and procedures development	2	2024	4	2024
PM2S - CDD Validation-Capability Development Document Validation	2	2023	2	2023
PM2S - Systems Engineering/Program Management	2	2024	4	2028
PM2S - Software Development & Integration	2	2024	4	2025
C-IND - Pre-Milestone A	1	2024	4	2024
CSC2 - SWP Execution Phase Decision	2	2023	2	2023
CSC2 - Continuous Software DT/OT	3	2023	4	2028
CSC2 - MVP (CDP-1)	4	2023	4	2023
CSC2 - Service Common Operating Environment Integration	1	2024	4	2028
CSC2 - Cyber Security Compliance	1	2024	4	2028
CSC2 - CD-Capability Drop - MVCR Delivery 1 (CDP-1)	4	2024	4	2025

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CSC2 - MVP (CDP-2)	4	2024	4	2024
CSC2 - Continuous Engineering & Software Updates	1	2025	4	2028
CSC2 - Operating System Architecture Updates	1	2025	4	2028
CSC2 - CD-Capability Drop - MVCR Delivery 2 (CDP-2)	4	2025	4	2026
CSC2 - Future MVPs	2	2026	4	2028
CSC2 - CD-Capability Drop - Future MVCR Deliveries	4	2026	4	2028
CVCAD - CDD Validation-Capability Development Document Validation	3	2023	3	2023
CVCAD - MS B-Milestone B	4	2023	4	2023
CVCAD - CDR-Critical Design Review	3	2024	3	2024
CVCAD - CDD Update	3	2025	3	2025
CVCAD - MS C-Milestone C	4	2025	4	2025
CVCAD - LRIP-Low Rate Initial Production	4	2026	4	2026
CVCAD - FRP-Full Rate Production Decision	4	2027	4	2027
CVCAD - IOC-Initial Operational Capability	4	2028	4	2028
CVCAD - FOC-Full Operational Capability	4	2028	4	2028
PCAD - MS C-Milestone C	4	2027	4	2027
PCAD - LRIP-Low Rate Initial Production	4	2027	4	2028
PCAD - Draft CDD	2	2024	2	2024
PCAD - MS A-Milestone A	3	2024	3	2024
PCAD - MS B-Milestone B	1	2027	1	2027
SPCHAR-ENBD - Pathogenicity Studies	1	2023	2	2024

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
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COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
PT4: *Protect (ACD&P)*	-	0.000	175.219	179.158	0.000	179.158	135.096	107.341	123.538	139.376	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Protect Advanced Component Development and Prototypes (ACD&P) Project provides the ability to shield the Joint Force from harm caused by Chemical Biological Radiological and Nuclear (CBRN) hazards by preventing or reducing individual and collective exposures, applying prophylaxis to prevent or mitigate negative physiological effects, and protecting critical equipment. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. PT4 efforts in FY 2022 remain in Projects IP4, MB4, and TM4. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) Accelerated Antibodies-Enhanced Biodefense (AA-ENBD)
(2) Biological Warfare Defense Prototype (BIOPROTO)
(3) Generative Unconstrained Intelligent Drug Engineering-Enhanced Biodefense (GUIDE-ENBD)
(4) Medical Countermeasure Platform Technologies (MCMPT)
(5) Plague Monoclonal Antibodies (PLG MAB)
(6) Uniform Integrated Protective Ensemble Family of Systems Footwear (UIPE FoS Footwear)
(7) Vaccine Acceleration by Modular Progression-Enhanced Biodefense (VAMP-ENBD)

The Accelerated Antibodies - Enhanced Biodefense (AA-ENBD) will develop prophylactic and therapeutic monoclonal antibody (mAb) Medical Countermeasure (MCM) against a broad range of biological threats. Funded in FY22 as COVID Therapies Monoclonal Antibodies (COVID TX MAB), this is a continuation which will target the discovery, identification and small scale manufacture of mAbs with sufficient material to support non-clinical and clinical testing. Sufficient doses will be produced and maintained for potential use in emergency response situations. AA-ENBD was formerly known as Monoclonal Antibodies Therapeutics-Enhanced Biodefense (MAB TX-ENBD).

The Biological Warfare Defense Prototype (BIOPROTO) supports early-phase clinical development and supporting non-clinical safety, tolerability and toxicity data for candidate vaccines and therapeutic drugs prior to transition to System Development & Demonstration. This work provides safe and effective medical defense against validated biological threat agents and emerging infectious disease biothreats including bacteria, toxins, and viruses. This work also involves the evaluation of Food and Drug Administration (FDA) approved therapeutics for operational use, as well as generation of novel drug products and formulations, to enhance level of protection and/or operational utility for the Warfighter. This effort reduces programmatic risk of failure in the advanced development phase.

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The Generative Unconstrained Intelligent Drug Engineering - Enhanced Biodefense (GUIDE-ENBD) is an intelligent drug design and engineering system intended to decrease product development risk throughout the medical countermeasure development life cycle, accelerate candidate development, and enable preemptive preparedness and rapid response. GUIDE impacts the discovery and design of biologics products (e.g., monoclonal antibodies and vaccines) and small molecule drugs through a multi-faceted optimization process capturing critical quality attributes of safety, efficacy, manufacturability and pharmacokinetics/pharmacodynamics (PK/PI). Furthermore, GUIDE incorporates computational approaches to manufacturing controls and preclinical/clinical testing. GUIDE is a collaboration between the interagency, academia and industry partners and is integrated to the Accelerated Antibodies and RNA vaccine (VAMP) programs. In FY24 GUIDE will continue to develop a fully integrated computational approach to accelerating medical countermeasure development.

The Medical Countermeasure Platform Technologies (MCMPT) program streamlines and accelerates delivery of medical countermeasure to the Warfighter against known and emerging biological threats by establishing mature platform technologies that allow for rapid response and by reducing developmental risks. MCMPT is establishing enabling technologies and prepositioning platform systems within the Department of Defense (DoD)'s Advanced Development Manufacturing (ADM) network using standardized discovery, design, manufacturing, and testing processes to reduce the medical countermeasure (MCM) development risks. MCMPT will deliver an enduring capability from which future candidates can be manufactured.

The Plague Monoclonal Antibodies (PLG MAB) program was transitioned in FY2023 from MCMPT Advanced Development and Manufacturing of Antibody Technology (ADAMANT), PLG MAB will provide a pre-exposure monoclonal antibody product to protect the Warfighter from aerosolized plague and is intended for intramuscular route of administration. This capability is complementary to plague therapeutics and will provide a continuum of protection against plague bacteria. In FY24 PLG MAB continues monoclonal antibody discovery and half-life extensions to produce product to support a Phase 1 clinical study.

The Uniform Integrated Protective Ensemble Family of Systems Footwear (UIPE FoS Footwear) will provide the warfighter with percutaneous protection against liquid, vapor, dust, particulate, or sporulated toxic material, chemical and biological warfare agents and radiological fallout particles when worn as part of the Uniform Individual Protection Ensemble (UIPE). In FY24 UIPE FoS Footwear will initiate prototype development to evaluate up to ten footwear alternatives, conduct chemical agent swatch testing to inform initial down select of alternatives, conduct limited early user testing to garner feedback on service preferred alternatives and generate documentation for Milestone B 2QFY25.

The Vaccine Acceleration by Modular Progression - Enhanced Biodefense (VAMP-ENBD) will leverage lessons learned to shorten future emergency response timelines, mitigate impacts of biological threat outbreaks, and create interim capabilities to protect the Warfighter. Leveraging interagency, industry, and academia partnership, VAMP will continue to build the Warfighter's bio-armor to protect against biological threat families. VAMP will continue to develop alternative vaccine platform technologies and manage awards utilizing go/no-go checkpoints along the development pathway.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) AA-ENBD	-	59.000	67.664
Description: This effort will focus on Accelerated Antibody Development and Production. Target the discovery, identification and small scale manufacture of monoclonal antibodies (mAbs) for 2 additional prototypes, with sufficient material to support non-clinical and clinical testing.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
FY 2023 Plans: Initiate Nonclinical Investigational New Drug (IND) enabling testing for the first 2 prototypes. ***FY 2024 Plans:*** Initiate phase 1 clinical studies for the first 2 mAb products and complete large scale manufacturing of 5-10K phase 2 compliant doses to transfer into the Rapid Access to Products In Development (RAPID) program for the first 2 mAb products. Initiate manufacturing scale up and nonclinical testing for mAb product #3. Initiate mAb product #4 in conjunction with GUIDE Live Fire Exercise. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor change due to routine program adjustments.			
Title: 2) BIOPROTO ***Description:*** BIOPROTO supports early-phase clinical development and supporting non-clinical safety, tolerability and toxicity data for candidate vaccines and therapeutic drugs prior to transition to System Development & Demonstration. This work provides safe and effective medical defense against validated biological threat agents and emerging infectious disease biothreats including bacteria, toxins, and viruses. This work also involves the evaluation of Food and Drug Administration (FDA)-approved therapeutics for operational use, as well as generation of novel drug products and formulations, to enhance level of protection and/or operational utility for the Warfighter. This effort reduces programmatic risk of failure in the advanced development phase. ***FY 2023 Plans:*** - Complete human melioidosis clinical trial and continue Non-Human Primate (NHP) studies to establish efficacy of broad spectrum antibacterial candidate. Ready candidate for transition to Biomedical Advanced Research and Development Authority (BARDA). - Complete testing of broad spectrum antiviral in endemic Lassa fever disease and prepare to transition to advanced developer. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project funding transferred to another funding line. FY 2024 funding has been transferred to Project PT3 for better alignment under budget activity 3.	-	2.573	-
Title: 3) GUIDE-ENBD ***Description:*** This effort will focus on Generative Unconstrained Intelligent Drug Engineering. Developing and implementing a fully integrated computational approach to accelerating medical countermeasure development. ***FY 2023 Plans:***	-	55.000	49.633

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Develop and implement a fully integrated computational approach to accelerating medical countermeasure development by improving computational predictions of antibody-antigen interactions and affinity (strength of interaction), incorporating the ability to address manufacturing-related properties to include a panel of manufacturing tools, expanding the safety models to ensure selected candidates do not have known issues such as anti-drug antibodies and screening for polyreactive antibodies, and starting vaccine design modeling and technologies ***FY 2024 Plans:*** Execute medical countermeasure design campaigns to discover prototypes for up to 3 distinct threat families. Iterate the planning, coding, building, and testing of up to 17 new and existing digital tools and algorithms to increase speed and accuracy of computational MCM discovery efforts and rapid response capability; Conduct Live Fire Exercise against an unknown target, countermeasure will be transferred to Accelerated Antibodies program for development and testing. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease due to transition from development of computational tools to refinement of those computational tools.			
Title: 4) MCMPT ***Description:*** Manufacturing ***FY 2023 Plans:*** Initiate Digital Twin program to develop Artificial Intelligence models for manufacturing process controls to improve efficiency by reducing human intervention and control inputs. ***FY 2024 Plans:*** Continue refining Digital Twin Artificial Intelligence models for manufacturing process controls to reduce human interventions and increase process efficiency. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor change due to routine program adjustments. Effort concludes in FY24.	-	4.794	1.200
Title: 5) MCMPT ***Description:*** Rapid Response ***FY 2023 Plans:*** Initiate Pandemic Prevention Platform (P3) transfer from Defense Advanced Research Projects Agency (DARPA) to mature disease-agnostic antibody platform which will be further developed by the AA-ENBD or GUIDE-ENBD programs. ***FY 2024 Plans:***	-	5.774	5.076

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Continue refining Pandemic Prevention Platform (P3) capability to discover/optimize antigens against known and emerging threats to be further developed under AA-ENBD or GUIDE-ENBD programs for monoclonal and vaccine countermeasures and stored within the Rapid Access to Products in Development (RAPID) program. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor change due to routine program adjustments.			
Title: 6) MCMPT ***Description:*** Nucleic Acid ***FY 2024 Plans:*** Initiate the transfer of DARPA gene-encoded Deoxyribonucleic Acid (DNA) or Ribonucleic Acid (RNA) based medical countermeasure platform. This new technology will enhance both the onset of protection and duration of protection for a pre-exposure countermeasure against chemical/biological threats. Initiate transition of DARPA Nucleic Acid on Demand (NOW) manufacturing capability. This capability eliminates outsourcing of lengthy prototype manufacturing to allow programs such as GUIDE to test and evaluate more candidates real time. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase due to change in program/project technical parameters.	-	-	4.200
Title: 7) PLG MAB ***Description:*** Manufacturing, Non-Clinical and Clinical Development ***FY 2023 Plans:*** Initiate Small Model and At Scale Manufacturing development for Phase 1 Study. Continue in the discovery of Plague monoclonal antibodies (mAbs) . These efforts initiate Half-Life Extension to extend half-life candidate mAbs to meet service requirements. To include initiating Assay Development to provide validated assay support to manufacturing and Phase 1 study, and Conduct Primate Proof of Concept Study to demonstrate efficacy in Non-human primates using aerosol challenge. ***FY 2024 Plans:*** Continue large scale manufacturing to support the Phase I clinical study and delivery of 5-10K doses of Phase 2 compliant material to Rapid Access to Products in Development (RAPID) program for an Interim Fielding Capability. Complete Non-Human Primate (NHP) Pharmacokinetics (PK)/Efficacy studies, small animal model toxicology studies and initiate Phase 1 clinical study to support Milestone B in FY25. ***FY 2023 to FY 2024 Increase/Decrease Statement:***	-	13.078	14.700

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Increase due to start of phase 1 study and ramp up of large scale manufacturing.			
Title: 8) UIPE FoS Footwear ***Description:*** Development of the UIPE FoS Footwear System ***FY 2024 Plans:*** Initiate prototype Other Transaction Authority (OTA) to evaluate up to ten footwear alternatives, conduct chemical agent swatch testing to inform initial down select of alternatives, conduct limited early user testing to garner feedback on service preferred alternatives and generate documentation for Milestone B 2QFY25. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** UIPE FoS Footwear is a new effort within the UIPE Family of Systems starting in FY24.	-	-	2.386
Title: 9) VAMP-ENBD ***Description:*** Focus on Vaccine Acceleration by Modular Progression (VAMP), leveraging established commercial biotechnology manufacturing processes and interagency partners [e.g., Biomedical Advanced Research and Development Authority (BARDA), Defense Innovation Unit (DIU)] to support development of vaccine(s) against priority threats to the warfighter. ***FY 2023 Plans:*** Continue vaccine development to produce vaccine(s) against priority threats. ***FY 2024 Plans:*** Continue development and manufacturing of vaccine candidates against multiple viral biothreats. Continue test and evaluation efforts in animals and human clinical trials. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor change due to routine program adjustments.	-	35.000	34.299
Accomplishments/Planned Programs Subtotals	-	175.219	179.158

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• MB4: *Medical Biological Defense (ACD&P)*	46.791	-	-	-	-	-	-	-	-	0.000	46.791
• MB5: *Medical Biological Defense (SDD)*	138.156	-	-	-	-	-	-	-	-	0.000	138.156

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• MT4: *Mitigate (ACD&P)*	-	17.302	28.785	-	28.785	20.885	15.433	13.369	-	Continuing	Continuing
• PT2: *Protect (Applied Research)*	-	58.091	55.057	-	55.057	56.153	57.817	61.452	61.452	Continuing	Continuing
• PT5: *Protect (SDD)*	-	87.923	97.975	-	97.975	69.858	66.259	52.871	67.776	Continuing	Continuing

Remarks

D. Acquisition Strategy

ACCELERATED ANTIBODIES-ENHANCED BIODEFENSE (AA-ENBD)

AA-ENBD, in collaboration with interagency partners at Biomedical Advanced Research and Development Authority (BARDA) & Defense Advanced Research Projects Agency (DARPA), will address multiple high-priority threats by developing antibody solutions and advancing them through Phase 1 clinical trials by 2028. Additionally, all necessary studies will be completed to enable advanced development, as desired. AA-ENBD will provide a stockpile of 5-10K doses that will remain on a stability program as a potential rapid response capability for deployment. Furthermore, a commercial manufacturing process will be leveraged and developed that can be rapidly implemented for a larger response if needed. The intention is to work each candidate to the appropriate regulatory level (e.g., through Phase 1) within a codified timeframe (e.g., 2 years) from initiation. These efforts will leverage the Other Transactions Authority (OTA) through the medical OTA consortium. AA-ENBD was formerly known as Monoclonal Antibodies Therapeutics-Enhanced Biodefense (MAB TX-ENBD).

GENERATIVE UNCONSTRAINED INTELLIGENT DRUG ENGINEERING-ENHANCED BIODEFENSE (GUIDE-ENBD)

GUIDE computational tools, to include artificial intelligence and machine learning, are tailored specifically to Warfighter threats and needs through a preemptive approach that broadly addresses a diverse and dynamic threat space. GUIDE's intelligent drug design enables medical countermeasures (MCM) candidates to be developed across a wider aperture of threat space thereby reducing early development time. MCM candidates, particularly in the case of high priority threats, can be advanced preemptively. The GUIDE program offers a revolutionary approach to addressing unanticipated endemic and engineered threats through rapid retargeting and optimization. GUIDE is a collaboration between the Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (CBRND) (JPEO-CBRND), Defense Advanced Research Projects Agency (DARPA), and the Department of Energy (DOE). The GUIDE program is utilizing Interagency Agreements (IAA) with the DOE National Labs as well as a Other Transaction Authority (OTA) agreement for high throughput testing.

MCM PLATFORM TECHNOLOGIES (MCMPT)

The goal of the MCMPT is to rapidly counter a broad-spectrum of threat agents using standardized discovery, design, manufacturing, and testing processes to reduce the MCM development risks. Efforts will focus on transitioning S&T programs from other DoD agencies, such as the Defense Threat Reduction Agency (DTRA)-Joint Science and Technology Office (JSTO) or DARPA, and establishing advanced platform technologies within the Department of Defense (DoD)'s Advanced Development Manufacturing (ADM) network and evaluating that capability through nonclinical and clinical testing. A subset of these technologies, such as the DARPA Pandemic

Prevention Platform (P3), will be adapted to deliver a rapid response capability to novel and emerging threats. Once established, future programs will be able to leverage these platforms for the development of future medical countermeasures. It is anticipated that these efforts will leverage the Other Transactions Authority (OTA) through the medical OTA consortium, or Army Contracting Command-Edgewood.

PLAGUE MONOCLONAL ANTIBODIES (PLG MAB)

The Plague Monoclonal Antibodies (PLG MAB) program was initiated by the Medical Countermeasure Platform Technologies (MCMPT) program and continued using the Accelerated Antibodies contracting methodology Medical CBRN Defense Consortium Other Transaction Agreement (MCDC OTA). The program's Milestone Development Decision (MDD) was approved 26 OCT 2022. The program is now a Major Defense Acquisition Program (MDAP) and anticipates a Milestone (MS) B Decision point in 2025. Prior to MS B the program will conduct the necessary nonclinical and clinical testing and large-scale manufacturing needed to advance into the Engineering and Manufacturing Development Phase.

Uniform Integrated Protective Ensemble Family of Systems Footwear

The Uniform Integrated Protective Ensemble Family of Systems (UIPE FoS) Footwear program will use Other Transaction Authority for prototype production. The program will develop and assess multiple prototypes with an emphasis on a balance between cost, protection, schedule, risk and interoperability. Early user testing will include comparison to legacy boots as well as laboratory testing with boots that are contaminated, followed by operational and developmental test efforts in realistic operational environments. Using a gated test approach, the program will select multiple candidates at Milestone (MS) B using Cost As an Independent Variable (CAIV) to trade risk, requirements, and schedule to achieve the maximum value at a fixed cost. Rather than choose the top performance candidates, the program will select a low cost candidate that meets Key Performance Parameters (KPP) and high performance candidates constrained by maximum target costs. Results of prototyping will inform developmental and operational testing, followed by a down select prior to Critical Design Review (CDR) and production initiation at MS C using a Federal Acquisition Regulation (FAR) based production contract.

VACCINE ACCELERATION BY MODULAR PROGRESSION-ENHANCED BIODEFENSE (VAMP-ENBD)

The Vaccine Acceleration by Modular Progression (VAMP) program is an investment program that leverages lessons learned, industrial leaders, established manufacturing processes, and interagency partners (including Biomedical Advanced Research and Development Authority (BARDA), Defense Innovation Unit (DIU)) to develop prototype vaccine candidates utilizing matured platforms from established commercial manufacturing that target biothreats while utilizing a modular approach to ensure flexibility. These prototype vaccines (including, but not limited to, Messenger Ribonucleic Acid (mRNA) vaccines) will use a tailored acquisition pathway and will create a strategic reserve to counter the biothreats against the Warfighter and shorten the development time when an emergency occurs. Data generated from these efforts may be used to support an interim fielding capability (U.S. Food & Drug Administration (FDA) pre-Emergency Use Authorizations (EUA)/EUA and Expanded Access protocols) that could achieve FDA licensure as appropriate. These efforts will leverage the Other Transactions Authority (OTA) through the Medical CBRN Defense consortium, Broad Agency Announcements, and Commercial Solutions Opening. Data on VAMP products will be captured within Rapid Acquisition of Products in Development (RAPID) defense system to aid in identification of MCMs to counter threats.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AA-ENBD - Development	Various	Various : N/A	-	0.000		53.690	Dec 2022	62.544	Dec 2023	-		62.544	Continuing	Continuing	0.000
GUIDE-ENBD - Development	Various	Various : N/A	-	0.000		50.050	Dec 2022	45.713	Dec 2023	-		45.713	Continuing	Continuing	0.000
MCMPT - HW S - Rapid Response	C/CPFF	TBD : N/A	-	0.000		4.282	Dec 2022	4.782	Dec 2023	-		4.782	Continuing	Continuing	0.000
MCMPT - HW S - P3/ Nucleic Acid	C/CPFF	TBD : N/A,	-	0.000		5.247	Dec 2022	3.930	Dec 2023	-		3.930	Continuing	Continuing	0.000
MCMPT - HW S - Manufacturing	C/CPFF	TBD : N/A	-	0.000		0.000		0.993		-		0.993	Continuing	Continuing	0.000
PLG MAB - HW S - Manufacturing, Non-Clinical and Clinical Development	Various	Various : N/A	-	0.000		11.970	Mar 2023	13.546	Dec 2023	-		13.546	Continuing	Continuing	0.000
UIPE FoS Footwear - HW S - Footwear Prototype	C/FFP	TBD : N/A	-	0.000		0.000		0.100	Jan 2024	-		0.100	Continuing	Continuing	0.000
VAMP-ENBD - Vaccine - Development	Various	Various : N/A	-	0.000		29.925	Dec 2022	28.254	Dec 2023	-		28.254	Continuing	Continuing	0.000
VAMP-ENBD - SBIR/STTR - Direct Program Support	Various	Various : N/A	-	0.000		0.000		2.745	Dec 2023	-		2.745	Continuing	Continuing	0.000
		Subtotal	-	0.000		155.164		162.607		-		162.607	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
BIOPROTO - TD/D S	MIPR	Army Contracting Command : Picatinny, NJ	-	0.000		2.573	Oct 2022	0.000		-		0.000	0.000	2.573	0.000
UIPE FoS Footwear - ES S - Logistics/Engineering Support	Various	Various : N/A	-	0.000		0.000		0.358	Jan 2024	-		0.358	Continuing	Continuing	0.000
		Subtotal	-	0.000		2.573		0.358		-		0.358	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FoS Footwear - OTHT S - Swatch Testing (new/worn)	TBD	TBD : N/A	-	0.000		0.000		0.500	Apr 2024	-		0.500	Continuing	Continuing	0.000
UIPE FoS Footwear - OTHT S - Early User Testing	TBD	TBD : N/A	-	0.000		0.000		1.000	Jun 2024	-		1.000	Continuing	Continuing	0.000
UIPE FoS Footwear - OTHT S - Infrastructure	MIPR	TBD : N/A	-	0.000		0.000		0.282	Jan 2024	-		0.282	Continuing	Continuing	0.000
		Subtotal	-	0.000		0.000		1.782		-		1.782	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AA-ENBD - Program Management	Various	Various : N/A	-	0.000		5.310	Dec 2022	5.120	Dec 2023	-		5.120	Continuing	Continuing	0.000
GUIDE-ENBD - Program Management	Various	Various : N/A	-	0.000		4.950	Dec 2022	3.920	Dec 2023	-		3.920	Continuing	Continuing	0.000
MCMPT - PM Support	Various	JPL CBRND Enabling Biotechnologies, JPEO-CBRND : Fort Detrick, MD	-	0.000		1.039	Dec 2022	0.771	Dec 2023	-		0.771	Continuing	Continuing	0.000
PLG MAB - PM/MS S - Program Management	Various	Various : N/A	-	0.000		1.108	Dec 2022	1.154	Dec 2023	-		1.154	Continuing	Continuing	0.000
UIPE FoS Footwear - PM/MS S - Management Services	Various	Various : N/A	-	0.000		0.000		0.146	Jan 2024	-		0.146	Continuing	Continuing	0.000
VAMP-ENBD - PM/MS S - Management Support	Various	Various : N/A	-	0.000		5.075	Dec 2022	3.300	Dec 2023	-		3.300	Continuing	Continuing	0.000
		Subtotal	-	0.000		17.482		14.411		-		14.411	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
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	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.000		175.219		179.158		-		179.158	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** PT4 / *Protect (ACD&P)*

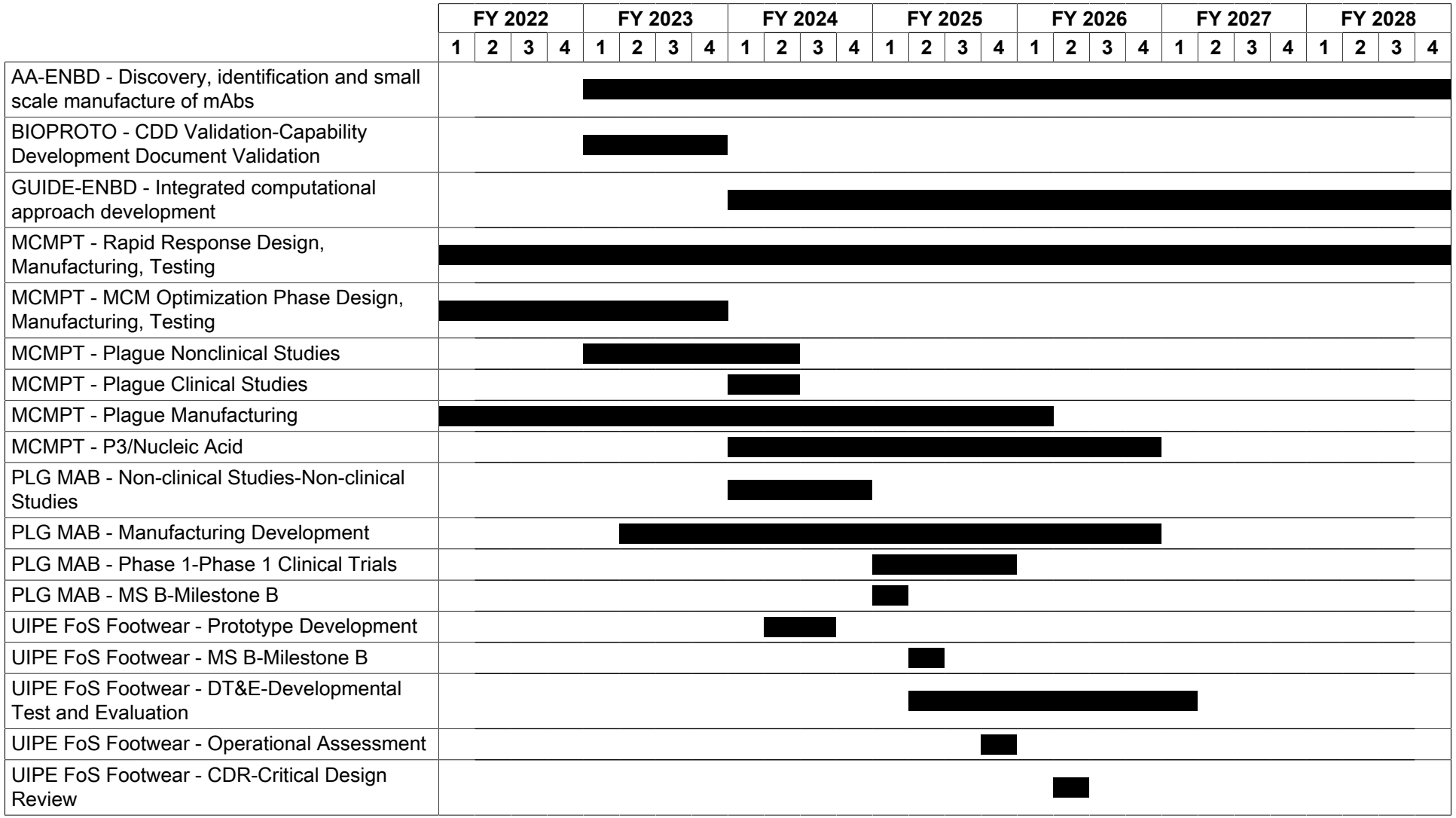

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** PT4 / *Protect (ACD&P)*

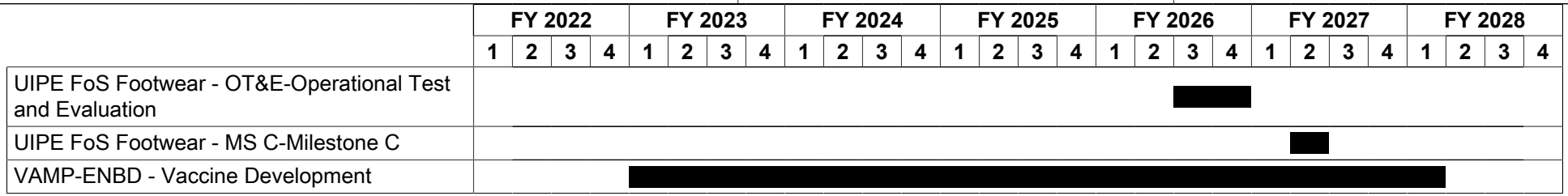

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AA-ENBD - Discovery, identification and small scale manufacture of mAbs	1	2023	4	2028
BIOPROTO - CDD Validation-Capability Development Document Validation	1	2023	4	2023
GUIDE-ENBD - Integrated computational approach development	1	2024	4	2028
MCMPT - Rapid Response Design, Manufacturing, Testing	1	2022	4	2028
MCMPT - MCM Optimization Phase Design, Manufacturing, Testing	1	2022	4	2023
MCMPT - Plague Nonclinical Studies	1	2023	2	2024
MCMPT - Plague Clinical Studies	1	2024	2	2024
MCMPT - Plague Manufacturing	1	2022	1	2026
MCMPT - P3/Nucleic Acid	1	2024	4	2026
PLG MAB - Non-clinical Studies-Non-clinical Studies	1	2024	4	2024
PLG MAB - Manufacturing Development	2	2023	4	2026
PLG MAB - Phase 1-Phase 1 Clinical Trials	1	2025	4	2025
PLG MAB - MS B-Milestone B	1	2025	1	2025
UIPE FoS Footwear - Prototype Development	2	2024	3	2024
UIPE FoS Footwear - MS B-Milestone B	2	2025	2	2025
UIPE FoS Footwear - DT&E-Developmental Test and Evaluation	2	2025	1	2027
UIPE FoS Footwear - Operational Assessment	4	2025	4	2025
UIPE FoS Footwear - CDR-Critical Design Review	2	2026	2	2026
UIPE FoS Footwear - OT&E-Operational Test and Evaluation	3	2026	4	2026
UIPE FoS Footwear - MS C-Milestone C	2	2027	2	2027
VAMP-ENBD - Vaccine Development	1	2023	1	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
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COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
MT4: *Mitigate (ACD&P)*	-	0.000	17.302	28.785	0.000	28.785	20.885	15.433	13.369	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Mitigate Advanced Component Development and Prototypes (ACD&P) Project provides the Joint Force the ability to conduct decontamination and medical actions that enable the quick restoration of combat power; maintain/recover essential functions that are free from the effects of Chemical Biological Radiological and Nuclear (CBRN) hazards; and facilitate the return to pre-incident operational capability as soon as possible. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. MT4 efforts in FY 2022 remain in Projects DE4 and TM4. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) Automated Decon System (ADS)
(2) Antiviral Oral Therapeutic (AVO TX)
(3) Biological Warfare Defense Prototype (BIOPROTO)
(4) Botulinum Toxin Therapeutic (BOT TX)
(5) Consolidated Nerve Agent Treatment System (CNATS)
(6) Discovery of Medical Countermeasures Against New and Emerging Threats (DOMANE)
(7) Reactivating Nerve Agent Treatment System (RNATS)
(8) Service Equipment Decontamination System (SEDS)
(9) Tactical Contamination Mitigation System (TCMS)

The Automated Decontamination System (ADS) is a new start program in FY24. ADS is a semi-autonomous supported capability that relies on precision detection capabilities, modernized decontaminants, and robotics to allow a chemical, biological, radiological and nuclear (CBRN) decontamination squad to provide platoon level thorough decontamination on critical mission equipment and infrastructure. In FY24 ADS will award a concept prototype contract, accept delivery of an initial concept prototype and conduct an Alternative Systems Review.

The Antiviral Oral Therapeutics (AVO TX) is a new start program in FY24. AVO TX will provide the Joint Force the ability to recover from exposure to biological hazards and quickly return to the fight. Efforts include development of Food and Drug Administration (FDA) approved Medical Countermeasure (MCM) to protect the lives and maintain the battle readiness of the Warfighter. AVO TX fulfills an existing gap for a MCM to treat exposure to alpha virus.

The Biological Warfare Defense Prototype (BIOPROTO) supports early-phase clinical development and supporting non-clinical safety, tolerability and toxicity data for candidate vaccines and therapeutic drugs prior to transition to System Development & Demonstration. This work provides safe and effective medical defense against

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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validated biological threat agents and emerging infectious disease biothreats including bacteria, toxins, and viruses. This work also involves the evaluation of Food and Drug Administration (FDA) approved therapeutics for operational use, as well as generation of novel drug products and formulations, to enhance level of protection and/or operational utility for the Warfighter. This effort reduces programmatic risk of failure in the advanced development phase.

The Botulinum Toxin Therapeutic (BOT TX) is a new start program in FY24. BOT TX will develop and deliver a Food and Drug Administration (FDA) approved treatment for the warfighter to treat respiratory depression caused by botulinum toxin exposure. Botulinum toxin exposure is lethal and there are no available therapeutics that can be administered for BOT treatment in the field environment. This intramuscular injectable treatment is already approved for human use by the FDA.

The Consolidated Nerve Agent Treatment System (CNATS) is a new start program in FY24. CNATS will deliver an FDA-approved autoinjector that combines anticholinergics, atropine and scopolamine, and a new broad-spectrum oxime. The proposed oxime will have efficacy against emerging threats including Fourth Generation Agents (FGAs). Combining nerve agent treatments into fewer autoinjectors will reduce basic load for service members.

The Discovery of Medical Countermeasures Against Novel Entities (DOMANE) supports prototype development of emerging technology platforms and technologies to identify medical countermeasures (MCMs), MCM targets, and disease pathogenesis and toxicity using the combination of Artificial Intelligence/Machine Learning, organs-on-a-chip, high-throughput screening as well as novel imaging platforms. Additionally, MT4 supports early-phase clinical development of prophylaxis treatments and therapeutic drugs through the use of adaptive clinical trials to provide safe and effective medical defense against validated biological threat agents and emerging infectious disease biothreats including bacteria, toxins, and viruses. This effort reduces programmatic risk of failure in the advanced development phase by developing validated prototypes and generating clinical and supporting non-clinical safety, tolerability and toxicity data for candidate prophylaxis treatments and therapeutic drugs prior to transition to System Development & Demonstration.

The Reactivator Nerve Agent Treatment System (RNATS) is a new start program in FY24. RNATS will provide the Services an FDA-approved broad-spectrum oxime to address emerging chemical threats and fourth generation agents (FGAs). The program will field a vial formulation as an additional capability to mitigate gaps in current nerve agent therapeutics.

The Service Equipment Decontamination System (SEDS) program consists of two efforts, Joint SEDS and Special Operations Forces (SOF) Critical Equipment Decontamination (CEDS), which will develop a capability for use by the Warfighter during the decontamination operations that will provide a quantifiable reduction in the number of personnel experiencing adverse health effects by reducing contamination on equipment, individual combat equipment, and sensitive platform interiors. This capability is needed to sustain both the Joint and SOF by reducing logistical burdens in order to increase tactical agility and sustain a resilient force posture, and align with the National Defense Strategy (NDS). SEDS and CEDS will provide contamination mitigation capabilities for critical equipment that have been exposed to chemical and biological contamination and achieve efficacy levels that allow unprotected post-decontamination exposures for long periods with less than negligible severity effects. In FY24, the Joint SEDS effort will continue through the Engineering and Manufacturing Development (EMD) phase with Developmental Testing (DT) and a Critical Design Review (CDR). FY23 is last year of BA4 funding, program is transitioning to EMD.

The Tactical Containment Mitigation System (TCMS) is a Contamination Mitigation concept and intends to address gaps related to the decontamination of critical equipment and vehicles and it will reduce the time and logistics associated with decontamination. TCMS will limit the spread and mitigate the effects of Chemical,

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Biological, and Radiological (CBR) contamination to allow warfighters to continue their mission for an extended period of time in a high threat, CBR contaminated environment. The Program's intent is to mitigate the risk to personnel and limit the potential spread of CBR contamination by minimizing contact and transfer hazards. TCMS will greatly enhance or eliminate the need for subsequent decontamination to mitigate contamination on military equipment. Following application of TCMS, combined with weathering, Mission Oriented Protective Posture (MOPP) levels may be reduced without further decontamination, depending on the surface or material being decontaminated and the agent. In FY24 the program will continue prototype testing and complete technical reviews in support of the Milestone B/Engineering Manufacturing & Development (EMD) Phase. FY24 is last year of BA4 funding, program is transitioning to the Engineering Manufacturing & Development (EMD) Phase.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) ADS - Prototype Development ***Description:*** Development of Robotic Platform Systems ***FY 2024 Plans:*** Begin prototype development, conduct alternative systems review ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.	-	-	1.500
Title: 2) AVO TX - Non Clinical Study ***Description:*** Non Clinical Studies ***FY 2024 Plans:*** Initiate Natural History Study (NHS). ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.	-	-	3.740
Title: 3) BIOPROTO ***Description:*** Funds biomedical research focused on the nonclinical and early clinical development of therapeutic countermeasures against known and emerging viral, bacterial, and toxin biological warfare (BW) threats for which U.S. Food and Drug Administration (FDA)-approved therapeutics are limited or lacking. BW defense therapeutics mitigate and reverse the effects of known and emerging viral, bacterial, and toxin biological warfare threats in symptomatic warfighters diagnosed with BW disease. They are the last line of defense against BW threats and are critical to returning symptomatic warfighters to service. Biomedical research is focused on nonclinical development (e.g., animal model, and formulation/manufacturing studies) and early clinical evaluation of broad-spectrum therapeutic candidates that target viruses, bacteria or toxins directly, enhance the host response (e.g., by modulating the immune system) and/or relieve BW disease symptoms. Therapeutic candidates that are shown to be both safe and efficacious against BW threats will advance for further non-clinical and/or clinical evaluation under RDT&E budget activity 5, and can be accelerated for use against emerging infectious diseases	-	2.572	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
during an outbreak. Clinical and nonclinical evaluation of novel small molecules (chemically synthesized), novel biologic molecules (isolated from natural sources), drug and drug/vaccine combinations (aka layered defense), and repurposing of drugs approved by the FDA or in clinical development for other indications, are included in this research. Refinement of appropriate animal models in which to evaluate therapeutic candidates is also included. Projects leverage interagency and commercial sector investments to accelerate development and reduce costs. ***FY 2023 Plans:*** - Continue nonclinical and regulatory activities to transition broad spectrum antibacterial candidate to BARDA. - Initiate clinical and/or nonclinical studies for broad-spectrum antibacterial/antiviral or toxin therapeutic candidate. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project funding transferred to another funding line. FY 2024 funding has been transferred to Project PT3 for better alignment under budget activity 3.			
Title: 4) BOT TX ***Description:*** Nonclinical Studies ***FY 2024 Plans:*** Initiate non-clinical study for Dose Determination following FDA animal rule guidance. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.	-	-	2.847
Title: 5) BOT TX ***Description:*** Manufacturing ***FY 2024 Plans:*** Initiate scale-up manufacturing for intermuscular injection product. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.	-	-	5.000
Title: 6) CNATS - Acquisition Activities ***Description:*** Acquisition Activities ***FY 2024 Plans:*** Initiate activities to support the Milestone Development Decision (MDD) and Milestone B.	-	-	2.388

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
1. Perform Market Research and develop AoA study guidance and plan as required. 2. Perform Affordability Analysis to support the development of Program goals. 3. Perform Technology Readiness Assessment for potential candidate materiel solutions. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.			
Title: 7) CNATS - Pre Milestone B ***Description:*** Technical Studies and Feasibility ***FY 2024 Plans:*** Assess feasibility of drug combination. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.	-	-	1.500
Title: 8) DOMANE ***Description:*** Prototype Development and Early-Phase Clinical Development ***FY 2023 Plans:*** - Supports the advanced development of medical countermeasures to include prophylaxes, pretreatments, antidotes and therapeutic drugs against identified and emerging biological warfare threat agents. - Demonstration of human safety and tolerability prior to entry of candidate prophylaxes and therapeutics into advanced development using adaptive clinical trials. - Continued development of prototypes for high-resolution forecasting of pathogenesis or toxicity that occurs during host interaction of a biological threat with its host. - Continued development of adaptive clinical trial platforms for drug re-purposing efforts. - Development of prototypes for precision predictions of medical countermeasures that interfere with key pathogenesis or toxicity events and restore homeostasis coupled with artificial intelligence/machine learning (AI/ML). - Initiate development of prototype for accurate prediction of targets on the biological threat and within the host that result in the necessary engagements to produces pathogenesis or toxicity using AI/ML. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project terminated in FY 2024. The impact will be a slow-down in the development of platform prototypes for high throughput screening as well as AI development for predicting MCMs for new and emerging pathogens.	-	1.038	-
Title: 9) RNATS	-	-	5.270

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Description: Reactivating Nerve Agent Treatment System (RNATS) ***FY 2024 Plans:*** Initiate development of broad spectrum oxime for FDA approval. Initiate Natural History Studies for alternative large animal model development. Initiate API procurement and compounding development. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project is new start effort in FY 2024.			
Title: 10) SEDS ***Description:*** Milestone (MS) B support and Prototype Development ***FY 2023 Plans:*** Integrate system components into full prototype system(s). Complete Special Operations Forces (SOF) Developmental Testing (DT) and Joint Service Early Developmental Testing (EDT). Conduct Preliminary Design Review (PDR) for Other Services, and Technology Readiness Assessment (TRA). Update MS documentation and conduct MS B Decision Reviews. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Program/project transitioned to Engineering and Manufacturing Development Phase.	-	9.515	-
Title: 11) TCMS ***Description:*** Milestone (MS) A support and Prototype Development ***FY 2023 Plans:*** Complete Milestone A and award a prototyping Other Transaction Authority (OTA) contract. Conduct a Systems Readiness Review (SRR) and Test Readiness Review (TRR) of the prototypes to be tested. Begin prototype testing and update prototypes. Conduct a Business Case Analysis (BCA) for the program sustainment strategy. ***FY 2024 Plans:*** Continue iterative prototype testing and complete technical reviews and documentation in support of the Milestone (MS) B/ Engineering Manufacturing & Development (EMD) Phase. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase due to change in program/project technical parameters. Increase of funding to complete TMRR phase.	-	4.177	6.540
Accomplishments/Planned Programs Subtotals	-	17.302	28.785

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• DE4: *Decontamination (ACD&P)*	14.747	-	-	-	-	-	-	-	-	0.000	14.747
• MT3: *Mitigate (ATD)*	-	86.157	100.791	-	100.791	89.511	91.704	85.795	85.480	Continuing	Continuing
• MT5: *Mitigate (SDD)*	-	74.225	88.441	-	88.441	92.279	91.431	87.773	93.250	Continuing	Continuing
• PT4: *Protect (ACD&P)*	-	175.219	179.158	-	179.158	135.096	107.341	123.538	139.376	Continuing	Continuing
• TM4: *Techbase Medical Defense (ACD&P)*	29.687	-	-	-	-	-	-	-	-	0.000	29.687
• PHM007: *Service Equipment Decontamination System (SEDS)*	-	-	-	-	-	14.028	22.531	24.920	13.050	Continuing	Continuing
• PHM042: *Tactical Contamination Mitigation System (TCMS)*	-	-	-	-	-	-	1.250	5.072	5.000	Continuing	Continuing
• PHM045: *Botulinum Therapeutic (BOT TX)*	-	-	-	-	-	-	-	-	54.485	Continuing	Continuing

Remarks

D. Acquisition Strategy

Automated Decontamination System

The Automated Decontamination System (ADS) acquisition approach will focus on the integration of hardware and software components to deliver a capability that performs decontamination procedures autonomously. It will use developmental, government off the shelf (GOTS), and commercial off the shelf (COTS) products using a system of systems approach and prototyping. The program will conduct developmental, operational, and integration testing to understand how an autonomous decontamination system will be employed, operated, and supported considering the current military operational framework.

Antiviral Oral Therapeutic

The Antiviral Oral Therapeutic Program (AVO TX) program acquisition strategy supports the development through the Engineering, Manufacturing and Development (EMD) phase for a Federal and Drug Administration (FDA) approved oral broad spectrum antiviral therapeutic for the Warfighter. Initial drug product will be developed targeting Encephalitic Virus Disease (VEEV), with potential for other indications as a broad spectrum oral antiviral. The operational concept is to provide an oral broad-spectrum therapeutic Medical Countermeasures (MCM) to the Joint Force following a “trigger event” relating to a virus exposure (e.g., a credible intelligence report of use or potential use, a positive outcome of an environmental sample analysis, or a clinical specimen diagnostic test). This is a transition from Science and Technology (S&T). This program will leverage safety and large scale manufacturing from COVID.

Botulinum Toxin Therapeutic

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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The Botulinum Toxin Therapeutic (BOT TX) program will transition from the Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD) to JPEO CBRND. In the BOT TX acquisition strategy, the continued advanced activities will be performed through the Medical CBRN Defense Consortium (MCDC)/Other Transaction Agreement (OTA) supporting the development through the Engineering, Manufacturing and Development (EMD) phase for a Food and Drug Administration (FDA) approved treatment for the Warfighter to against respiratory depression caused by botulinum toxin exposure. BOT TX is part of the layered defense against BONT covering both treatment (BOT TX) and pre-exposure prophylaxis (BOT MAB). The product will produce an intermuscular injection capability that is based on an oral drug that is already approved for human use by the FDA.

Consolidated Nerve Agent Treatment System

In the CNATS acquisition strategy, a contractor will sponsor and conduct activities to achieve Food and Drug Administration (FDA) approval. The government will leverage data obtained under a Small Business and Innovation Research (SBIR) project. The government contemplates utilizing an Other Transaction Authority (OTA) agreement. Upon FDA approval, a follow-on procurement contract will acquire quantities of product to meet Full Operational Capability (FOC). Sustainment will be the responsibility of the Defense Logistics Agency Troop Support. Post marketing commitments and requirements are anticipated as a result of the FDA approval and will be the responsibility of the contractor and the government.

Reactivating Nerve Agent Treatment System

The Reactivator Nerve Agent Treatment System (RNATS) acquisition strategy will leverage prior investments in prior oxime developments by Canada and the United Kingdom. A contractor shall be responsible for conducting activities associated with drug development to obtain U.S. Food and Drug Administration (FDA) approval via a government Other Transaction Authority (OTA) agreement. The contractor shall sponsor the drug. Upon FDA approval, a follow-on procurement contract will acquire quantities of product to meet Full Operational Capability (FOC). Subsequent purchases for product sustainment will be made by the Defense Logistics Agency Troop Support. Post marketing commitments and requirements are anticipated as a result of the FDA approval and will be the responsibility of the contractor and the government.

SERVICE EQUIPMENT DECONTAMINATION SYSTEM (SEDS)

The Joint Service Equipment Decontamination System (SEDS) and Special Operations Forces (SOF) Critical Equipment Decontamination System (CEDS) program will utilize the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to design and develop state of the art equipment using competitive and iterative prototyping. The program will test prototypes against live chemical warfare agents and biological warfare agents, conduct reliability, availability, and maintainability testing, conduct regular user evaluations to identify human system integration issues, and will conduct testing to ensure the system meets military standards. The program will use the Request for Prototype Proposals (RPP), under the CWMD OTA, followed by awards of Prototype Agreement. In FY24, the Program will conduct MS B activities for Special Operation Forces (SOF) and Other Services, conclude Engineering, Manufacturing and Development (EMD) testing, conduct operational testing and limited user evaluations, and conduct a Critical Design Review (CDR) for SOF.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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TACTICAL CONTAMINATION MITIGATION SYSTEM (TCMS)

The Tactical Containment Mitigation System (TCMS) program will develop the equipment, processes and procedures for contamination mitigation related to post-incident operations in a Chemical Biological Radiological and Nuclear (CBRN) contaminated environment. The acquisition strategy includes market research through both Requests for Information (RFIs) and a call for White Papers through an Other Transaction Authority (OTA) contracting approach. Data collected will inform a Milestone A decision in FY23. The OTA vehicle will also be used to request prototypes, which will undergo technology demonstrations and Early Field testing, followed by an analysis to determine the most suitable candidate. Results of Prototyping will inform Milestone B and Request for Proposals (RFPs) followed by developmental and operational testing and Milestone C/Full Rate Production Approval.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ADS - HW C - Prototype Modification	TBD	TBD : N/A	-	0.000		0.000		0.356	Jan 2024	-		0.356	Continuing	Continuing	0.000
BIOPROTO - Clinical/Non-clinical studies for Broad Spectrum antibacterial/ antiviral candidates	MIPR	U.S. Army Contracting Command (ACC-NJ) : Picatinny, NJ	-	0.000		2.572	Oct 2022	0.000		-		0.000	0.000	2.572	0.000
BOT TX - Nonclinical/ Manufacturing	Various	Various : N/A	-	0.000		0.000		6.590	Dec 2023	-		6.590	Continuing	Continuing	0.000
CNATS - Acq Activities/ Pre M/S B	Various	Various : N/A	-	0.000		0.000		2.925	Mar 2024	-		2.925	Continuing	Continuing	0.000
CNATS - Product Management	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.000		0.000		0.535	Nov 2023	-		0.535	Continuing	Continuing	0.000
DOMANE	MIPR	U.S. Army Contracting Command (ACC-NJ) : Picatinny, NJ	-	0.000		1.038	Oct 2022	0.000		-		0.000	0.000	1.038	0.000
RNATS - HW C - Development	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.000		0.000		4.208	Jun 2024	-		4.208	Continuing	Continuing	0.000
RNATS - Product Development	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.000		0.000		0.482	Jan 2024	-		0.482	Continuing	Continuing	0.000
SEDS - HW S - Product Development	SS/FFP	TBD : N/A	-	0.000		4.366	Nov 2022	0.000		-		0.000	0.000	4.366	0.000
TCMS - HW S - Product Development	C/FFP	TBD : N/A	-	0.000		1.256	Nov 2022	1.800	Jan 2024	-		1.800	Continuing	Continuing	0.000
		Subtotal	-	0.000		9.232		16.896		-		16.896	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ADS - Engineering Support	MIPR	TBD : N/A	-	0.000		0.000		0.225	Nov 2023	-		0.225	Continuing	Continuing	0.000
SEDS - ILS S - Logistics, Engineering and IPT Support	MIPR	Various : N/A	-	0.000		2.098	Nov 2022	0.000		-		0.000	0.000	2.098	0.000
TCMS - ES S - Logistics, Engineering and IPT Support	MIPR	Various : N/A	-	0.000		0.684	Nov 2022	0.981	Nov 2023	-		0.981	Continuing	Continuing	0.000
		Subtotal	-	0.000		2.782		1.206		-		1.206	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ADS - DTE C - Prototype System Testing	MIPR	TBD : N/A	-	0.000		0.000		0.827	Nov 2023	-		0.827	Continuing	Continuing	0.000
AVO TX - Non Clinical Studies	Various	Various : N/A	-	0.000		0.000		2.940	Dec 2023	-		2.940	Continuing	Continuing	0.000
SEDS - OTHT S - T&E IPR Test Planning	MIPR	Various : N/A	-	0.000		2.280	Nov 2022	0.000		-		0.000	0.000	2.280	0.000
TCMS - OTHT S - Prototype T&E IPR Test Planning	MIPR	Various : N/A	-	0.000		1.732	Jan 2023	3.358	Nov 2023	-		3.358	Continuing	Continuing	0.000
		Subtotal	-	0.000		4.012		7.125		-		7.125	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ADS - PM/MS C - Program Management	MIPR	TBD : N/A	-	0.000		0.000		0.092	Nov 2023	-		0.092	Continuing	Continuing	0.000
AVO TX - Management Support	Various	Various : N/A	-	0.000		0.000		0.800	Dec 2023	-		0.800	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
BOT TX - Various	Various	Various : N/A	-	0.000		0.000		1.257	Dec 2023	-		1.257	Continuing	Continuing	0.000
CNATS - Management Services	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.000		0.000		0.428	Nov 2023	-		0.428	Continuing	Continuing	0.000
RNATS - Management Support	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.000		0.000		0.580	Dec 2023	-		0.580	Continuing	Continuing	0.000
SEDS - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		0.771	Nov 2022	0.000		-		0.000	0.000	0.771	0.000
TCMS - PM/MS S - Program Management Support	C/FFP	TBD : N/A	-	0.000		0.505	Nov 2022	0.401	Jan 2024	-		0.401	Continuing	Continuing	0.000
		Subtotal	-	0.000		1.276		3.558		-		3.558	Continuing	Continuing	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.000		17.302		28.785		-		28.785	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

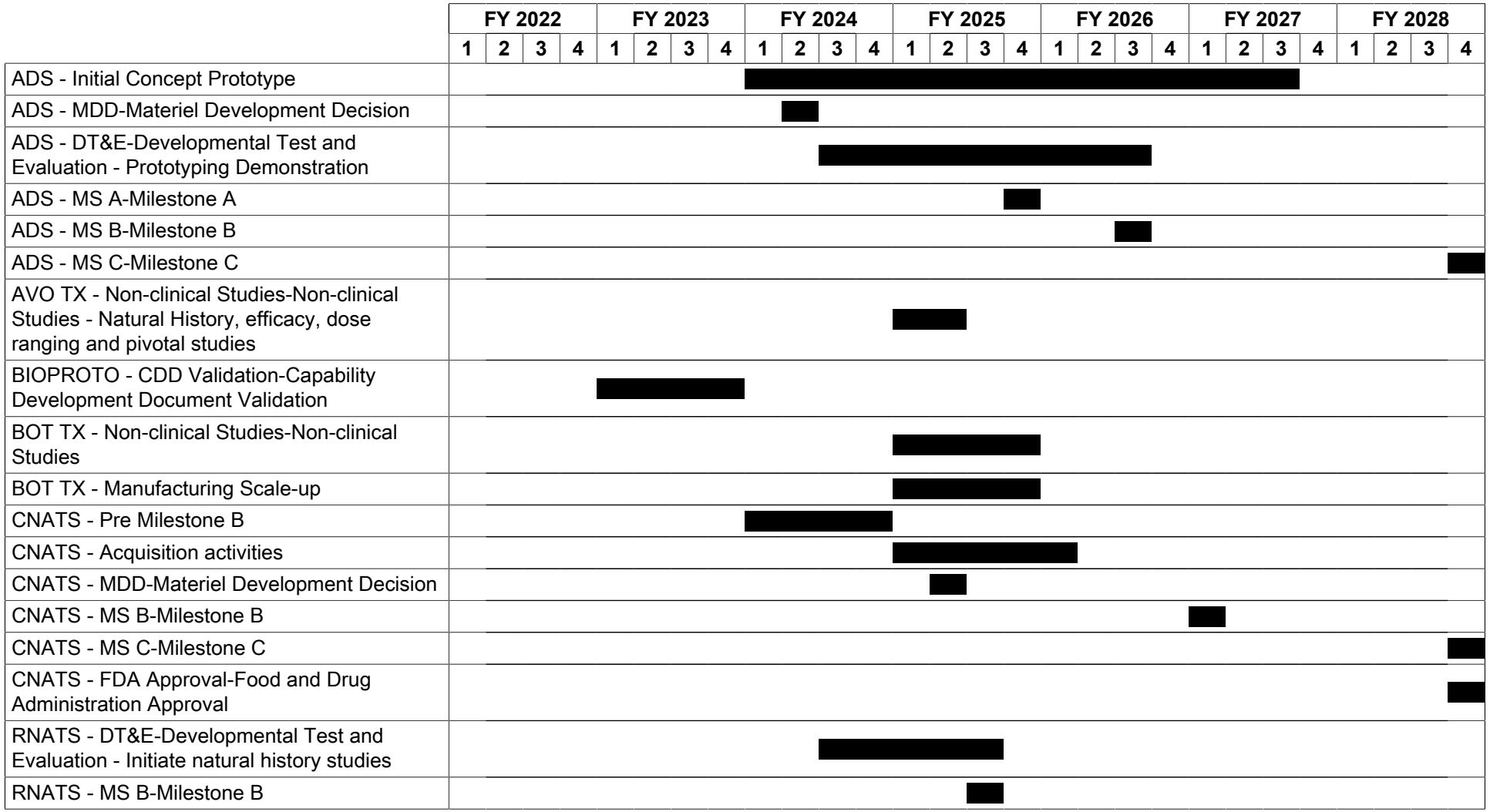

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

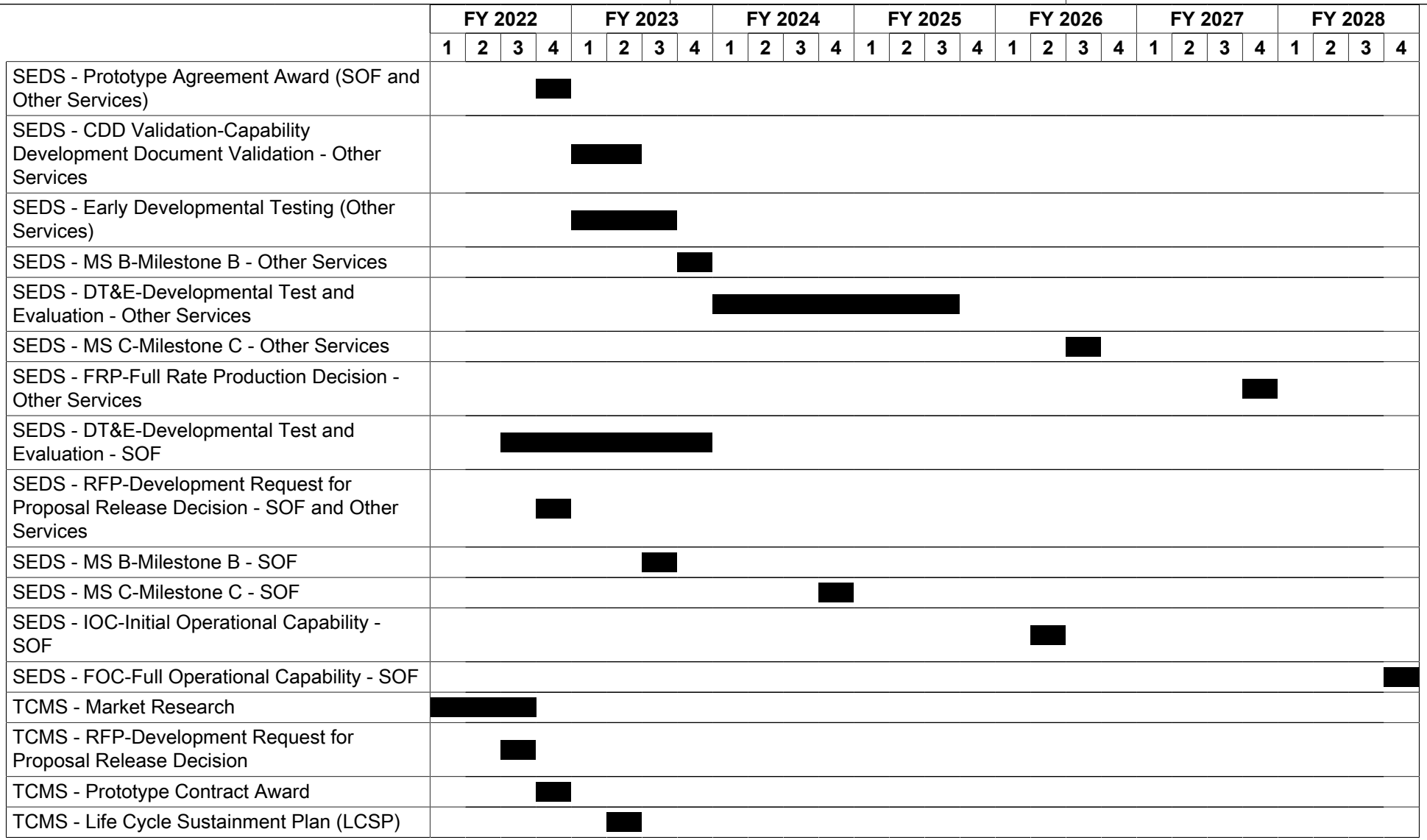

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

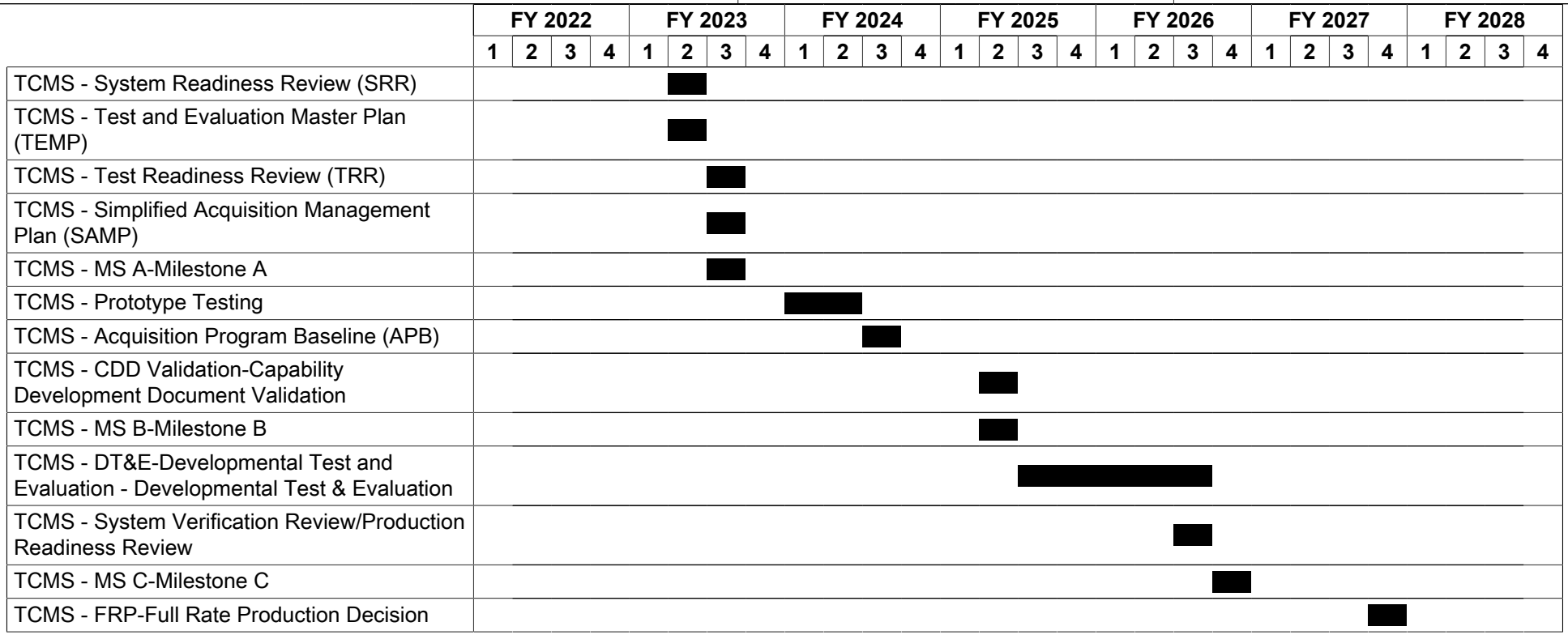

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ADS - Initial Concept Prototype	1	2024	3	2027
ADS - MDD-Materiel Development Decision	2	2024	2	2024
ADS - DT&E-Developmental Test and Evaluation - Prototyping Demonstration	3	2024	3	2026
ADS - MS A-Milestone A	4	2025	4	2025
ADS - MS B-Milestone B	3	2026	3	2026
ADS - MS C-Milestone C	4	2028	4	2028
AVO TX - Non-clinical Studies-Non-clinical Studies - Natural History, efficacy, dose ranging and pivotal studies	1	2025	2	2025
BIOPROTO - CDD Validation-Capability Development Document Validation	1	2023	4	2023
BOT TX - Non-clinical Studies-Non-clinical Studies	1	2025	4	2025
BOT TX - Manufacturing Scale-up	1	2025	4	2025
CNATS - Pre Milestone B	1	2024	4	2024
CNATS - Acquisition activities	1	2025	1	2026
CNATS - MDD-Materiel Development Decision	2	2025	2	2025
CNATS - MS B-Milestone B	1	2027	1	2027
CNATS - MS C-Milestone C	4	2028	4	2028
CNATS - FDA Approval-Food and Drug Administration Approval	4	2028	4	2028
RNATS - DT&E-Developmental Test and Evaluation - Initiate natural history studies	3	2024	3	2025
RNATS - MS B-Milestone B	3	2025	3	2025
SEDS - Prototype Agreement Award (SOF and Other Services)	4	2022	4	2022
SEDS - CDD Validation-Capability Development Document Validation - Other Services	1	2023	2	2023
SEDS - Early Developmental Testing (Other Services)	1	2023	3	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SEDS - MS B-Milestone B - Other Services	4	2023	4	2023
SEDS - DT&E-Developmental Test and Evaluation - Other Services	1	2024	3	2025
SEDS - MS C-Milestone C - Other Services	3	2026	3	2026
SEDS - FRP-Full Rate Production Decision - Other Services	4	2027	4	2027
SEDS - DT&E-Developmental Test and Evaluation - SOF	3	2022	4	2023
SEDS - RFP-Development Request for Proposal Release Decision - SOF and Other Services	4	2022	4	2022
SEDS - MS B-Milestone B - SOF	3	2023	3	2023
SEDS - MS C-Milestone C - SOF	4	2024	4	2024
SEDS - IOC-Initial Operational Capability - SOF	2	2026	2	2026
SEDS - FOC-Full Operational Capability - SOF	4	2028	4	2028
TCMS - Market Research	1	2022	3	2022
TCMS - RFP-Development Request for Proposal Release Decision	3	2022	3	2022
TCMS - Prototype Contract Award	4	2022	4	2022
TCMS - Life Cycle Sustainment Plan (LCSP)	2	2023	2	2023
TCMS - System Readiness Review (SRR)	2	2023	2	2023
TCMS - Test and Evaluation Master Plan (TEMP)	2	2023	2	2023
TCMS - Test Readiness Review (TRR)	3	2023	3	2023
TCMS - Simplified Acquisition Management Plan (SAMP)	3	2023	3	2023
TCMS - MS A-Milestone A	3	2023	3	2023
TCMS - Prototype Testing	1	2024	2	2024
TCMS - Acquisition Program Baseline (APB)	3	2024	3	2024
TCMS - CDD Validation-Capability Development Document Validation	2	2025	2	2025
TCMS - MS B-Milestone B	2	2025	2	2025
TCMS - DT&E-Developmental Test and Evaluation - Developmental Test & Evaluation	3	2025	3	2026
TCMS - System Verification Review/Production Readiness Review	3	2026	3	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MT4 / *Mitigate (ACD&P)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
TCMS - MS C-Milestone C	4	2026	4	2026
TCMS - FRP-Full Rate Production Decision	4	2027	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) EN4 / *Enabling Investments (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
EN4: *Enabling Investments (ACD&P)*	-	0.000	6.781	47.272	0.000	47.272	51.579	9.792	9.840	9.840	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Enabling Investments Advanced Component Development and Prototypes (ACD&P) Project maintains the Department of Defense (DoD) advanced development manufacturing facility to rapidly develop, manufacture, and approve medical countermeasures. Enabling efforts in this area support dedicated infrastructure capabilities, demonstrations, and overarching development support functions as portfolio enablers responding to emerging threats. Priority access to the facility provides an on demand manufacturing capability not only for the DoD but for the entire United States Government enterprise. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. EN4 efforts in FY 2022 remain in Project MB4. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) Chem Bio Incident Preparedness and Response - Advanced Development and Manufacturing (CBIPR-ADM)
(2) Medical Countermeasures Manufacturing Optimization (MCM MFRO)

The CBIPR-ADM ensures prioritization to domestic biopharmaceutical manufacturing capacities, capabilities, and infrastructure (e.g. the DoD-ADM Facility and other strategic partners) that are operationally ready to rapidly develop and manufacture medical countermeasures (MCMs) against current and emerging chemical and biological threats including pandemic response. Prioritization is achieved by establishing and enhancing proven biopharmaceutical manufacturing platform technologies and infrastructure at these facilities. Thus, these facilities will have the capability to accelerate development of MCMs at all stages of development, enhance preparedness for existing threats, and rapidly respond to emerging threats as part of a medical integrated layered defense. MCMs that benefit from these efforts include: Vaccines for Viral Agents, Vaccines for Bacterial Agents and Toxins, monoclonal antibodies, antibody fragments and conjugates for therapeutic and prophylactic use across all agent classes. Funds to support prioritization and operational readiness were previously provided via individual product development and manufacturing funding lines. The Department is now providing dedicated funds. The CBIPR-ADM return on investment is an increased level of preparedness and responsiveness. In FY24, the CBIPR-ADM program continues to establish and enhance new manufacturing platform technologies and infrastructure that will enable the development of MCMs against chemical and biological threats.

The MCM MFRO postures the DoD to rapidly respond to biological incidents by leveraging partners across Industrial Base, Chemical and Biological Defense Program, and Defense Health Program to reduce time required to onshore materials critical to the rapid production of medical countermeasures. Furthermore, MCM MFRO will increase the use of computational tools and manufacturing controls to optimize development of MCMs for accelerated delivery to the Warfighter. In FY24, MCM MFRO will increase usage of computational tools and manufacturing controls, initiate optimization of cell productivity, initiate development of starting materials and conduct a process efficiency study.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** EN4 / *Enabling Investments (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) CBIPR-ADM ***Description:*** Establish proven enabling manufacturing technologies at the Department of Defense (DoD) ADM Capability Building. ***FY 2023 Plans:*** Continue technology transfer and enhancement of manufacturing technologies to support manufacture medical countermeasures (MCM) development against biological threats. Manufacturing technologies can come from any government sources (including the Joint Science & Technology Office for Chemical Biological Defense (JSTO-CBD), the Walter Reed Army Institute of Research (WRAIR), the Biomedical Advanced Research and Development Authority (BARDA), etc. when mature enough for BA4 funding) and other external sources and targets of opportunity from industry. ***FY 2024 Plans:*** Continue activities to technology-transfer and establish new manufacturing technologies and infrastructure that support the development and manufacturing of medical countermeasures (MCMs) at the DoD-ADM Facility and strategic partners. This approach ensures that the DoD's efforts are not limited to a single facility. New manufacturing technologies can come from any government sources (including JSTO, WRAIR, BARDA, etc. when mature enough for BA4 funding) and/or other external sources and targets of opportunity from industry. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor change due to routine program adjustments.	-	6.781	9.172
Title: 2) MCM MFRO ***Description:*** Biologics Optimization ***FY 2024 Plans:*** Initiate optimization of computational tools and manufacturing tools to reduce the cost per dose and time to field for medical countermeasures through optimization of cell productivity and control, in order to improve product quality, consistency, and stability. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Additional investment to advance the overarching goals aligned with the 2022 National Biodefense Strategy and Implementation Plan (NBS).	-	-	27.000
Title: 3) MCM MFRO ***Description:*** Small Molecule Synthesis	-	-	10.800

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** EN4 / *Enabling Investments (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
FY 2024 Plans: Initiate development of critical reagents (such as catalysts), repository stockpile of starting materials, and a database for rapid sourcing of starting materials and critical reagents from stockpile or from other sources during a manufacturing surge. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Additional investment to advance the overarching goals aligned with the 2022 National Biodefense Strategy and Implementation Plan (NBS).			
Title: 4) MCM MFRO ***Description:*** Process Improvement/Quality ***FY 2024 Plans:*** Initiate quality release process efficiency study to reduce delays in the manufacturing batch release process. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Additional investment to advance the overarching goals aligned with the 2022 National Biodefense Strategy and Implementation Plan (NBS).	-	-	0.300
Accomplishments/Planned Programs Subtotals	-	6.781	47.272

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• EN5: *Enabling Investments (SDD)*	-	13.392	13.835	-	13.835	13.884	14.179	14.197	14.261	Continuing	Continuing

Remarks

D. Acquisition Strategy

CHEM BIO INCIDENT PREPAREDNESS AND RESPONSE - (CBIPR-ADM)

CBIPR-ADM establishes new capability-building efforts such as manufacturing platforms using U.S. Food & Drug Administration (FDA) known technologies and infrastructure improvements that will enable new additional medical countermeasure (MCM) product development. This line ensures the DOD ADM is in a state of operational readiness so that it can continue to be an enduring domestic MCM manufacturing capability that provides the DoD with priority access. In FY24 CBIPR-ADM will implement a facility-agnostic approach for tech transferring and enhancing new manufacturing technologies and infrastructure to support the development and manufacturing of MCMs against chemical/biological threats. This approach ensures that these efforts are not limited to a single facility in order to provide rapid response

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** EN4 / *Enabling Investments (ACD&P)*

to known and unknown threats. New manufacturing technologies can come from any government sources (including JSTO, WRAIR, BARDA, etc. when mature enough for BA4 funding) and other external sources and targets of opportunity from industry.

Medical Countermeasures Manufacturing Optimization

MCM MFRO will leverage industrial base partnerships and buy down risks to manufacturing by prioritizing onshoring of key chemicals (active pharmaceutical ingredients (API) and key starting materials (KSMs)) critical to produce DoD-unique enhanced biodefense medical countermeasure needs. Additionally, increased use of computational tools and manufacturing controls will reduce the risk associated with cost per dose and time to field, as well as enhance FDA regulatory compliance.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** EN4 / *Enabling Investments (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CBIPR-ADM - Capability Establishment (Establish "Cell Free" Manufacturing Platform)	C/CPFF	Ology : Alachua, FL	-	0.000		6.473	Dec 2022	8.830	Dec 2023	-		8.830	Continuing	Continuing	0.000
CBIPR-ADM - Product Management Support	C/CPFF	Various : N/A	-	0.000		0.308	Dec 2022	0.342	Jan 2024	-		0.342	Continuing	Continuing	0.000
MCM MFRO - Development	Various	TBD : N/A	-	0.000		0.000		35.052	Dec 2024	-		35.052	Continuing	Continuing	0.000
		Subtotal	-	0.000		6.781		44.224		-		44.224	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MCM MFRO - Program Management	Various	Various : N/A	-	0.000		0.000		3.048	Dec 2024	-		3.048	Continuing	Continuing	0.000
		Subtotal	-	0.000		0.000		3.048		-		3.048	Continuing	Continuing	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.000		6.781		47.272		-		47.272	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** EN4 / *Enabling Investments (ACD&P)*

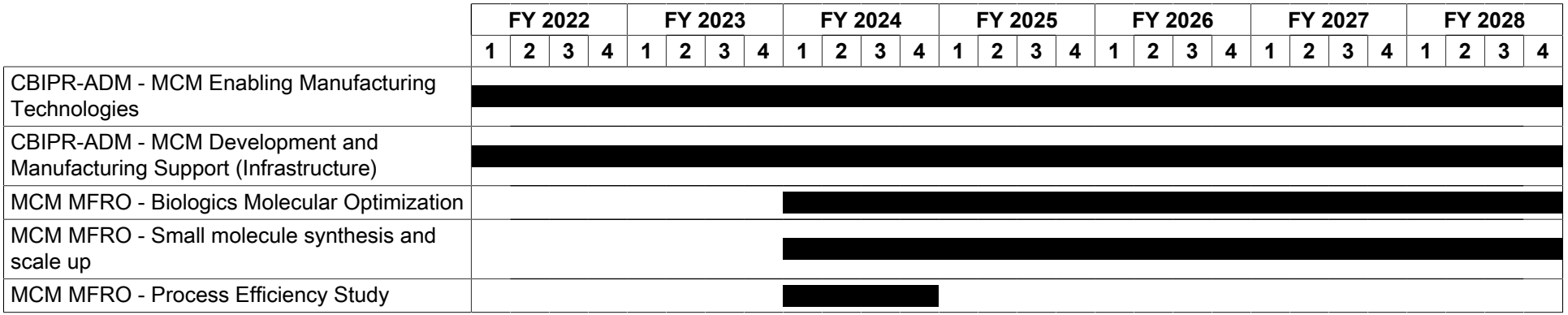

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** EN4 / *Enabling Investments (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CBIPR-ADM - MCM Enabling Manufacturing Technologies	1	2022	4	2028
CBIPR-ADM - MCM Development and Manufacturing Support (Infrastructure)	1	2022	4	2028
MCM MFRO - Biologics Molecular Optimization	1	2024	4	2028
MCM MFRO - Small molecule synthesis and scale up	1	2024	4	2028
MCM MFRO - Process Efficiency Study	1	2024	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) CA4 / *Contamination Avoidance (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
CA4: *Contamination Avoidance (ACD&P)*	-	37.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.189
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Contamination Avoidance Advanced Component Development and Prototypes (ACD&P) Project supports reconnaissance, detection, identification, and hazard prediction equipment, hardware, and software. After FY 2022, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. CA4 efforts in FY 2022 progress to Project UN4. This restructuring provides standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) Advanced Emerging Threat Defense (AET DEFENSE) **Progresses to UN4 in FY2023**,
(2) CBRN Support to Command and Control (CSC2) **Progresses to UN4 in FY2023**, and
(3) Compact Vapor Chemical Agent Detector (CVCAD) **Progresses to UN4 in FY2023**

The AET DEFENSE program continues to address the highest priority CBRN gaps and supports the Chemical Biological Defense Program (CBDP) Strategic Line of Effort to meet current and emerging threats by anticipating CB hazards and developing capabilities to counter emerging and future threats. The AET Defense program collaborates with the Joint Services, interagency, and international partners to align RDT&E resources to determine readiness against emerging threats, to include NTAs, such as Novichoks and Pharmaceutical-Based Agents (PBA) (e.g. synthetic opioids), emerging biological threats, and other advanced and emerging threats as they are identified across the entire CBDP enterprise portfolio.

CSC2 is the overarching System of Systems (SoS) that provides for the interoperability and integration of CBRN and Non CBRN sensors to achieve needed situational awareness and understanding to accomplish CBRN integrated layered defense, interdependent with Service and Mission Partner Common Operating Environments and Computing Environments (CoE/CE). This is not achievable in current Command and Control constructs. CSC2 addresses this objective by establishing a Service and Joint All Domain Command and Control (JADC2) compatible CBRN CoE architecture and deployment environments.

This consolidates CSC2 with Modernization CBRN Information Systems (MOD CBRN IS) in order to gain efficiencies of managing funding and programmatic efforts under one line. Additionally, it allows the consolidation of continuous engineering for the currently deployed legacy CBRN information systems (Joint Effects Model (JEM)/Joint Warning and Reporting Network (JWARN), CBRN Information System (CBRN IS)). This maintains the stopgap capability for CBRN warning, reporting, and effects modeling while setting conditions for the sun setting of the legacy capabilities replaced by CSC2 capabilities beginning in FY27. The approach to consolidate simplifies software BA7 management under one line (like the BA7 in other CBDP commodity areas) and synchronizes the sunset of legacy JEM and JWARN capabilities as replacement capabilities are deployed through CSC2.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

CVCAD is designed to be an unobtrusive, low-profile chemical detection capability that will continuously, and autonomously, monitor and alert general and specialized units to an unsafe environment without further burdening the warfighters payload or interfering with the primary mission. The small form factor (less than 2 lbs.) is amenable to both man-worn and unmanned aerial or ground system operations to enable timely personnel protective action and other force protection decisions. In FY24 after milestone B decisions competing prototypes will undergo down selects based on performance and a Technology Readiness Assessment and execute engineering manufacturing and development phase and conduct development and operational testing.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) AET DEFENSE ***Description:*** Program Management, Product Development, Support and Testing to demonstrate and evaluate technologies to assess performance against advanced and emerging threats.	10.074	-	-
Title: 2) CSC2 ***Description:*** Automated Warning, Reporting , Analysis and decision support tools. Service Common Operating Environment (COE) and CoE Convergence.	4.400	-	-
Title: 3) CSC2 ***Description:*** Program Management and Support	2.321	-	-
Title: 4) CSC2 ***Description:*** Product Development, Integration and Sensor Management	14.174	-	-
Title: 5) CVCAD ***Description:*** Prototype Advanced Development, Testing & Program Management	6.220	-	-
Accomplishments/Planned Programs Subtotals	37.189	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• CA5: *Contamination Avoidance (SDD)*	84.967	-	-	-	-	-	-	-	-	0.000	84.967
• UN4: *Understand (ACD&P)*	-	52.708	61.638	-	61.638	64.399	48.874	41.264	38.169	Continuing	Continuing
• UN5: *Understand (SDD)*	-	126.071	182.726	-	182.726	137.991	127.671	108.908	68.088	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• SA0005: *CBRN Sensor Integration On Robotic Platforms (CSIRP)*	3.461	2.099	-	-	-	-	-	-	-	0.000	6.063
• SA0050: *CBRN Support to C2 (CSC2)*	1.750	11.803	2.186	-	2.186	2.257	2.366	2.451	2.549	Continuing	Continuing

Remarks

D. Acquisition Strategy

ADVANCED AND EMERGING THREAT DEFENSE (AET DEFENSE)

The AET DEFENSE program will use a variety of acquisition approaches to survey, develop, assess, and rapidly field technologies to inform and fill advanced and emerging threat gaps. The program will utilize an existing Multiple Award Indefinite Delivery Indefinite Quantify Task Order Contract to provide technical support to studies and assessments of performance against emerging threats. For Program of Record (PoR) systems currently in development that will be assessed for performance against emerging threats, those PoR's existing contracts will be modified to incorporate development engineering and test support for emerging threat capability. The AET DEFENSE program will utilize OTAs for system development and prototyping activities and Government Agencies and Federally Funded Research and Development Centers to provide development, testing and technical support.

CBRN SUPPORT TO C2 (CSC2)

CSC2 focuses on technology maturation, demonstration, integration and transitioning early warning capability sets to fielded Chemical Biological Defense Program (CBDP) programs of record to combat emerging and potentially urgent threats within Joint All Domain Operations. Contracting strategy includes the use of Other Transaction Authority Research & Development and prototyping. Annual development cycles and capability drops are requested and validated by all Department of Defense (DoD) Services in the Assistant Secretary of Defense (NCB/CB) Integrated Early Warning (IEW) Campaign Plan as well as approved capability development packages designated through the Joint Requirements Office and prioritized based on National Defense Strategy and National Military Strategy goals. Current strategy also collaborates with multi-agency partners to obtain synergy and interoperability across the areas of sensor data analytics, integrated early warning, and protect to warn/protect to treat capabilities. Efforts within CSC2 are driven by Service Chemical Biological Radiological and Nuclear (CBRN) capability gaps that are identified on an annual basis and evaluated by CBDP stakeholders; possible solutions and applicable technologies within the CBDP will be experimented, integrated, networked, and deployed through the software acquisition pathway.

COMPACT VAPOR CHEMICAL AGENT DETECTOR (CVCAD)

The CVCAD program will use the Combating Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) contract vehicle to transition four technologies from Science & Technology (S&T) into the program of record. This streamlined acquisition approach is broken into four phases uses one contracting mechanism to

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

award one contract with follow-on acquisition awards; Phase I S&T advanced development, Phase II technology transition maturation evaluation, Phase III competitive prototyping down select and Engineering decision. Phase IV will execute Production and Development for low rate initial production systems.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - HW C - Emerging threat detection/ decontamination/protection capability prototyping	Various	Various : N/A	-	1.436	Dec 2021	0.000		0.000		-		0.000	0.000	1.436	0.000
AET DEFENSE - SW C - Spectral library enhancements	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	2.021	Nov 2021	0.000		0.000		-		0.000	0.000	2.021	0.000
AET DEFENSE - SW C - Hazard awareness tool updates	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	1.376	Dec 2021	0.000		0.000		-		0.000	0.000	1.376	0.000
AET DEFENSE - SW C - Physiological Monitoring Architecture	MIPR	Various : N/A	-	2.190	Aug 2022	0.000		0.000		-		0.000	0.000	2.190	0.000
CSC2 - HW C - Contractor Product Development Team Labor	MIPR	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	0.500	Feb 2022	0.000		0.000		-		0.000	0.000	0.500	0.000
CSC2 - HW C - Operational Capability	C/CPAF	Various : N/A	-	12.074	Feb 2022	0.000		0.000		-		0.000	0.000	12.074	0.000
CSC2 - HW - C Government Product Development Team Labor	MIPR	Various : N/A	-	2.500	Oct 2021	0.000		0.000		-		0.000	0.000	2.500	0.000
CVCAD - HW S - Government Team Labor	Various	Various : N/A	0.581	0.690	Nov 2021	0.000		0.000		-		0.000	0.000	1.271	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CVCAD - HW S - Advanced Prototype Development	C/FFP	Advanced Technologies International : Summerville, SC	-	3.856	Oct 2021	0.000		0.000		-		0.000	0.000	3.856	0.000
		Subtotal	0.581	26.643		0.000		0.000		-		0.000	0.000	27.224	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CSC2 - ES C - Contractor Support	C/CPAF	TBD : N/A,	-	0.800	May 2022	0.000		0.000		-		0.000	0.000	0.800	0.000
CSC2 - ES C - Support	MIPR	TBD : N/A,	-	0.700	May 2022	0.000		0.000		-		0.000	0.000	0.700	0.000
CVCAD - ES S - Other Government Agency Developmental Support	MIPR	Various : N/A	-	0.600	Nov 2021	0.000		0.000		-		0.000	0.000	0.600	0.000
		Subtotal	-	2.100		0.000		0.000		-		0.000	0.000	2.100	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - DTE S - Technology Assessments	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	1.556	Dec 2021	0.000		0.000		-		0.000	0.000	1.556	0.000
CSC2 - DTE C - Technical/ Operational Demo	MIPR	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-	-	2.000	Jun 2022	0.000		0.000		-		0.000	0.000	2.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		CBRND) : Aberdeen Proving Ground, MD													
CVCAD - DTE S - Chemical Surety Testing	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.440	Aug 2022	0.000		0.000		-		0.000	0.000	0.440	0.000
CVCAD - DTE S - MIL-STD Testing	MIPR	Aberdeen Test Center (ATC) : Aberdeen Proving Ground, MD	-	0.080	Jun 2022	0.000		0.000		-		0.000	0.000	0.080	0.000
		Subtotal	-	4.076		0.000		0.000		-		0.000	0.000	4.076	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - PM/MS S - IPT Support/Program Management	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	1.495	Dec 2021	0.000		0.000		-		0.000	0.000	1.495	0.000
CSC2 - PM/MS C - Program Management Support	MIPR	Various : N/A	-	2.321	Oct 2021	0.000		0.000		-		0.000	0.000	2.321	0.000
CVCAD - PM/MS S - Program Management Support	MIPR	Various : N/A	0.080	0.554	Nov 2021	0.000		0.000		-		0.000	0.000	0.634	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.080	4.370		0.000		0.000		-		0.000	0.000	4.450	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.661	37.189		0.000		0.000		-		0.000	0.000	37.850	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

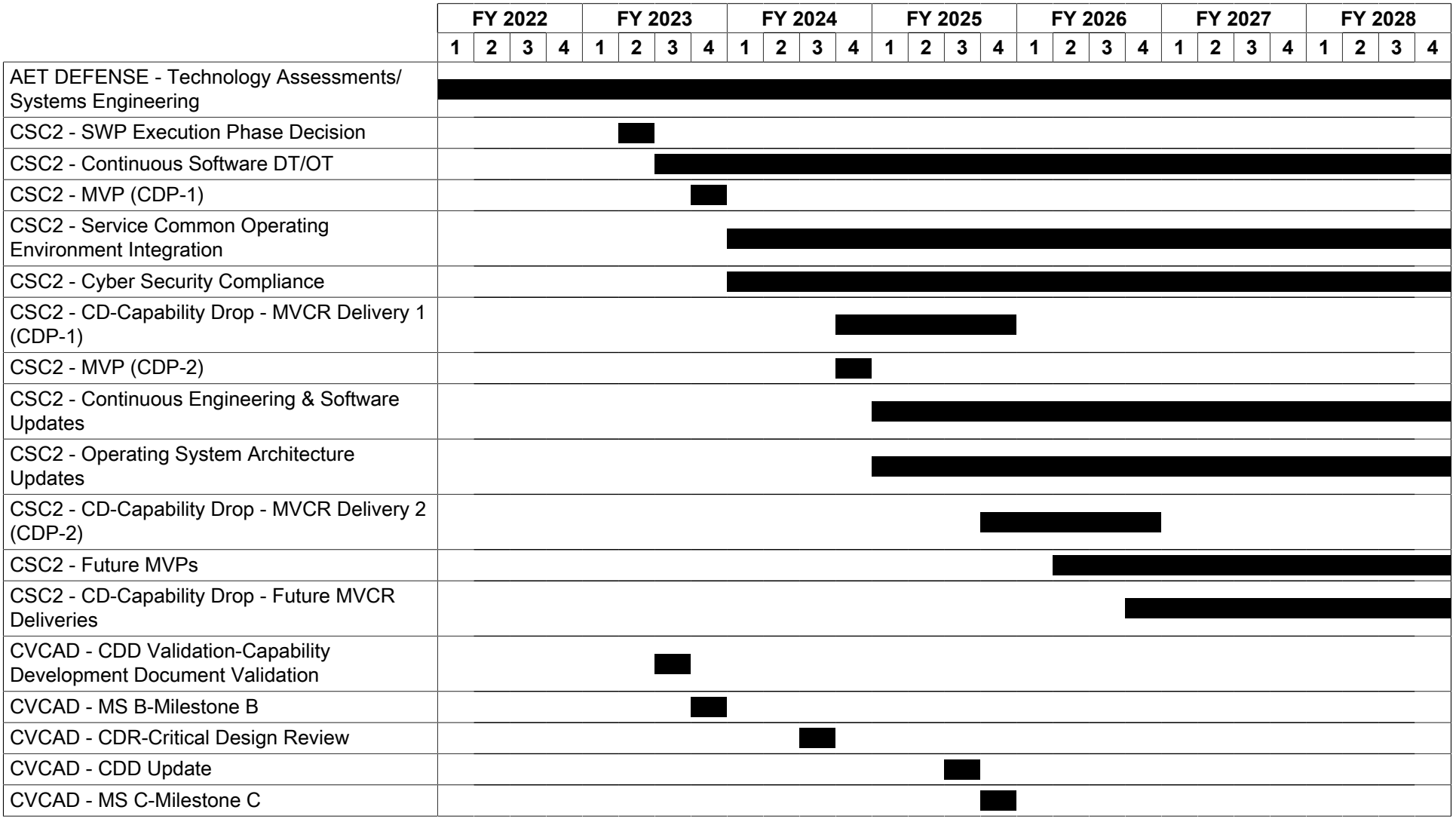

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

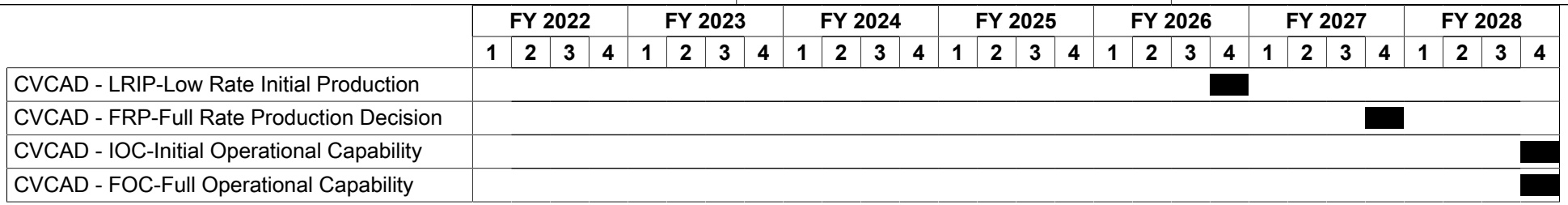

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** CA4 / *Contamination Avoidance (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AET DEFENSE - Technology Assessments/Systems Engineering	1	2022	4	2028
CSC2 - SWP Execution Phase Decision	2	2023	2	2023
CSC2 - Continuous Software DT/OT	3	2023	4	2028
CSC2 - MVP (CDP-1)	4	2023	4	2023
CSC2 - Service Common Operating Environment Integration	1	2024	4	2028
CSC2 - Cyber Security Compliance	1	2024	4	2028
CSC2 - CD-Capability Drop - MVCR Delivery 1 (CDP-1)	4	2024	4	2025
CSC2 - MVP (CDP-2)	4	2024	4	2024
CSC2 - Continuous Engineering & Software Updates	1	2025	4	2028
CSC2 - Operating System Architecture Updates	1	2025	4	2028
CSC2 - CD-Capability Drop - MVCR Delivery 2 (CDP-2)	4	2025	4	2026
CSC2 - Future MVPs	2	2026	4	2028
CSC2 - CD-Capability Drop - Future MVCR Deliveries	4	2026	4	2028
CVCAD - CDD Validation-Capability Development Document Validation	3	2023	3	2023
CVCAD - MS B-Milestone B	4	2023	4	2023
CVCAD - CDR-Critical Design Review	3	2024	3	2024
CVCAD - CDD Update	3	2025	3	2025
CVCAD - MS C-Milestone C	4	2025	4	2025
CVCAD - LRIP-Low Rate Initial Production	4	2026	4	2026
CVCAD - FRP-Full Rate Production Decision	4	2027	4	2027
CVCAD - IOC-Initial Operational Capability	4	2028	4	2028
CVCAD - FOC-Full Operational Capability	4	2028	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) DE4 / *Decontamination (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
DE4: *Decontamination (ACD&P)*	-	14.747	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.747
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the development of Contamination Mitigation (ConMit) systems that reduce operational impact and logistics burden, reduce sustainment costs, increase safety, and minimize environmental effects associated with decontamination and contamination mitigation operations. These efforts align with Chemical, Biological, Radiological, and Nuclear the National Defense Strategy by prioritizing preparedness for war and sustaining Joint Force military advantage and resilient force posture. After FY 2022, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. DE4 efforts in FY 2022 progress to Project MT4. This restructuring provides standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) Chemical, Biological, Radiological, and Nuclear (CBRN) Covers, Coatings and Protective Overlays (C3PO),
(2) Service Equipment Decontamination System (SEDS) **Progresses to MT4 in FY2023**,
(3) Tactical Contamination Mitigation System (TCMS) **Progresses to MT4 in FY2023**, and
(4) Wide Area Decontamination System (WADS)

The Chemical Biological Coverings Coatings and Protective Overlays (C3PO) program, uses a Family of Systems approach to provide contamination mitigation capability to critical equipment and assets prior to a Chemical, Biological, Radiological and Nuclear (CBRN) attack. This mitigates the effects and amount of CBRN contamination exposure allowing the Joint Force to be better prepared for war, maintain a resilient force posture, and remain lethal. These capabilities include CBRN protective covers, coatings, paints, and other preventative measures. In FY23 and beyond, the Chemical Biological Defense Program (CBDP) terminated the program for higher priorities. All programmatic documentation will be archived and the Joint Requirements Office will archive the Draft Capability Development Document.

The Service Equipment Decontamination System (SEDS) program consists of two efforts, Joint SEDS and Special Operations Forces (SOF) Critical Equipment Decontamination (CEDS), the program will develop a capability for use by the Warfighter during the decontamination operations that will provide a quantifiable reduction in the number of personnel experiencing adverse health effects by reducing contamination on equipment, individual combat equipment, and sensitive platform interiors. This capability is needed to sustain both the Joint and SOF by reducing logistical burdens in order to increase tactical agility and sustain a resilient force posture, and align with the National Defense Strategy (NDS). SEDS and CEDS will provide contamination mitigation capabilities for critical equipment that have been exposed to chemical and biological contamination and achieve efficacy levels that allow unprotected post-decontamination exposures for long periods with less than negligible severity effects. In FY24, the Joint SEDS effort will continue through the Engineering and Manufacturing Development (EMD) phase with Developmental Testing (DT) and a Critical Design Review (CDR). FY23 is last year of BA4 funding, program is transitioning to EMD.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

Tactical Containment Mitigation System (TCMS) is a Contamination Mitigation concept and intends to address gaps related to the decontamination of critical equipment and vehicles and it will reduce the time and logistics associated with decontamination. TCMS will limit the spread and mitigate the effects of Chemical, Biological, and Radiological (CBR) contamination to allow warfighters to continue their mission for an extended period of time in a high threat, CBR contaminated environment. The Program's intent is to mitigate the risk to personnel and limit the potential spread of CBR contamination by minimizing contact and transfer hazards. TCMS will greatly enhance or eliminate the need for subsequent decontamination to mitigate contamination on military equipment. Following application of TCMS, combined with weathering, Mission Oriented Protective Posture (MOPP) levels may be reduced without further decontamination, depending on the surface or material being decontaminated and the agent. In FY24 the program will continue prototype testing and complete technical reviews in support of the MS B/Engineering Manufacturing & Development (EMD) Phase. TCMS was a new start in FY22 and FY24 is the last year of BA4 funding as the program transitions to the EMD Phase.

The Wide Area Decontamination System (WADS), a new start program in FY22, will provide contamination mitigation capabilities against chemical and biological warfare agents on various types of terrain and exterior of fixed site facilities. The WADS will be employed to conduct Airport of Debarkation, Seaport of Debarkation, Terrain, Fix Site and Anti-access/Anti-denial decontamination operations. The WADS will be a replacement for the M12. The M12A1, Power Driven Decontamination Apparatus (PDDA) system is an Army lead program that consists of a pump unit, a 500 gallon tank unit, and a 600 gallon per hour liquid fuel water heater with a spray bar mounted to the system for terrain decontamination. The WADS will use the principles of the PDDA to further enhance terrain decontamination capabilities. In FY23 and beyond, the Chemical Biological Defense Program (CBDP) reduced the program for higher priorities. All programmatic documentation will be archived and the Joint Requirements Office will enter the Draft Capability Development Document in the Knowledge Management/Decision Support tool for Archiving.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) C3PO ***Description:*** Prototype Development	2.893	-	-
Title: 2) SEDS - JOINT ***Description:*** Milestone (MS) B support and Prototype Development.	4.339	-	-
Title: 3) SEDS - SOF ***Description:*** Milestone (MS) B Support and Prototype Development	4.485	-	-
Title: 4) TCMS ***Description:*** Milestone (MS) A support and Prototype Development	2.354	-	-
Title: 5) WADS ***Description:*** Prototype Development and Evaluation	0.676	-	-
Accomplishments/Planned Programs Subtotals	14.747	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• DE5: *Decontamination (SDD)*	7.485	-	-	-	-	-	-	-	-	0.000	7.485
• MT4: *Mitigate (ACD&P)*	-	17.302	28.785	-	28.785	20.885	15.433	13.369	-	Continuing	Continuing
• MT5: *Mitigate (SDD)*	-	74.225	88.441	-	88.441	92.279	91.431	87.773	93.250	Continuing	Continuing
• PHM007: *Service Equipment Decontamination System (SEDS)*	-	-	-	-	-	14.028	22.531	24.920	13.050	Continuing	Continuing
• PHM042: *Tactical Contamination Mitigation System (TCMS)*	-	-	-	-	-	-	1.250	5.072	5.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

CBRN COVERS COATINGS AND PROTECTIVE OVERLAYS (C3PO)

The Chemical Biological Coverings Coatings and Protective Overlays (C3PO) program acquisition approach involves testing fielded material against live chemical warfare agents and biological warfare agents. The C3PO program will evaluate Government and Commercial Off the Shelf options to reduce development costs. The program will test Government and Commercial Off the Shelf options against live chemical warfare agents and biological warfare agents, conduct regular user evaluations to identify human system integration issues, and will conduct testing to ensure the system meets military standards. The C3PO program funding ends in FY22 and all program contract, test, and acquisition documentation will be archived and the Joint Requirements Office will archive the Draft Capability Development Document.

SERVICE EQUIPMENT DECONTAMINATION SYSTEM (SEDS)

The Joint Service Equipment Decontamination System (SEDS) and Special Operations Forces (SOF) Critical Equipment Decontamination System (CEDS) program will utilize the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to design and develop state of the art equipment using competitive and iterative prototyping. The program will test prototypes against live chemical warfare agents and biological warfare agents, conduct reliability, availability, and maintainability testing, conduct regular user evaluations to identify human system integration issues, and will conduct testing to ensure the system meets military standards. The program will use the Request for Prototype Proposals (RPP), under the CWMD OTA, followed by Prototype Agreement awards. Milestone B approval is planned in FY23 for the United States Special Operations Command (SOCOM) and Joint Service variant. During the FY24-28 FYDP the SOCOM CEDS effort is planning to achieve a successful Milestone C decision and enter Full Rate Production, leading to an initial operational capability and reaching full operational capability by FY28.

TACTICAL CONTAMINATION MITIGATION SYSTEM (TCMS)

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

The Tactical Containment Mitigation System (TCMS) program will develop the equipment, processes and procedures for contamination mitigation related to post-incident operations in a Chemical Biological Radiological and Nuclear (CBRN) contaminated environment. The acquisition strategy includes market research through both Requests for Information (RFIs) and a call for White Papers through an Other Transaction Authority (OTA) contracting approach. Data collected will inform a Milestone A decision in FY23. The OTA vehicle will also be used to request prototypes, which will undergo technology demonstrations and Early Field testing, followed by an analysis to determine the most suitable candidate. Results of Prototyping will inform Milestone B and Request for Proposals (RFPs) followed by developmental and operational testing and Milestone C/Full Rate Production Approval.

WIDE AREA DECONTAMINATION SYSTEM (WADS)

The Wide Area Decontamination System (WADS) program will develop the equipment, processes and procedures for contamination mitigation of various types of terrain and the exterior of Department of Defense (DoD) fixed site facilities contaminated by chemical, biological, and radiological agents. The acquisition strategy includes market research through both Requests for Information (RFIs) and a call for White Papers through an Other Transaction Authority (OTA) contracting approach. The OTA vehicle will also be used to request prototypes, which will undergo technology demonstrations and Early Field testing, followed by an analysis to determine the most suitable candidate. The WADS program funding ends in FY22 and all program contract, test, and acquisition documentation will be archived and the Joint Requirements Office will enter the Draft Capability Development Document into Knowledge Management/Decision Support tool for archiving.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C3PO - HW S - Advanced Product Development	Various	Various : N/A	0.203	0.208	Nov 2021	0.000		0.000		-		0.000	0.000	0.411	0.000
SEDS - HW S - SEDS - Product Development	SS/FFP	TBD : N/A	-	0.896	Aug 2022	0.000		0.000		-		0.000	0.000	0.896	0.000
SEDS - CEDS	C/FFP	Various : N/A	-	0.992	Aug 2022	0.000		0.000		-		0.000	0.000	0.992	0.000
TCMS - HW S - Product Development	C/FFP	TBD : N/A	-	0.784	Sep 2022	0.000		0.000		-		0.000	0.000	0.784	0.000
WADS - HW C - Autonomous Contamination Mitigation Prototype	C/FFP	TBD : N/A	-	0.676	Sep 2022	0.000		0.000		-		0.000	0.000	0.676	0.000
		Subtotal	0.203	3.556		0.000		0.000		-		0.000	0.000	3.759	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C3PO - ILS S - Logistics, Engineering and IPT Support	MIPR	Various : N/A	0.525	0.434	Nov 2021	0.000		0.000		-		0.000	0.000	0.959	0.000
SEDS - ES S - SEDS - Logistics, Engineering and IPT Support	MIPR	Various : N/A	0.066	0.651	Oct 2021	0.000		0.000		-		0.000	0.000	0.717	0.000
SEDS - CEDS	MIPR	Various : N/A	-	0.852	Nov 2021	0.000		0.000		-		0.000	0.000	0.852	0.000
TCMS - ES S - Logistics, Engineering and IPT Support	MIPR	Various : N/A	-	0.353	Jun 2022	0.000		0.000		-		0.000	0.000	0.353	0.000
		Subtotal	0.591	2.290		0.000		0.000		-		0.000	0.000	2.881	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C3PO - OTHT S - Other S - Developmental Testing and Test Planning Support	MIPR	Various : N/A	0.784	2.035	Dec 2021	0.000		0.000		-		0.000	0.000	2.819	0.000
SEDS - OTHT S - SEDS - T&E IPR Test Planning	MIPR	Various : N/A	0.562	2.459	Nov 2021	0.000		0.000		-		0.000	0.000	3.021	0.000
SEDS - CEDS	MIPR	Various : N/A	-	2.316	Sep 2022	0.000		0.000		-		0.000	0.000	2.316	0.000
TCMS - OTHT S - Prototype T&E IPR Test Planning	MIPR	Various : N/A	-	1.041	Jun 2022	0.000		0.000		-		0.000	0.000	1.041	0.000
		Subtotal	1.346	7.851		0.000		0.000		-		0.000	0.000	9.197	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C3PO - PM/MS S - PM/MS S- Program Management Support	MIPR	Various : N/A	0.131	0.216	Nov 2021	0.000		0.000		-		0.000	0.000	0.347	0.000
SEDS - PM/MS S - SEDS - Program Management Support	MIPR	Various : N/A	0.251	0.324	Jan 2022	0.000		0.000		-		0.000	0.000	0.575	0.000
SEDS - CEDS	MIPR	Various : N/A	-	0.334	Nov 2021	0.000		0.000		-		0.000	0.000	0.334	0.000
TCMS - PM/MS S - Program Management Support	Various	TBD : N/A	-	0.176	May 2022	0.000		0.000		-		0.000	0.000	0.176	0.000
		Subtotal	0.382	1.050		0.000		0.000		-		0.000	0.000	1.432	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.522	14.747		0.000		0.000		-		0.000	0.000	17.269	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

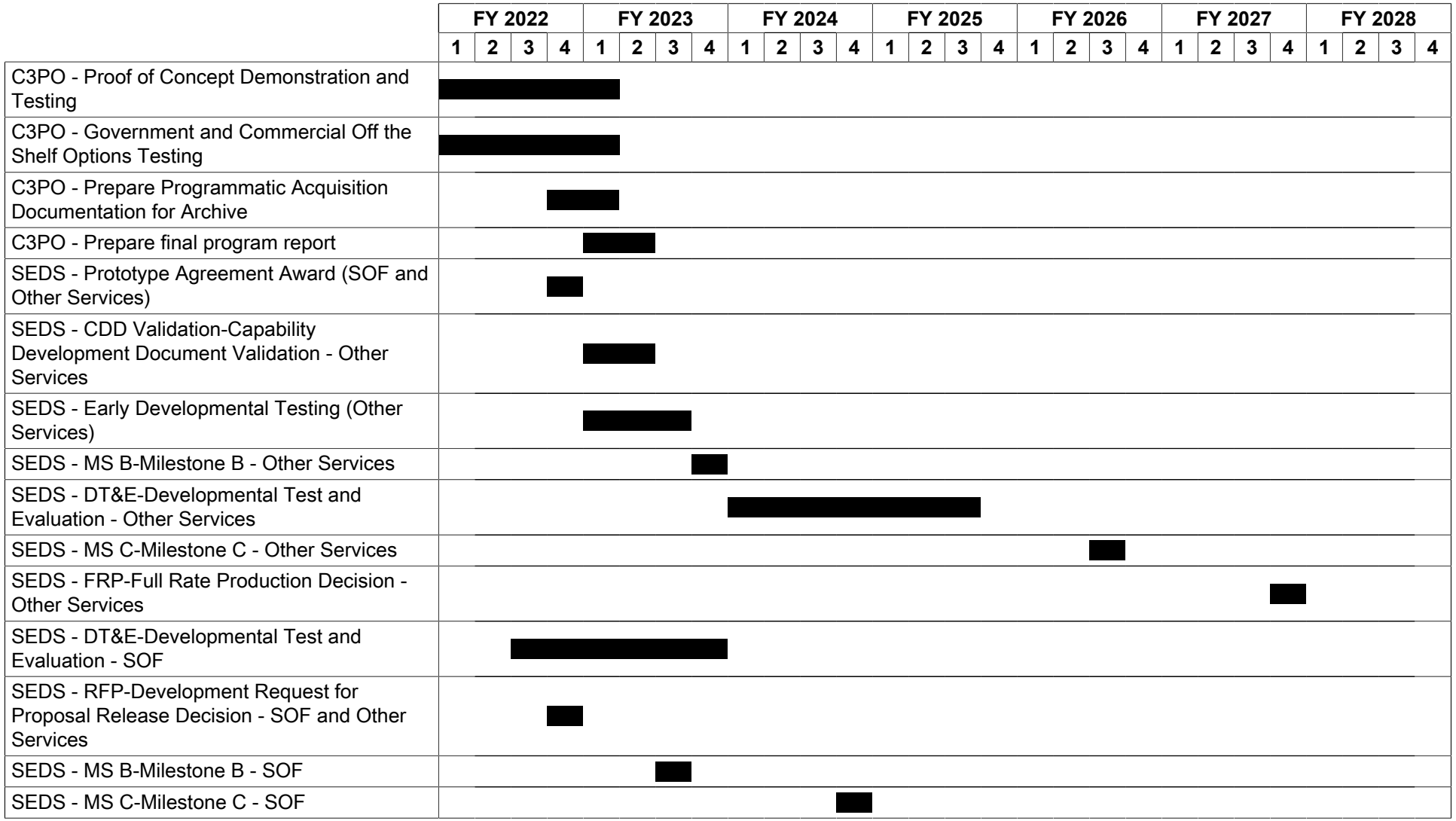

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

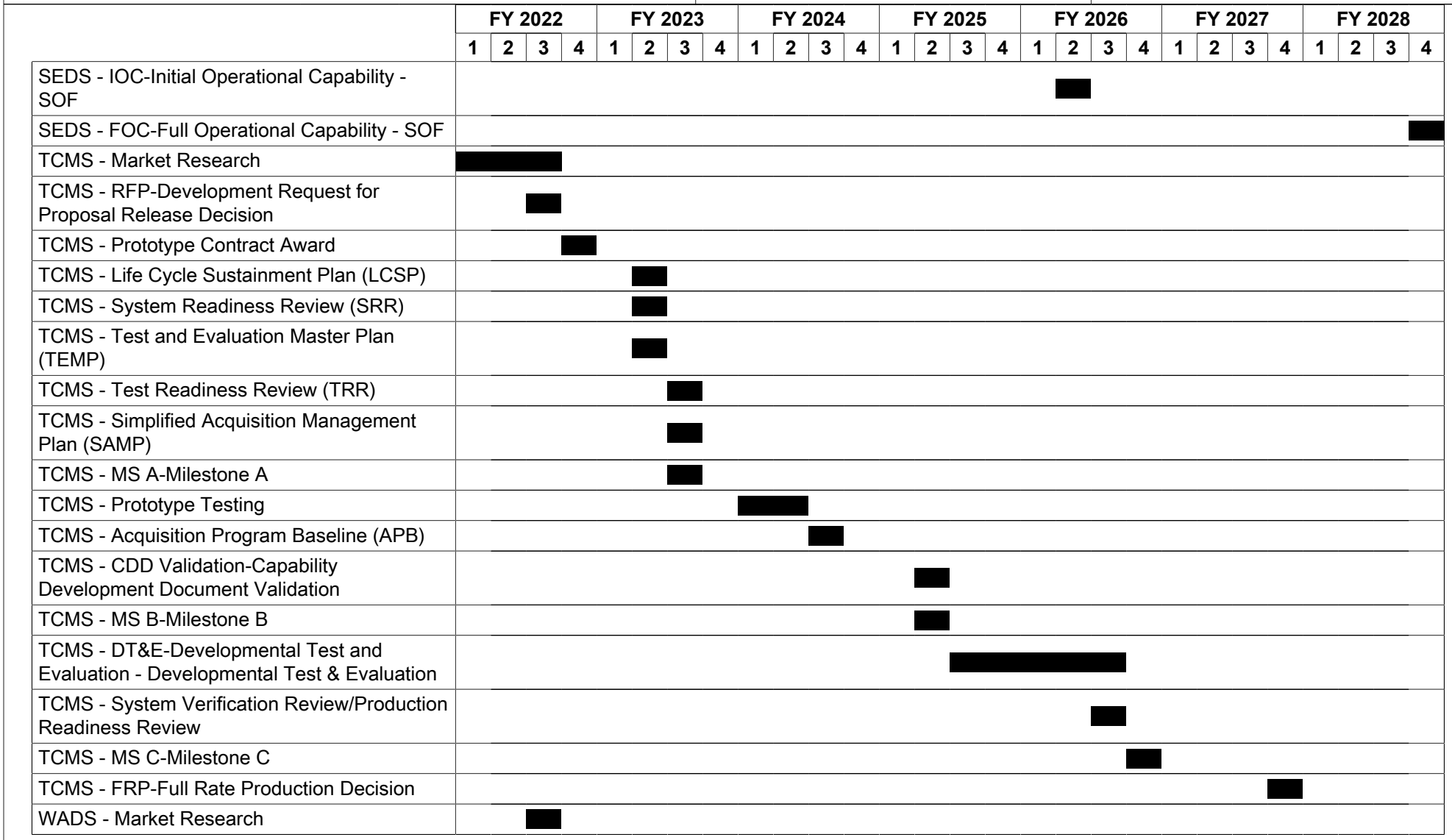

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

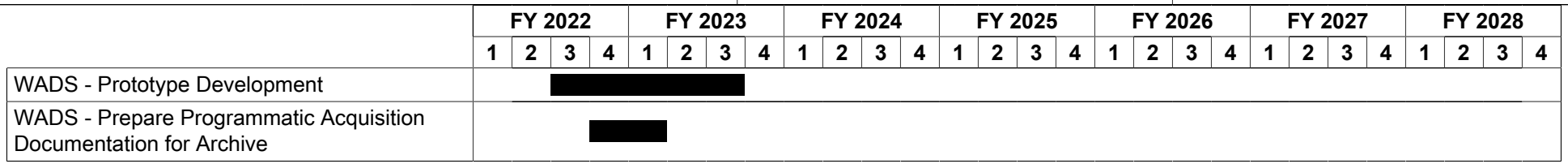

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
C3PO - Proof of Concept Demonstration and Testing	1	2022	1	2023
C3PO - Government and Commercial Off the Shelf Options Testing	1	2022	1	2023
C3PO - Prepare Programmatic Acquisition Documentation for Archive	4	2022	1	2023
C3PO - Prepare final program report	1	2023	2	2023
SEDS - Prototype Agreement Award (SOF and Other Services)	4	2022	4	2022
SEDS - CDD Validation-Capability Development Document Validation - Other Services	1	2023	2	2023
SEDS - Early Developmental Testing (Other Services)	1	2023	3	2023
SEDS - MS B-Milestone B - Other Services	4	2023	4	2023
SEDS - DT&E-Developmental Test and Evaluation - Other Services	1	2024	3	2025
SEDS - MS C-Milestone C - Other Services	3	2026	3	2026
SEDS - FRP-Full Rate Production Decision - Other Services	4	2027	4	2027
SEDS - DT&E-Developmental Test and Evaluation - SOF	3	2022	4	2023
SEDS - RFP-Development Request for Proposal Release Decision - SOF and Other Services	4	2022	4	2022
SEDS - MS B-Milestone B - SOF	3	2023	3	2023
SEDS - MS C-Milestone C - SOF	4	2024	4	2024
SEDS - IOC-Initial Operational Capability - SOF	2	2026	2	2026
SEDS - FOC-Full Operational Capability - SOF	4	2028	4	2028
TCMS - Market Research	1	2022	3	2022
TCMS - RFP-Development Request for Proposal Release Decision	3	2022	3	2022
TCMS - Prototype Contract Award	4	2022	4	2022
TCMS - Life Cycle Sustainment Plan (LCSP)	2	2023	2	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** DE4 / *Decontamination (ACD&P)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
TCMS - System Readiness Review (SRR)	2	2023	2	2023
TCMS - Test and Evaluation Master Plan (TEMP)	2	2023	2	2023
TCMS - Test Readiness Review (TRR)	3	2023	3	2023
TCMS - Simplified Acquisition Management Plan (SAMP)	3	2023	3	2023
TCMS - MS A-Milestone A	3	2023	3	2023
TCMS - Prototype Testing	1	2024	2	2024
TCMS - Acquisition Program Baseline (APB)	3	2024	3	2024
TCMS - CDD Validation-Capability Development Document Validation	2	2025	2	2025
TCMS - MS B-Milestone B	2	2025	2	2025
TCMS - DT&E-Developmental Test and Evaluation - Developmental Test & Evaluation	3	2025	3	2026
TCMS - System Verification Review/Production Readiness Review	3	2026	3	2026
TCMS - MS C-Milestone C	4	2026	4	2026
TCMS - FRP-Full Rate Production Decision	4	2027	4	2027
WADS - Market Research	3	2022	3	2022
WADS - Prototype Development	3	2022	3	2023
WADS - Prepare Programmatic Acquisition Documentation for Archive	4	2022	1	2023

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) IP4 / *Individual Protection (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
IP4: *Individual Protection (ACD&P)*	-	4.748	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.748
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project includes the development of next generation individual protective ensembles (e.g., suits, boots, and gloves) that enable the Joint Forces to survive and continue the mission in Chemical, Biological, and Radiological (CBR) contaminated environments. After FY 2022, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. IP4 efforts in FY 2022 progress to Project PT4. This restructuring provides standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) UIPE FoS Gloves **Progresses to PT5 in FY2023**

Uniform Integrated Protective Ensemble (UIPE) Family of Systems (FoS) Gloves provides percutaneous protection to the Warfighter against traditional and non-traditional Chemical, Biological, Radiological and Nuclear (CBRN) threats. UIPE FoS Gloves provides improved comfort, tactility and dexterity, and for some mission profiles advanced features such as touch screen and flame resistance. In FY22, UIPE FoS Gloves will finalize UIPE FoS Glove prototype development and testing for multiple mission profiles (General Purpose, Aviation Light and Aviation Heavy Variants) and conduct Developmental Testing (DT) events on mature prototypes. FY22 is the last year of BA4 funding.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) UIPE FOS GLOVES ***Description:*** Development of the Next Generation Protective Glove	4.748	-	-
Accomplishments/Planned Programs Subtotals	4.748	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• IP5: *Individual Protection (SDD)*	18.690	-	-	-	-	-	-	-	-	0.000	18.690
• PT5: *Protect (SDD)*	-	87.923	97.975	-	97.975	69.858	66.259	52.871	67.776	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** IP4 / *Individual Protection (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• PHM032: *Uniform Integrated Protective Ensemble FOS Gloves (UIPE FOS GLOVES)*	-	-	4.978	-	4.978	6.215	7.974	8.328	8.926	Continuing	Continuing

Remarks

D. Acquisition Strategy

UNIFORM INTEGRATED PROTECTIVE ENSEMBLE FOS GLOVES (UIPE FOS GLOVES)

Uniform Integrated Protective Ensemble (UIPE) Family of Systems (FoS) Glove program conducted market research through both Requests For Information (RFIs) and a call for White Papers through an Other Transaction Authority (OTA) contracting approach. Eight white papers were deemed acceptable and will be pursued through a Mid-Tier Acquisition Rapid Prototyping strategy. Candidate technologies will undergo Early User Tests/Wear events and material and system level testing to identify available capabilities as well as Analytical framework analyses to determine the most suitable solution(s) per mission profile.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) IP4 / *Individual Protection (ACD&P)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FOS GLOVES - HW C - Prototype Development	C/CPFF	ATI Solutions, Inc. : Tysons Corner, VA	0.100	0.033	Jan 2022	0.000		0.000		-		0.000	0.000	0.133	0.000
		Subtotal	0.100	0.033		0.000		0.000		-		0.000	0.000	0.133	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FOS GLOVES - ES S - Engineering and Technical IPT Support / SME Support	MIPR	Various : N/A	0.113	0.712	Nov 2021	0.000		0.000		-		0.000	0.000	0.825	0.000
		Subtotal	0.113	0.712		0.000		0.000		-		0.000	0.000	0.825	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FOS GLOVES - DTE C - Prototype Testing & Test Support	MIPR	Various : N/A	0.241	3.648	Nov 2021	0.000		0.000		-		0.000	0.000	3.889	0.000
		Subtotal	0.241	3.648		0.000		0.000		-		0.000	0.000	3.889	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FOS GLOVES - PM/MS C - Program Management Support	Various	Various : N/A	0.040	0.355	Nov 2021	0.000		0.000		-		0.000	0.000	0.395	0.000
		Subtotal	0.040	0.355		0.000		0.000		-		0.000	0.000	0.395	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** IP4 / *Individual Protection (ACD&P)*	

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.494	4.748		0.000		0.000		-		0.000	0.000	5.242	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** IP4 / *Individual Protection (ACD&P)*

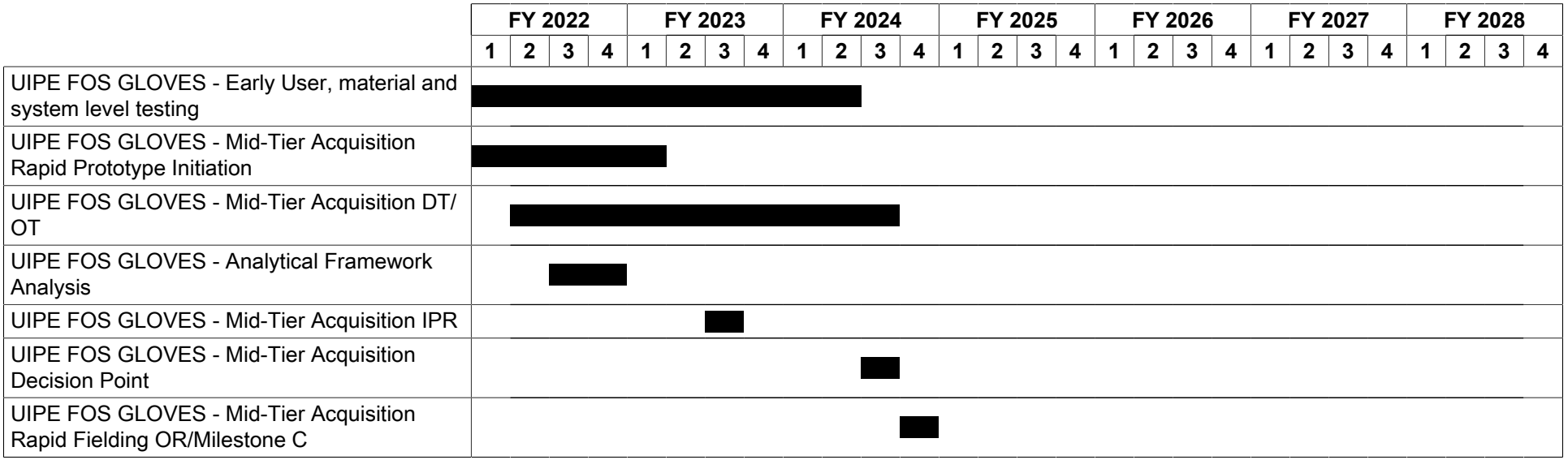

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** IP4 / *Individual Protection (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
UIPE FOS GLOVES - Early User, material and system level testing	1	2022	2	2024
UIPE FOS GLOVES - Mid-Tier Acquisition Rapid Prototype Initiation	1	2022	1	2023
UIPE FOS GLOVES - Mid-Tier Acquisition DT/OT	2	2022	3	2024
UIPE FOS GLOVES - Analytical Framework Analysis	3	2022	4	2022
UIPE FOS GLOVES - Mid-Tier Acquisition IPR	3	2023	3	2023
UIPE FOS GLOVES - Mid-Tier Acquisition Decision Point	3	2024	3	2024
UIPE FOS GLOVES - Mid-Tier Acquisition Rapid Fielding OR/Milestone C	4	2024	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program											Date: March 2023	
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*				Project (Number/Name) MB4 / *Medical Biological Defense (ACD&P)*			
COST ($ in Millions)	**Prior Years**	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**Cost To Complete**	**Total Cost**
MB4: *Medical Biological Defense (ACD&P)*	-	46.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	46.791
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project includes Medical Countermeasure platform technologies, Medical Countermeasures (vaccines and therapeutics), development of reagents, assays, diagnostic equipment, biosurveillance and supporting efforts. After FY 2022, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. MB4 efforts in FY 2022 progress to Projects EN4 and PT4. This restructuring provides standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

(1) COVID Therapies Monoclonal Antibodies (COVID TX MAB) **Progresses to PT4 in FY2023**,
(2) Validated Nucleic Acid Vaccine Construction (COVID VAC) **Progresses to PT4 in FY2023**,
(3) Chem Bio Incident Preparedness and Response - Advanced Development and Manufacturing (CBIPR - ADM) **Progresses to EN4 in FY2023**, and
(4) Medical Countermeasure Platform Technologies (MCMPT) **Progresses to PT4 in FY2023**

The COVID TX MAB program will leverage lessons learned from the COVID response to rapidly discover, manufacture, and clinically evaluate new monoclonal antibodies to deliver short term capabilities against long standing biological threats. Monoclonal antibodies are a proven technology and first line of defense for many biological threats. In FY22, COVID TX MAB will target the discovery, identification and small scale manufacture of monoclonal antibodies (mAbs), with sufficient material to support non-clinical and clinical testing. In FY23 COVID TX MAB transitions to the Accelerated Antibodies-Enhanced Biodefense (AA-ENBD) program.

COVID VAC will leverage lessons learned from the Coronavirus Disease 2019 (COVID-19) response to shorten future emergency response timelines, mitigate impacts of biological threat outbreaks, and create interim capabilities to protect the warfighter. In FY 2022, COVID VAC will leverage interagency, industry, and academia partnerships to develop nucleic acid vaccines. COVID VAC will transition to Vaccine Acceleration by Modular Progression (VAMP) in FY 2023 where VAMP will continue to build the Warfighter's bio-armor to protect against biological threats. In addition to nucleic acid vaccines, VAMP will develop alternative vaccine platform technologies and manage awards utilizing go/no-go checkpoints along the development pathway.

The CBIPR-ADM program ensures prioritization to domestic biopharmaceutical manufacturing capacities, capabilities, and infrastructure (e.g. the DoD-ADM Facility and other strategic partners) that are operationally ready to rapidly develop and manufacture medical countermeasures (MCMs) against current and emerging chemical and biological threats including pandemic response. Prioritization is achieved by establishing and enhancing proven biopharmaceutical manufacturing platform technologies and infrastructure at these facilities. Thus, these facilities will have the capability to accelerate development of MCMs at all stages of development, enhance preparedness for existing threats, and rapidly respond to emerging threats as part of a medical integrated layered defense. MCMs that benefit from these

efforts include: Vaccines for Viral Agents, Vaccines for Bacterial Agents and Toxins, monoclonal antibodies, antibody fragments and conjugates for therapeutic and prophylactic use across all agent classes. Funds to support prioritization and operational readiness were previously provided via individual product development and manufacturing funding lines. The Department is now providing dedicated funds. The CBIPR-ADM return on investment is an increased level of preparedness and responsiveness. In FY24, the CBIPR-ADM program continues to establish and enhance new manufacturing platform technologies and infrastructure that will enable the development of MCMs against chemical and biological threats.

The MCMPT program streamlines and accelerates delivery of medical countermeasure to the Warfighter against known and emerging biological threats by establishing mature platform technologies that allow for rapid response and by reducing developmental risks. MCMPT is establishing enabling technologies and prepositioning platform systems within the Department of Defense (DoD)'s Advanced Development Manufacturing (ADM) network using standardized discovery, design, manufacturing, and testing processes to reduce the medical countermeasure (MCM) development risks. MCMPT will deliver an enduring capability from which future candidates can be manufactured.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) COVID TX MAB ***Description:*** Rapid Monoclonal Antibody Development	10.276	-	-
Title: 2) COVID VAC ***Description:*** Validated Nucleic Acid Vaccine Construction Development	9.776	-	-
Title: 3) CBIPR-ADM ***Description:*** Establish proven enabling manufacturing technologies at the Department of Defense (DoD) ADM Capability Building.	8.105	-	-
Title: 4) MCMPT ***Description:*** Advanced Development and Manufacturing of Antibody Technology (ADAMANT)	18.634	-	-
Accomplishments/Planned Programs Subtotals	46.791	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• EN4: *Enabling Investments (ACD&P)*	-	6.781	47.272	-	47.272	51.579	9.792	9.840	9.840	Continuing	Continuing
• EN5: *Enabling Investments (SDD)*	-	13.392	13.835	-	13.835	13.884	14.179	14.197	14.261	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MB4 / *Medical Biological Defense (ACD&P)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• MB5: *Medical Biological Defense (SDD)*	138.156	-	-	-	-	-	-	-	-	0.000	138.156
• PT4: *Protect (ACD&P)*	-	175.219	179.158	-	179.158	135.096	107.341	123.538	139.376	Continuing	Continuing
• UN5: *Understand (SDD)*	-	126.071	182.726	-	182.726	137.991	127.671	108.908	68.088	Continuing	Continuing
• SA0043: *Next Gen Diag 2 Chemical Diagnostics (NGDS 2 CHEM DX)*	-	-	1.881	-	1.881	9.579	10.982	11.898	11.861	Continuing	Continuing

Remarks

D. Acquisition Strategy

COVID THERAPIES MONOCLONAL ANTIBODIES (COVID TX MAB)

COVID TX MAB will leverage industry capabilities, in the interest of speed, in order to establish capabilities that can be technology transferred to the DoD ADM for longer term use and scale up as necessary.

COVID VACCINE (COVID VAC)

The COVID VAC program is an investment master list (IML) program that leverages lessons learned from the COVID-19 response to develop vaccines that target biothreats while utilizing a modular approach to ensure flexibility. These prototype vaccines will use a tailored acquisition pathway and will create a strategic reserve to counter the biothreats against the Warfighter.

CHEM BIO INCIDENT PREPAREDNESS AND RESPONSE - (CBIPR-ADM)

By establishing new capabilities at the DoD-ADM Facility and other strategic partners, the CBIPR-ADM line ensures that the DoD will have priority access to critical technologies and infrastructure that are operationally ready to support the rapid development and manufacture of MCMs. This approach ensures that the DoD's efforts are not limited to a single facility. In FY24, the CBIPR-ADM line will continue to establish, enhance, and optimize new manufacturing platform technologies and infrastructure to support the production of MCMs. These new manufacturing technologies can come from any government sources (including the Joint Science & Technology Office for Chemical Biological Defense (JSTO-CBD), the Walter Reed Army Institute of Research (WRAIR), and the Biomedical Advanced Research and Development Authority (BARDA), etc. when mature enough for BA4 funding) and/or other external sources and targets of opportunity from industry.

MCM PLATFORM TECHNOLOGIES (MCMPT)

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MB4 / *Medical Biological Defense (ACD&P)*

The goal of the MCMPT is to rapidly counter a broad-spectrum of threat agents using standardized discovery, design, manufacturing, and testing processes to reduce the MCM development risks. Efforts will focus on transitioning S&T programs from other DoD agencies, such as Defense Threat Reduction Agency (DTRA)-Joint Science and Technology Office (JSTO) or Defense Advanced Research Projects Agency (DARPA), and establishing advanced platform technologies within the Department of Defense (DoD)'s Advanced Development Manufacturing (ADM) network and evaluating that capability through nonclinical and clinical testing. A subset of these technologies, such as the DARPA Pandemic Prevention Platform (P3), will be adapted to deliver a rapid response capability to novel and emerging threats. Once established, future programs will be able to leverage these platforms for the development of future medical countermeasures. It is anticipated that these efforts will leverage the Other Transactions Authority (OTA) through the medical OTA consortium, or Army Contracting Command-Edgewood.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MB4 / *Medical Biological Defense (ACD&P)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
COVID TX MAB - Accelerated Antibody Development	C/CPFF	Various : N/A	-	9.329	Apr 2022	0.000		0.000		-		0.000	0.000	9.329	0.000
COVID VAC - Vaccine - Development	Various	Various : N/A	-	7.608	Aug 2022	0.000		0.000		-		0.000	0.000	7.608	0.000
COVID VAC - Direct Program Support	Various	Various : N/A	-	1.536	Nov 2022	0.000		0.000		-		0.000	0.000	1.536	0.000
CBIPR-ADM - Enabling Manufacturing Technologies	C/CPFF	Ology : Alachua, FL	13.804	7.756	Mar 2022	0.000		0.000		-		0.000	0.000	21.560	0.000
MCMPT - HW S - ADAMANT PLAGUE MCM Development	C/CPFF	Various : N/A	36.115	17.527	Apr 2022	0.000		0.000		-		0.000	0.000	53.642	0.000
		Subtotal	49.919	43.756		0.000		0.000		-		0.000	0.000	93.675	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
COVID TX MAB - Program Management Support	Various	JPL CBRND Enabling Biotechnologies, JPEO-CBRND : Fort Detrick, MD	-	0.947	Dec 2021	0.000		0.000		-		0.000	0.000	0.947	0.000
COVID VAC - PM/MS C - Indirect Management Support	Various	Various : N/A	-	0.632	Nov 2021	0.000		0.000		-		0.000	0.000	0.632	0.000
CBIPR-ADM - Program Management Support	Various	JPL CBRND Enabling Biotechnologies, JPEO-CBRND : Fort Detrick, MD	1.480	0.349	Feb 2022	0.000		0.000		-		0.000	0.000	1.829	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MB4 / *Medical Biological Defense (ACD&P)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MCMPT - Program Management Support	Various	JPL CBRND Enabling Biotechnologies, JPEO-CBRND : Fort Detrick, MD	4.149	1.107	Dec 2021	0.000		0.000		-		0.000	0.000	5.256	0.000
		Subtotal	5.629	3.035		0.000		0.000		-		0.000	0.000	8.664	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	55.548	46.791		0.000		0.000		-		0.000	0.000	102.339	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MB4 / *Medical Biological Defense (ACD&P)*

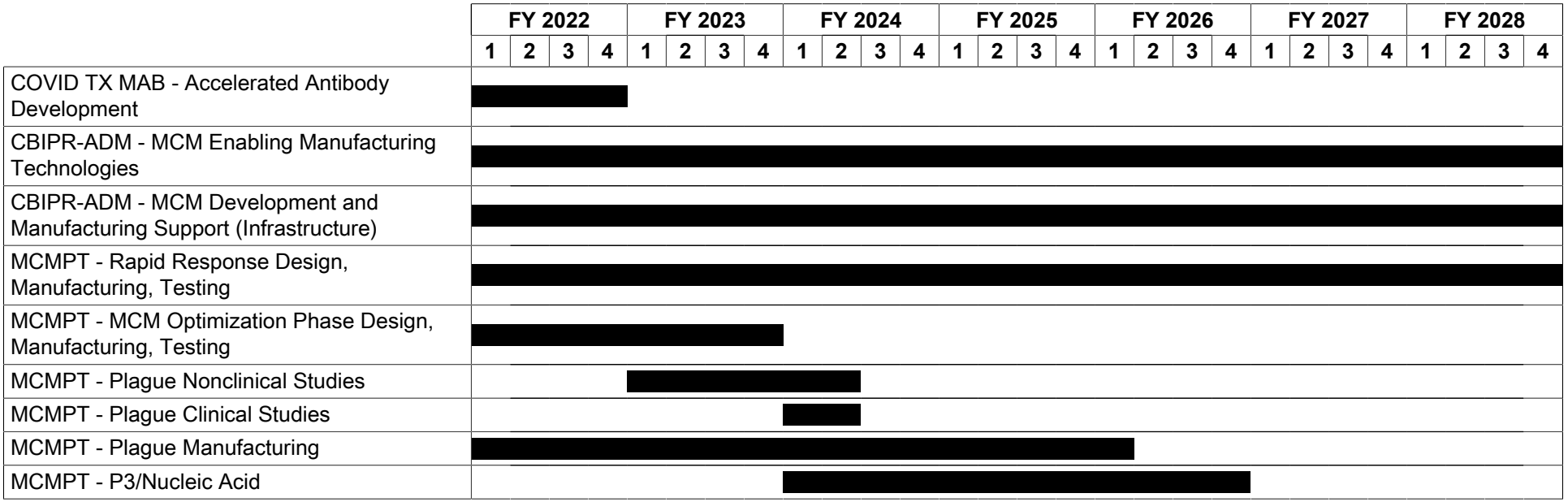

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** MB4 / *Medical Biological Defense (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
COVID TX MAB - Accelerated Antibody Development	1	2022	4	2022
CBIPR-ADM - MCM Enabling Manufacturing Technologies	1	2022	4	2028
CBIPR-ADM - MCM Development and Manufacturing Support (Infrastructure)	1	2022	4	2028
MCMPT - Rapid Response Design, Manufacturing, Testing	1	2022	4	2028
MCMPT - MCM Optimization Phase Design, Manufacturing, Testing	1	2022	4	2023
MCMPT - Plague Nonclinical Studies	1	2023	2	2024
MCMPT - Plague Clinical Studies	1	2024	2	2024
MCMPT - Plague Manufacturing	1	2022	1	2026
MCMPT - P3/Nucleic Acid	1	2024	4	2026

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) TM4 / *Techbase Medical Defense (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
TM4: *Techbase Medical Defense (ACD&P)*	-	29.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	29.687
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project TM4 supports early-phase clinical development of vaccines and therapeutic drugs to provide safe and effective medical defense against validated biological threat agents and emerging infectious disease biothreats including bacteria, toxins, and viruses. This effort reduces programmatic risk of failure in the advanced development phase by generating clinical and supporting non-clinical safety, tolerability and toxicity data for candidate vaccines and therapeutic drugs prior to transition to System Development & Demonstration. After FY 2022, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. TM4 efforts in FY 2022 progress to Projects MT4 and PT4. This restructuring provides standardization and alignment across CBDP research, development and acquisition efforts.

Individual efforts in this project include:

(1) Tech Base Medical - Transitional Medical Technology Initiative (TBMD TMTI), and
(2) Tech Base Medical Defense - Chem CM (TBMDC CHEM CM)

- Supports the advanced development of medical countermeasures to include prophylaxes, pretreatments, antidotes and therapeutic drugs against identified and emerging biological warfare threat agents.
- Demonstration of human safety and tolerability prior to entry of candidate vaccines and therapeutics into advanced development, supporting the preparation of technical data packages that conform to the Food and Drug Administration (FDA) Investigational New Drug (IND) processes, Department of Defense (DoD) acquisition regulations, and the oversight of early phase clinical trials in accordance with FDA guidelines.
- In addition, this project supports innovative biotechnology approaches to advance medical systems designed to rapidly identify, diagnose, prevent, and treat emerging biological threats whether naturally occurring or engineered.
- Focuses on therapeutic and prophylactic strategies to effectively minimize injuries resulting from exposure to Chemical Weapons Agents. This effort involves the evaluation FDA approved therapeutics for operational use, as well as generation of novel drug products and formulations to enhance level of protection and/or operational utility for the Warfighter. Efforts in this area are designed to develop drug candidates that will ultimately be submitted for FDA licensure or to identify previously licensed products for new uses in the treatment and pretreatment against chemical warfare injury.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) TBMD TMTI - DOMANE/LIMIT (Layered Integrated Medical Countermeasure Intervention Technologies)	9.000	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TM4 / *Techbase Medical Defense (ACD&P)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Description: Initiated platform biotechnologies, capabilities, processes and candidate medical countermeasures (MCMs). Investments will develop a rapid drug discovery and development engine to enable the joint force to rapidly respond to new & emerging Biological Warfare (BW) threats by providing BW MCMs. Immediate alignment with Biological Prophylaxis and Therapeutics Programs to respond and treat the Joint Force against BW threats.			
Title: 2) TBMD TMTI - Biological Warfare Defense Therapeutics ***Description:*** Biological Warfare (BW) defense therapeutics mitigate and reverse the effects of known and emerging viral, bacterial, and toxin biological warfare threats in symptomatic warfighters diagnosed with BW disease. Biomedical research is focused on nonclinical and early clinical development of therapeutic countermeasures against known and emerging viral, bacterial, and toxin BW threats for which Food and Drug Administration (FDA)-approved therapeutics are limited or lacking. Broad-spectrum therapeutic candidates that are shown to be both safe and efficacious against BW threats will advance for further clinical evaluation and can be accelerated for use against emerging infectious diseases during an outbreak. Refinement of appropriate animal models in which to evaluate therapeutic candidates is also included. Projects leverage interagency and commercial sector investments to accelerate development and reduce costs.	7.239	-	-
Title: 3) TBMD TMTI - Bacterial/Viral/Toxin/Broad Spectrum Prophylaxis ***Description:*** The ultimate protection of the Warfighter is by pretreating the Warfighter to withstand any biological threat with no adverse side effects from the pretreatment. Such pretreatment would enable the Warfighter to work in a less restrictive environment, absent of any personal protective equipment allowing operation at peak performance. Investments in this Program Element supports GMP manufacturing of candidates for clinical testing, toxicology studies necessary for entry into Phase 1 clinical trials and Phase 1 clinical trials just prior to transition to advanced development.	7.238	-	-
Title: 4) TBMDC CHEM CM - PBA Medical Countermeasures ***Description:*** Focuses on therapeutic and prophylactic strategies to effectively minimize injuries and/or death resulting from exposure to Pharmaceutical Based Agents (PBA). This will allow the Warfighter to maintain operational capacity in a chemically contested battlefield scenario. This effort involves the evaluation FDA approved therapeutics for operational use, as well as generation of novel drug products and formulations to enhance level of protection and/or operational utility for the Warfighter. Efforts in this area are designed to develop drug candidates that will ultimately be submitted for Food and Drug Administration (FDA) licensure or to identify previously licensed products for new uses in the treatment and pretreatment against chemical warfare injury.	1.710	-	-
Accomplishments/Planned Programs Subtotals	25.187	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TM4 / *Techbase Medical Defense (ACD&P)*

	FY 2022	FY 2023
Congressional Add: Development of medical countermeasures against novel entities (DOMANE)	4.500	-
FY 2022 Accomplishments: Deliver platform biotechnologies, capabilities, processes and candidate medical countermeasures (MCMs). Investments will develop a rapid drug discovery and development engine to enable the joint force to rapidly respond to new & emerging BW threats by providing biological warfare (BW) MCMs. Immediate alignment with Biological Prophylaxis and Therapeutics Programs to respond and treat the Joint Force against BW threats. - Enhance high-throughput screening technologies and advanced artificial intelligence/machine learning tools for rapid target and drug identification, with an emphasis on repurposing Food and Drug Administration approved drugs. In cases where no existing drug solution can be identified, new drugs will be identified to fill gaps in the Nations approved drug inventory. - Additional investments will be made in microphysiological organ-on-a-chip pathogenesis forecasting systems to address mechanisms of action, safety, efficacy to enhance drug development platforms.		
Congressional Adds Subtotals	4.500	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• MT4: *Mitigate (ACD&P)*	-	17.302	28.785	-	28.785	20.885	15.433	13.369	-	Continuing	Continuing
• PT4: *Protect (ACD&P)*	-	175.219	179.158	-	179.158	135.096	107.341	123.538	139.376	Continuing	Continuing
• TM2: *Techbase Medical Defense (Applied Research)*	107.608	-	-	-	-	-	-	-	-	0.000	107.608

Remarks

D. Acquisition Strategy

TECH BASE MEDICAL TRANSITIONAL MED TECHNOLOGY INTIATIVE (TBMD TMTI)

Supports early-phase clinical development and supporting non-clinical safety, tolerability and toxicity data for candidate vaccines and therapeutic drugs prior to transition to System Development & Demonstration. This work provides safe and effective medical defense against validated biological threat agents and emerging infectious disease biothreats including bacteria, toxins, and viruses. This work also involves the evaluation of Food and Drug Administration (FDA)-approved therapeutics for operational use, as well as generation of novel drug products and formulations, to enhance level of protection and/or operational utility for the Warfighter. This effort reduces programmatic risk of failure in the advanced development phase.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TM4 / *Techbase Medical Defense (ACD&P)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TBMD TMTI - DTE C - Viral Prophylaxis	C/CPFF	Advanced Technologies International : Summerville, SC	-	7.239	Oct 2021	0.000		0.000		-		0.000	0.000	7.239	0.000
TBMD TMTI - DTE C - DOMANE/LIMIT (Layered Integrated Medical Countermeasure Intervention Technologies)	C/CPFF	Advanced Technologies International : Summerville, SC	-	9.000	Oct 2021	0.000		0.000		-		0.000	0.000	9.000	0.000
TBMD TMTI - DTE C - Bacterial Therapeutics	C/CPFF	Advanced Technologies International : Summerville, SC	-	7.238	Oct 2021	0.000		0.000		-		0.000	0.000	7.238	0.000
TBMDC CHEM CM - DTE C - PBA Medical Countermeasures	MIPR	TBD : N/A	-	1.710	Oct 2021	0.000		0.000		-		0.000	0.000	1.710	0.000
CONG - DTE C - DOMANE	C/CPFF	Advanced Technologies International : Summerville, SC	-	4.500	Oct 2022	0.000		0.000		-		0.000	0.000	4.500	0.000
		Subtotal	-	29.687		0.000		0.000		-		0.000	0.000	29.687	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	29.687		0.000		0.000		-		0.000	0.000	29.687	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TM4 / *Techbase Medical Defense (ACD&P)*

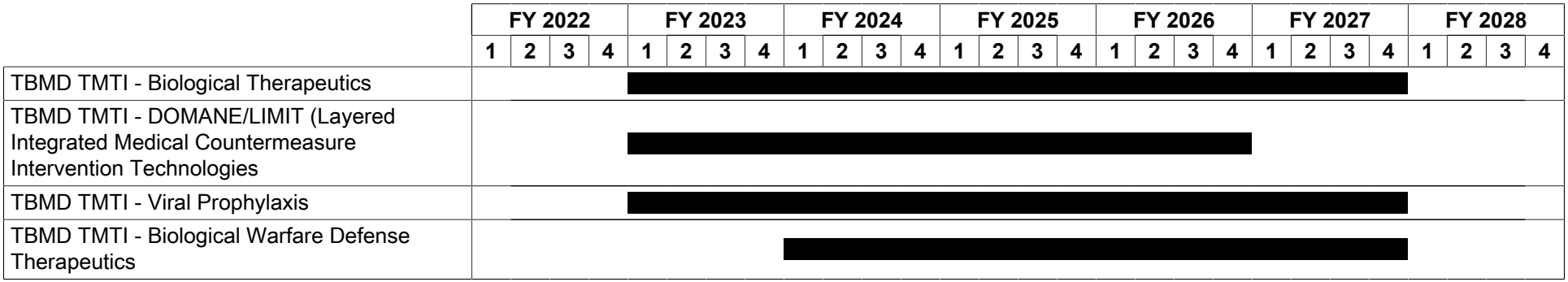

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TM4 / *Techbase Medical Defense (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
TBMD TMTI - Biological Therapeutics	1	2023	4	2027
TBMD TMTI - DOMANE/LIMIT (Layered Integrated Medical Countermeasure Intervention Technologies	1	2023	4	2026
TBMD TMTI - Viral Prophylaxis	1	2023	4	2027
TBMD TMTI - Biological Warfare Defense Therapeutics	1	2024	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program			Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	Project (Number/Name) TT4 / *Technology Transition (ACD&P)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
TT4: *Technology Transition (ACD&P)*	-	0.740	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.740
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project TT4 validates technologies and their respective concepts-of-operations in preparation for transition to advanced development programs requiring chemical and biological (CB) defense technologies. These demonstrations seek to demonstrate the potential for enhanced military operational capability and/or cost effectiveness while soliciting end-user 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.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: 1) TECHTRAN - Advanced Technology Demonstration	0.740	-	-
Description: ATDs enable the effective transition of cutting edge Chemical Biological Radiological and Nuclear (CBRN) Science & Technology (S&T) Technologies to the Warfighter by providing them an opportunity to engage with these new technologies in a mission oriented demonstration. Feedback from the Warfighters ensures that these technologies are operationally relevant, value added, and can be matured and transitioned in a timely and effective manner to end users for employment.			
Accomplishments/Planned Programs Subtotals	0.740	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• TT3: *Technology Transition (ATD)*	7.589	-	-	-	-	-	-	-	-	0.000	7.589

Remarks

D. Acquisition Strategy

TECHBASE TECH TRANSITION (TECHTRAN)

Advanced Technology Demonstrations (ATDs) exploit mature and maturing technologies to solve important military problems. ATDs emphasize technology integration, operational utility assessment, and transition of operational prototypes for practical use. The goals of efforts under Project TT4 are to provide a prototype capability to the Warfighter and support the evaluation of that capability in operationally-relevant field environments. This will allow Warfighters to evaluate the capabilities in

Exhibit R-2A, RDT&E Project Justification: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TT4 / *Technology Transition (ACD&P)*

real military exercises and at a scale sufficient to fully assess military utility. The Defense Threat Reduction Agency (DTRA) will fund Department of Defense (DoD) laboratories and DoD Federally Funded Research Development Centers (FFRDCs) through the Military Interdepartmental Purchase Request (MIPR) in accordance with the Economy Act in order to conduct operational evaluation of technology solutions for Integrated Early Warning (IEW) and Integrated Layered Defense (ILD) ATD efforts. Upon completion of efforts under this project, operational prototypes of Technology Readiness Level (TRL) 6 or TRL 7 with documented operational utility assessment outcomes will be transitioned to Service stakeholders and programs of record to support rapid acquisition and fielding decisions.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TT4 / *Technology Transition (ACD&P)*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TECHTRAN - IEW and ILD Transition	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	0.232	0.174	Jan 2022	0.000		0.000		-		0.000	0.000	0.406	0.000
		Subtotal	0.232	0.174		0.000		0.000		-		0.000	0.000	0.406	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TECHTRAN - IEW and ILD Transition	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	0.823	0.491	Jan 2022	0.000		0.000		-		0.000	0.000	1.314	0.000
		Subtotal	0.823	0.491		0.000		0.000		-		0.000	0.000	1.314	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TECHTRAN - PM/MS S - IEW and ILD Transition	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center	0.050	0.075	Jan 2022	0.000		0.000		-		0.000	0.000	0.125	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TT4 / *Technology Transition (ACD&P)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		(CBC) : Aberdeen Proving Ground, MD													
		Subtotal	0.050	0.075		0.000		0.000		-		0.000	0.000	0.125	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.105	0.740		0.000		0.000		-		0.000	0.000	1.845	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TT4 / *Technology Transition (ACD&P)*

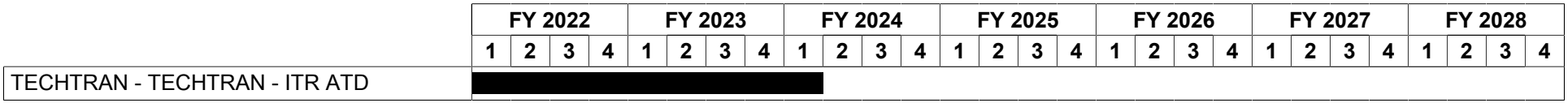

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Chemical and Biological Defense Program		Date: March 2023
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603884BP / *Chemical and Biological Defense Program - Dem/Val*	**Project (Number/Name)** TT4 / *Technology Transition (ACD&P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
TECHTRAN - TECHTRAN - ITR ATD	1	2022	1	2024