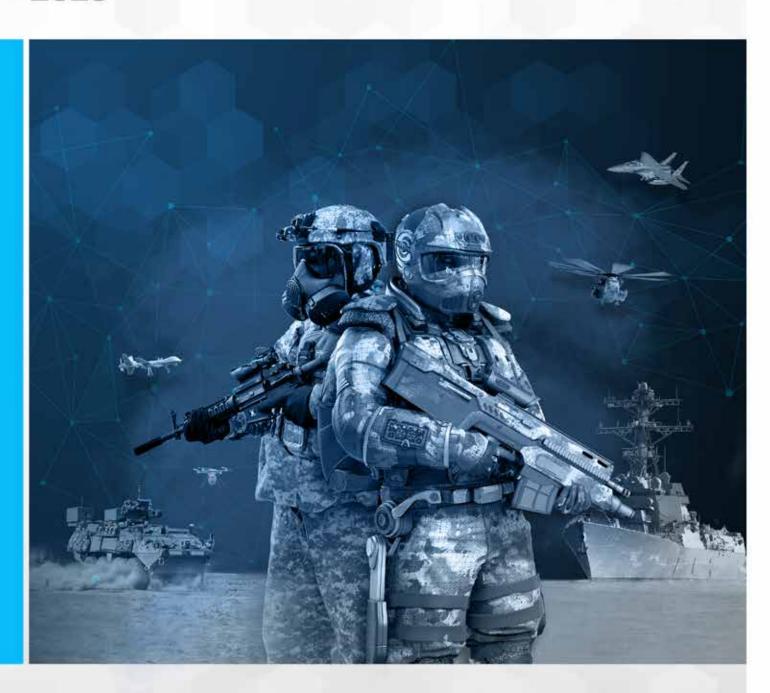


# JPEO-CBRND CAPABILITIES CATALOG

2023



JOINT PROGRAM EXECUTIVE OFFICE FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR DEFENSE







# TABLE OF CONTENTS

Mission and Vision	4
Message from the Joint Program Executive Officer	5
Where We Fit	6
Leadership Biographies	7
Joint Project Manager (JPM) and	
Joint Project Lead (JPL) Descriptions	11
Organization Leadership Chart	12
Strategic Goals and Core Values	13
CURRENT CARABILITIES	
CURRENT CAPABILITIES ————————————————————————————————————	
JPM CBRN Protection Capabilities	14
JPM CBRN Medical Capabilities	23
JPM CBRN Sensors Capabilities	30
JPM CBRN SOF Capabilities	39
JPL CBRN Integration Capabilities	42
JPL CBRND Enabling Biotechnologies Capabilities	45
ENDURING CAPABILITIES ————————————————————————————————————	
Enduring JPM CBRN Protection Capabilities	
Enduring JPM CBRN Medical Capabilities	58
Enduring JPM CBRN Sensors Capabilities	61
Enduring JPM CBRN SOF Capabilities	70
Enduring JPL CBRN Integration Capabilities	72
Acronym List	74







# A NOTE FROM MR. DARRYL J. COLVIN

s a component of the Chemical and Biological Defense Program, the JPEO-CBRND leads, manages, and directs the acquisition, fielding, and integration of CBRN sensors, protective equipment, medical countermeasures, and capabilities for Special Operations Force and combined, Joint All Domain Operations. We also focus on defense-enabling biotechnologies and integrating capabilities providing solutions to reduce risk, compress timelines, and improve acquisition outcomes across the entire portfolio.

JPEO-CBRND's role is critical. As our Warfighters face a complex battlefield, the Joint Force has to fight and win across all domains—sea, land, air, cyber, and space—to defeat our adversaries. In addition to the threat posed by traditional chemical, biological, radiological, and nuclear weapons, the COVID-19 pandemic showed we must prepare and respond to the full spectrum of chemical and biological threats. We need to be able to rapidly understand any threat, regardless of origin, in order to effectively protect against it, mitigate its impacts, and maintain Joint Force operations.

To align with these realities and future CBRN defense needs, the JPEO-CBRND mission statement reflects our strategic focus on Joint All Domain Operations, and our operational focus on integrating CBRN defense capabilities to deny our adversaries any advantage to using chemical, biological, radiological, and nuclear weapons.

We accomplish this mission by working with internal and external partners to develop and deliver CBRN defense capabilities that are compatible and interoperable with current and future equipment. Our partnerships with government, academia, industry, and international allies make it possible for us to push the boundaries of innovation, rapidly find solutions, and deliver the capabilities required for our Warfighters to operate in any CBRN denied environment.

Working with our CBDP partners—the Deputy Assistant Secretary of Defense for Chemical and Biological Defense, the Joint Science and Technology Office, the Joint Requirements Office, and the Army as the Executive Agent—we are shaping JPEO-CBRND's extraordinary future as we continue to serve the Joint Force.



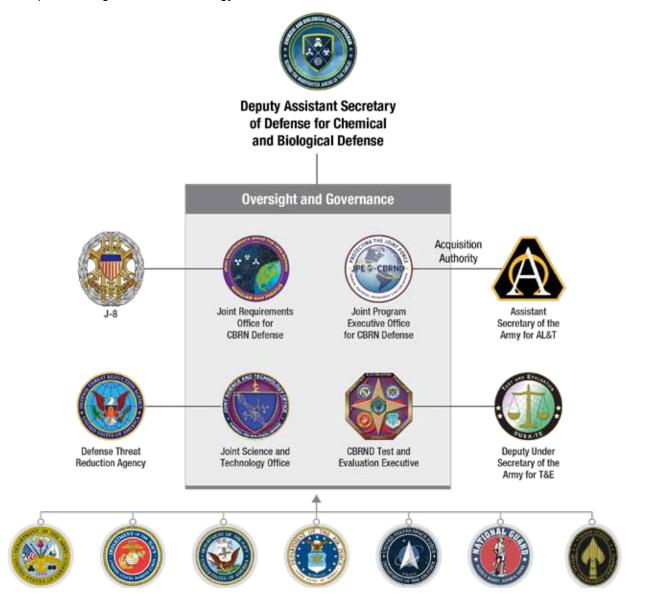
Mr. Darryl J. Colvin Joint Program Executive Officer for Chemical, Biological, Radiological and Nuclear Defense

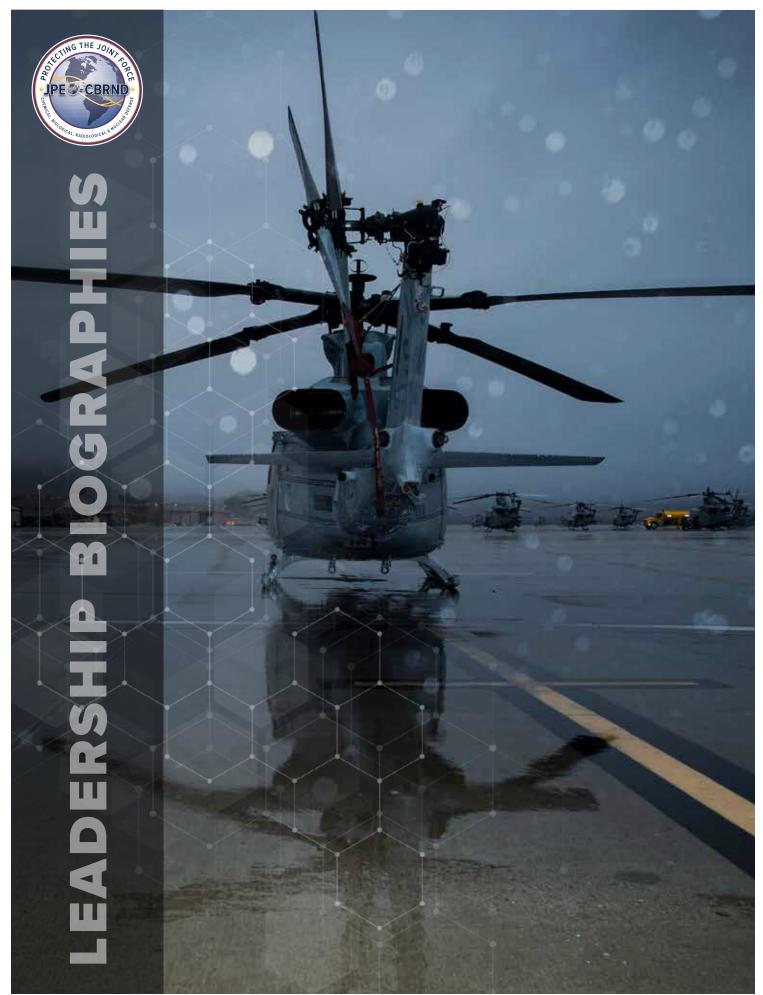
# WHERE WE FIT WITHIN THE DEPARTMENT OF DEFENSE

The JPEO-CBRND is one of the four components of the Chemical and Biological Defense Program, which is led by the Deputy Assistant Secretary of Defense for Chemical and Biological Defense. The CBDP consists of the:

- Joint Requirements Office, which develops requirements based on Warfighter needs;
- Joint Science and Technology Office, which conducts basic scientific and technical research;
- JPEO-CBRND, which performs advanced development and acquisition, and;
- CBRND Test and Evaluation Executive, which carries out test and evaluation activities.

While JPEO-CBRND receives guidance and oversight from the Deputy Assistant Secretary of Defense for Chemical and Biological Defense, the organization's acquisition authority comes from the Assistant Secretary of the Army for Acquisition, Logistics, and Technology.





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Mr. Darryl Colvin
JOINT PROGRAM EXECUTIVE OFFICER

# **MR. DARRYL COLVIN**

Mr. Darryl Colvin is the Joint Program Executive Officer for CBRN Defense. In this role, Mr. Colvin leads civilian and military multi-disciplinary teams whose mission is to provide integrated layered CBRN defense capabilities to the Joint Force across combined Joint All-Domain Operations.

Mr. Colvin was previously Deputy Program
Executive Officer (PEO) Missiles and Space;
Acting Deputy PEO for Missiles and Space;
Acting Deputy PEO Soldier; and Deputy for
Acquisition and Systems Management for
PEO Missiles and Space. He was also Project
Manager Ground-based Midcourse Defense
Interceptor for the Missile Defense Agency
and Project Manager for the PEO Missiles and
Space Lower Tier Project Office.

His prior acquisition assignments include Operations and Integration Officer, Army Tactical Operations Center Product Office; Product Manager for Field Artillery Launchers; Systems Coordinator for Army Tactical Missile System; and Executive Officer to the Deputy for Systems Management, Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology.

Mr. Colvin was commissioned through the University of Missouri at Rolla ROTC Program and retired as a Lieutenant Colonel after faithfully and proudly serving 20 years active duty to the nation.

Mr. Colvin holds a Bachelor of Science from University of Missouri at Rolla and a Master of Science from Colorado School of Mines. He is a graduate of the Army Command and General Staff College and Senior Service College Fellowship Program.

His civilian and military awards and decorations include the Decoration for Exceptional Civilian Service Award, Superior Civilian Service Award, Commander's Award for Civilian Service, Legion of Merit, Meritorious Service Medal, the Army Commendation Medal, and Army Achievement Medal.



Ms. Nicole Kilgore
DEPUTY JOINT PROGRAM
EXECUTIVE OFFICER

# **MS. NICOLE KILGORE**

Ms. Nicole Kilgore is the Deputy Joint Program Executive Officer for CBRN Defense. In this role, she provides leadership, technical, and programmatic direction in support of decision-making across the entire portfolio. Most recently, Ms. Kilgore was Acting Deputy JPEO for Assisted Acquisition/ Medical (COVID-19 Response), where she led the DoD's COVID-19 Joint Assisted Acquisition efforts in support of the Department of Health and Human Services.

Ms. Kilgore brings over 30 years of combined industry and civilian service experience to her role. She was previously Deputy Joint Project Manager (JPM) for CBRN Medical where she provided overall direction and guidance for the Medical Portfolio. Prior positions at JPM CBRN Medical included Chief of Staff; Joint Product Lead of Platforms for Rapid Integrated Solutions for Medical Countermeasures; Joint Product Manager, Joint Vaccine Acquisition Program; Primary Manager, Filovirus Vaccine Program; and Science Manager, Medical Identification and

Treatment Systems. She served as Acting Medical Director, Office of Deputy Assistant Secretary of Defense for Chemical and Biological Defense. Prior to joining the Department of Defense, Ms. Kilgore was Senior Manager of Virology and Safety Operations for Panacos Pharmaceuticals.

Ms. Kilgore holds a Bachelor of Science from Mount Saint Mary's College, a Master of Science from Hood College, and a Master of Science from National Defense University. She attended the Defense Acquisition University's Advanced Program Management Course and Advanced Leadership Course at the Army Management Staff College.

Ms. Kilgore is a member of the Army Acquisition Corps, DAWIA Level III certified in Program Management, and a Project Management Professional. Her awards include the Commander's Award for Civilian Service, Excellence in Federal Career Award, and Superior Civilian Service Award.



Mr. Gordon Graham CHIEF OF STAFF

# MR. GORDON GRAHAM

Mr. Gordon Graham is the Chief of Staff for the Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND). In this role, he provides expertise in acquisition, budget, program management, and directorate staff management. Mr. Graham works across functional areas to build consensus and ensure JPEO-CBRND programs have the resources required to support delivery of CBRN defense capabilities to the Warfighter and the nation.

Mr. Graham's work experience includes 34 years of combined logistics, acquisition and program management experience gained during active duty and civilian service. He was commissioned from the Reserve Officer Training Corps at The University of North Carolina Wilmington in 1988. He was a Distinguished Military Graduate and received a Bachelor of Arts in Psychology. Mr. Graham also holds a Master of Science in General Administration from Central Michigan University and a Master of Arts in Procurement

and Acquisition Management from Webster University. His military education includes the Ordnance Officers' Basic Course, the Combined Logistics Officers' Advanced Course, the U.S. Navy Explosive Ordnance Disposal (EOD) Course, the Combined Arms and Services Staff School Course, Army Command and General Staff College, and Defense Systems Management College Program Manager's Course. He is currently Advanced (Level III) certified in Program Management.

Mr. Graham's military awards include the Legion of Merit Medal & Award presented at his retirement. Other awards include the Bronze Star, Defense Meritorious Service Medal (two oak leaf clusters), Army Meritorious Service Medal (three oak leaf clusters), Army Commendation Medal (four oak leaf clusters), Army Achievement Medal (two oak leaf clusters), Army Basic Airborne and EOD Badges, and Office of the Secretary of Defense Staff Badge.



Mr. Wyatt Ulrich
DIRECTOR FOR ACQUISITION
& SYSTEMS MANAGEMENT

# **MR. WYATT ULRICH**

Mr. Wyatt Ulrich is the Director for Acquisition and Systems Management (DASM) for the JPEO-CBRND, serving as a key senior advisor to improve acquisition rigor and discipline across the JPEO-CBRND's acquisition portfolio. In this role, Mr. Ulrich oversees and implements acquisition policy within the JPEO-CBRND and supports the JPMs and JPLs as they prepare for milestone decisions while bringing together multi-functional teams from across the JPEO-CBRND to resolve issues and challenges prior to a milestone decision. Mr. Ulrich leverages over 25 years of experience in strategy, analysis, and evaluation of DoD and CBRN Defense programs to integrate acquisition activities at the portfolio level, and coordinate and communicate with senior acquisition leaders across the JPEO, Army, the Office of the Secretary of Defense, and other CBRN Defense stakeholders.

Most recently, he served as the Director of CBRN Analytics for the JPEO-CBRND, where he led a diverse team in the performance of activities to implement portfolio insight efforts across the JPEO-CBRND. He led the action steps and created the overarching vision and establishment of time phased milestones for JPEO implementation of its data management activities, Army Acquisition Reform initiatives, advanced analytics, and adoption of a continuous and persistent portfolio insight process. Mr. Ulrich holds a Master's in Operations Research from the George Washington University and a Bachelor of Science from Towson University. He is a certified Program Manager (PM) Level IV (Advanced) and has received the Department of Army Superior Civilian Service Award and Commander's Award for Civilian Service.



Ms. Rachel Overman STRATEGY AND JOINT WARFIGHTER CONCEPT INTEGRATOR (ACTING)

# MS. RACHEL OVERMAN

Ms. Rachel Overman is the Acting Strategy and Joint Warfighter Concept Integrator for the Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND). In this role, she serves as an advisor to JPEO-CBRND senior leaders across the portfolio on requirements generation and synchronization with acquisition processes. She also conducts strategic analysis to better understand portfolio alignment and gaps and interfaces with whole-of-government counterparts to ensure JPEO capabilities meet the needs of the Joint Force and support the National Defense Strategy.

Prior to her current role, Ms. Overman served as the Deputy Joint Product Manager for Biological Defense Pharmaceuticals within the Joint Project Manager for CBRN Medical. In this role, she oversaw the development of medical countermeasures for infectious and emerging diseases. This responsibility required leading multi-functional teams comprised of industry, government agencies, and defense contractor personnel.

Ms. Overman has held many programmatic roles within the Defense Department, including Assistant Project Manager and Product Manager. She also served as a Department of the Army Systems Coordinator for ACAT I programs, Defense Business systems, and Medical Programs for the Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology).

Ms. Overman holds a Bachelor of Science in Computer Engineering from the University of Central Florida and a Master of Science in Program Management from the University of Maryland. She is also a graduate of the U.S. Army Competitive Development Group/Army Acquisition Fellowship. She is a member of the Army Acquisition Corps and is Level III certified in Program Management and Engineering.

# JOINT PROJECT MANAGER (JPM) AND JOINT PROJECT LEAD (JPL) DESCRIPTIONS



#### JPM CBRN PROTECTION

JPM CBRN Protection develops, fields and sustains CBRN protection and mitigation capabilities for the warfighter and the Nation. They develop next-generation physical protection capabilities, like masks and suits, that reduce physiological burden and enhance protection against emerging threats. JPM CBRN Protection also develops contamination mitigation technologies, including decontamination systems, to significantly decrease the time and materials required to decontaminate personnel and equipment.



#### JPM CBRN MEDICAL

JPM CBRN Medical facilitates the advanced development and acquisition of medical solutions, such as nerve agent antidotes and diagnostic systems, to combat CBRN and emerging threats. They deliver safe, effective, and affordable medical solutions to counter threats and enable the Joint Force to fight and win in any denied environment. JPM CBRN Medical products span the continuum of medical care, providing an integrated layered medical defense, to include prevention, diagnosis, and treatment.



#### JPM CBRN SENSORS

JPM CBRN Sensors develops, fields and sustains CBRN sensors, reconnaissance systems, and mobile laboratory capabilities. They provide integrated early warning by bringing together the products in their portfolio along with robotics and autonomous systems, decision support tools, machine learning and artificial intelligence to provide situational awareness and understanding of CBRN threats.



# JPM CBRN SPECIAL OPERATIONS FORCES

JPM CBRN SOF rapidly acquires and equips
Special Operations and Special Purpose
Forces with critical CBRN defense equipment
necessary for mission success. Their focus is to
further develop crucial technologies necessary
for survival and unimpeded operations in
denied CBRN environments. These technologies
are transitioned to other Programs of Record
as appropriate to enhance the capability of the
Joint Force.



#### JPL CBRN INTEGRATION

JPL CBRN Integration is responsible for the total lifecycle of enterprise information technology systems and provides enterprisewise CBRN threat warning and reporting, hazard prediction, and decision support capabilities for the collection, analysis, and dissemination of CBRN defense information. These capabilities provide commanders with more complete situational understanding of all the threats in the battlespace by integrating CBRN defense systems with traditional defense systems.



# JPL CBRND ENABLING BIOTECHNOLOGIES

JPL CBRND Enabling Biotechnologies enables the rapid development, manufacture, and fielding of safe and effective medical solutions across the full product spectrum, including development, clinical trials, manufacturing, and validated biological threat detection materials. These solutions support programs across the JPEO-CBRND portfolio by lowering product development risks and accelerating product maturity.

# JPEO-CBRND ORGANIZATION LEADERSHIP



JPEO Mr. Darryl Colvin



Executive Officer MAJ Angela Burton



Deputy JPEO Ms. Nicole Kilgore



Strategy and Joint Warfighter Concept Integrator (Acting) Ms. Rachel Overman



Chief of Staff Mr. Gordon Graham



Director for Acquisition & Systems Management Mr. Wyatt Ulrich

# Joint Project Managers (JPM)



JPM CBRN Protection Mr. Steven Batts



JPM CBRN Medical COL Matthew Clark



JPM CBRN Sensors COL Robert Carter III



JPM CBRN Special Operations Forces Ms. Karen Burke (Acting)

#### Joint Project Leads (JPL)



JPL CBRN Integration Mr. Paul Gietka



JPL CBRND Enabling Biotechnologies Mr. Bruce Goodwin

# JPEO-CBRND STRATEGIC GOALS



#### STRATEGIC GOAL 1

Achieve CBRN Defense integration, interoperability, and interdependence across all warfighting domains and functions.

#### STRATEGIC GOAL 2

Foster an environment that seeks innovative enterprise solutions across industry, academia, and warfighters that is agile, versatile and efficient.

#### STRATEGIC GOAL 3

Provide indispensable value to the warfighter, DoD, Congress, the Nation and our Allies and Partners.

#### UNCOMPROMISING INTEGRITY

Perform your work to the highest standard. Be honest and transparent, even when it's difficult. Be accountable for your words and your actions. Choose to do what's right every time.



#### COMMITTED TO EXCELLENCE

Our Warfighters deserve the best we can deliver, so strive for greatness in all your work. Keep your mind open to new and different ways of doing things. Be willing to accept feedback and seek opportunities to learn and improve.



#### RESPECT FOR ALL

Each member of the JPEO family has their own values, experiences, and identities. Take that into consideration in all your interactions. Treat yourself and others with dignity and fairness.



#### **ALWAYS READY**

No matter what challenges we face, always be ready to adapt and respond. We can accomplish anything when we work as a team.



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#### **Contaminated Human Remains System (CHRS)**

**Description:** The Contaminated Human Remains Transfer Case (CHRT), a variation of the CHRS, is a triple layer packaging system that reduces risk of hazards exposure to unprotected personnel and allows the safe transportation of contaminated remains to the U.S. or servicing mortuary in accordance with federal and international standards.

Benefits to Warfighter: CHRS will protect personnel from the hazards associated with transporting human remains that are potentially contaminated with chemical, biological or radiological agents and Toxic Industrial Materials without posing additional risk to the handlers or the environment.

#### **Program Status:**

- FY18: Milestone A

- FY23: Initial Operational Capability

#### **Projected Activities:**

- FY24: Full Operational Capability



#### **Decontamination Family of Systems Contamination Indicator Decontamination Assurance System-Blister (DFoS CIDAS Blister)**

**Description:** DFoS Contamination Indicator Decontamination Assurance System Blister (DFoS CIDAS Blister) will visually indicate the presence and location of trace amounts of traditional and non-traditional blister agents on tactical vehicles, shipboard surfaces, crew-served weapons, and individual weapons pre- and post-decontamination.

Benefits to Warfighter: Reduces the logistics burden (e.g., water, manpower, decontaminants) of decontamination by indicating presence and location of blister agents on surfaces pre- and post-decontamination. Apply pre-decontamination operations to indicate surface contamination and prioritize/segregate contaminated assets and in postdecontamination operations as visible verification of the decontamination process Family of Systems – each includes applicator and indicator.

#### **Program Status:**

- FY11: Milestone A

- FY15: Milestone B

#### **Projected Activities:**

- FY25: Milestone C.

- FY26: Initial Operational Capability - FY28: Full Operational Capability



# **Decontamination Family of Systems Contamination Indicator Decontamination Assurance System-Nerve (DFoS CIDAS Nerve)**

**Description:** DFoS Contamination Indicator Decontamination Assurance System Nerve (DFoS CIDAS Nerve) will visually indicate the presence and location of trace amounts of traditional and non-traditional nerve agents on tactical vehicles, shipboard surfaces, crew-served weapons, and individual weapons pre- and post-decontamination.

**Benefits to Warfighter:** Reduces the logistics burden (e.g., water, manpower, decontaminants) of decontamination by indicating presence and location of trace nerve agents on surfaces pre- and post-decontamination. Apply pre-decontamination operations to indicate surface contamination and prioritize/segregate contaminated assets and in post-decontamination operations as visible verification of the decontamination process Family of Systems – each includes applicator and indicator.

#### **Program Status:**

FY11: Milestone AFY15: Milestone BFY20: Milestone C

#### **Projected Activities:**

- FY25: Initial Operational Capability- FY28: Full Operational Capability



# **Decontamination Family of Systems General Purpose Decontaminant (DFoS GPD)**

**Description:** DFoS General Purpose Decontaminant (DFoS GPD) provides operational and thorough decontamination capabilities for tactical vehicles, shipboard surfaces, crew-served weapons, and individual/personal weapons in hostile and non-hostile environments that have been exposed to traditional and nontraditional CB contamination.

**Benefits to Warfighter:** GPD-HME will provide Warfighters an operational/thorough decontaminant as a means to quickly reduce/eliminate risk to personnel and safely return Warfighters and their equipment back to the fight. It is the only fielded decon that is compatible with the M26 and has excellent material compatibility compared to previously fielded decon. It is an all-powder decon requiring water to mix which significantly reduces the weight and storage logistics by 90% compared to all-liquid decon.

#### **Program Status:**

- FY11: Milestone A - FY17: Milestone C

- FY20: Initial Operational Capability

#### **Projected Activities:**

- FY23: Full Operational Capability



#### Joint Biological Agent Decontamination System (JBADS)

Description: Joint Biological Agent Decontamination System (JBADS) will provide the capability to conduct biological warfare agent decontamination of the interior and exterior of aircraft to safe levels, to allow more rapid return to service.

Benefits to Warfighter: Decontaminates biologically decontaminated aircraft to facilitate return to service and enable mission continuation.

#### **Program Status:**

- FY17: Milestone B
- FY22: Initial Operational Capability
- FY22: Milestone C

#### **Projected Activities:**

- FY24: Full Operational Capability



#### Joint Expeditionary Collective Protection (JECP)

**Description:** Joint Expeditionary Collective Protection (JECP) is a family of systems that will allow the application of Collective Protection to transportable soft-side shelters, enclosed spaces of opportunity, and in remote austere locations as a standalone resource.

Benefits to Warfighter: JECP is a family of systems that protects personnel and infrastructure from chemical, biological, radiological and toxic industrial material contamination on the battlefield and during military operations other than war.

#### **Program Status:**

- FY06: Milestone A - FY08: Milestone B - FY13: Milestone C

#### **Projected Activities:**

- FY24: Initial Operational Capability
- FY25: Full Operational Capability



#### Joint Service Aircrew Mask Rotary Wing (JSAM RW)

**Description:** Joint Service Aircrew Mask Rotary Wing (JSAM RW) variant provides head, eye, respiratory and chemical biological (CB) protection for general purpose rotary wing aircrew except the AH-64 Apache and the V-22 Osprey.

**Benefits to Warfighter:** The JSAM RW is capable of being donned and doffed while in flight and decreases thermal burden compared to legacy systems. The mask allows Warfighters to survive and maintain operations in a chemical and biological threat environment.

#### **Program Status:**

- FY00: Milestone A

- FY03: Milestone B

- FY15: Milestone C

- FY19: Initial Operational Capability

#### **Projected Activities:**

- FY26: Full Operational Capability



#### Joint Service Aircrew Mask Strategic Aircraft (JSAM SA)

**Description:** Joint Service Aircrew Mask Strategic Aircraft (JSAM SA) mask will provide individual respiratory, ocular, and percutaneous protection of chemical and biological warfare agents, and select toxic industrial chemicals for USAF, USN, USMC, and USA strategic aircrew.

**Benefits to Warfighter:** Allows fixed-wing aircrew of non-ejection aircraft to survive and maintain operations in a chemical and biological threat environment.

#### Program Status:

- FY17: Milestone C

- FY21: Initial Operational Capability

#### **Projected Activities:**

- FY25: Full Operational Capability



#### Joint Service Aircrew Mask Tactical Aircraft (JSAM TA)

**Description:** JSAM TA provides respiratory, ocular and percutaneous protection of chemical and biological warfare agents and select toxic industrial chemicals for tactical aircrew members. JSAM TA interfaces with aircrew protective clothing and integrates with essential aircraft subsystems for continued mission operations in a CBRN event

**Benefits to Warfighter:** Allows fixed-wing aircrew of high performance ejection seat tactical aircraft to survive and maintain operations in a chemical and biological threat environment.

#### **Program Status:**

- FY19: Milestone C

- FY21: Initial Operational Capability

#### **Projected Activities:**

- FY23: Full Operational Capability



#### Joint Service General Purpose Mask M53A1 (JSGPM M53A1)

**Description:** The Joint Service General Purpose Mask M53A1 (JSGPM M53A1) is an above-the-neck chemical biological protective respirator against battlefield concentrations of CB agents, toxins, toxic industrial materials and radioactive particulate matter.

**Benefits to Warfighter:** M53A1 mask system is National Institute for Occupational Safety and Health (NIOSH) approved and can be used to support both military and domestic missions. It has the capability to be used either as a Air Purifying Respirator (APR), a Powered Air Purifying Respirator (PAPR), or a Self Contained Breathing Apparatus (SCBA).

#### **Projected Activities:**

- FY23: Full Operational Capability



#### **Service Equipment Decontamination System (SEDS)**

**Description:** The Service Equipment Decontamination System (SEDS) program will provide the Joint Forces with modular system capability to conduct decontamination operations on the battlefield to reduce residual contamination from critical equipment to levels of re-use without the need for CB protective equipment to re-equip the force.

**Benefits to Warfighter:** Provide contamination mitigation capabilities for hardened, sensitive and/or critical equipment that have been exposed to chemical and biological contamination. Recover contaminated equipment and reduce the need for protective equipment to maximize tactical flexibility and fighting strength.

#### **Program Status:**

#### **Projected Activities:**

- FY23: Milestone B

- FY26: Milestone C



#### **Tactical Contamination Mitigation System (TCMS)**

**Description:** Tactical Contamination Mitigation System (TCMS) program will limit the spread of and mitigate the effects of CBRN contamination to allow Warfighters to continue their mission for an extended period of time without respiratory or ocular protection in a high threat, CBRN contaminated area, or near contaminated equipment.

**Benefits to Warfighter:** Forward deployed contamination mitigation capability that allows for expeditious execution of decontamination and results in reduced Mission Oriented Protective Posture (MOPP).

**Program Status:** 

**Projected Activities:** 

- FY23: Milestone A

- FY27: Milestone C



#### Uniform Integrated Protection Ensemble Family of Systems Air (UIPE FoS Air)

Description: UIPE FoS Air will provide protection from operationally relevant traditional, nontraditional, and advanced chemical, biological, radiological, and nuclear/Toxic Industrial Materials threats likely to be encountered during joint force operations. UIPE FoS Air delivers two variants of suit tailored to user needs: Chemical, Biological, Radiological Layer (CBRL), and Two Piece Undergarment (2PUG).

Benefits to Warfighter: UIPE FoS Air is intended to reduce physiological burden and weight compared to current aircrew protective garments, shielding aircrew personnel conducting operations in a CBRN threat environment. When integrated with existing (or codevelopmental) flight equipment and individual protective equipment, the UIPE FoS Air will provide full-body percutaneous protection as a part of an ensemble for all personnel who serve as aircrew for aviation platforms.

#### **Program Status (CBRL):**

- FY17: Milestone A
- FY20: Milestone C
- FY22: Initial Operational Capability - FY22: Full Operational Capability

#### **Projected Activities (2PUG):**

- FY24: Initial Operational Capability - FY29: Full Operational Capability



### **Uniform Integrated Protection Ensemble Family of Systems General Purpose** (UIPE FoS GP)

**Description:** Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP) will develop solutions that provide the broad spectrum of users with individual, percutaneous protective equipment that can be employed in a contaminated environment with minimal to no degradation in performance.

Benefits to Warfighter: Provides all general-purpose Service Members with improved Chemical and Biological (CB) protection, reduced thermal burden in all combat theaters and an improved fit, function and integration with current combat kits and equipment as compared to legacy systems.

#### **Program Status:**

- FY17: Milestone A
- FY21: Milestone B

#### **Projected Activities:**

- FY24: Milestone C
- FY28: Initial Operational Capability
- FY36: Full Operational Capability



Notional

Uniform Integrated Protection Ensemble Family of Systems Gloves - Rapid Prototyping (UIPE FoS Gloves - RP)

**Description:** UIPE FoS Gloves - RP will develop protective gloves that include touchscreen interoperability and increased tactility and dexterity compared to legacy systems while protecting the wearer from all chemical and biological agents to include nontraditional agents and radiological particulates. The program develops a protective glove to support three distinct mission profiles (Aviation Glove Heavy, Aviation Glove Light, and General Purpose Ground) to support the full range of CBRN operations.

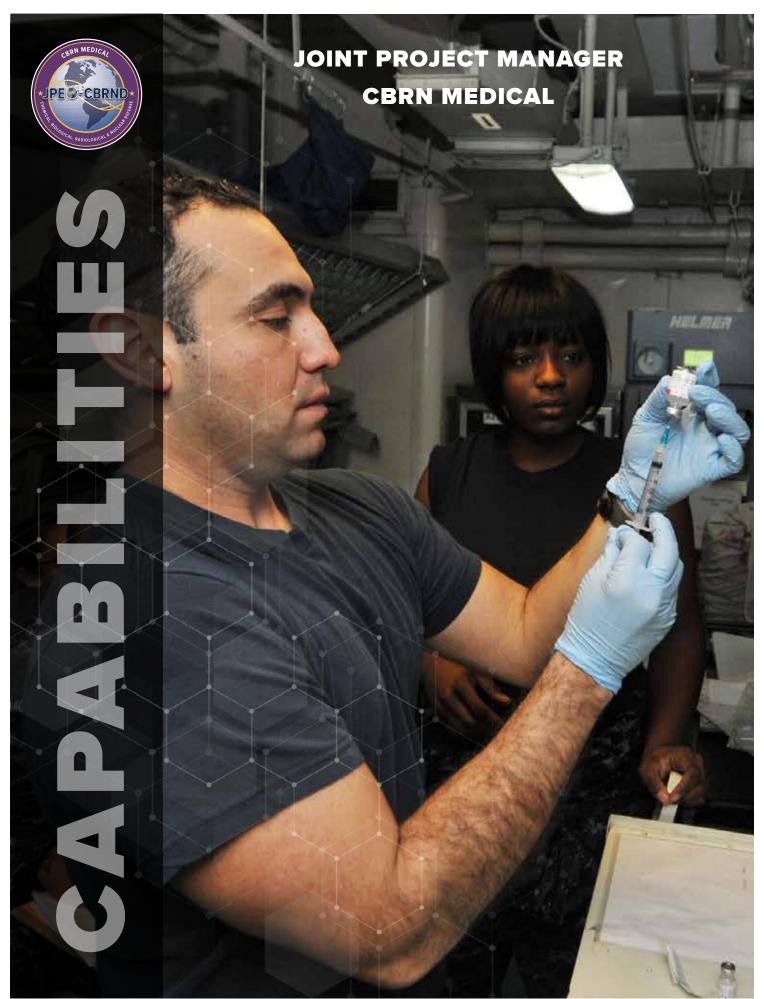
**Benefits to Warfighter:** UIPE FoS Gloves will provide CBR protection as well as increased tactility and dexterity over the legacy system and touchscreen capability. The UIPE FoS Glove will integrate with the corresponding individual protective equipment such as the UIPE FoS General Purpose or UIPE FoS Air garments.

#### **Program Status:**

- FY22: Milestone A

#### **Projected Activities:**

- FY24: Milestone B- FY25: Milestone C



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#### Advanced Anticonvulsant System (AAS)

**Description:** Advanced Anticonvulsant System (AAS) advanced development will treat seizures caused by exposure to nerve agents via intramuscular injection of midazolam in an autoinjector.

**Benefits to Warfighter:** The AAS will provide life-saving anticonvulsant medical countermeasures (MCMs) against chemical NAs. Replaces the Convulsant Antidote for Nerve Agent (CANA) autoinjector, which is no longer manufactured.

#### **Program Status:**

FY01: Milestone AFY07: Milestone BFY13: Milestone C

#### **Projected Activities:**

FY23: Initial Operational CapabilityFY25: Full Operational Capability



#### **Antiviral Therapeutics (AV TX)**

**Description:** Antiviral Therapeutics (AV TX) Filovirus will develop an antiviral agent with broad-spectrum activity against Marburgvirus and other filoviruses.

**Benefits to Warfighter:** The AV TX program is a treatment for the warfighter following filovirus exposure and infection. This product is lifesaving to the warfighter with ability for the warfighter to return to the fight.

#### **Program Status:**

- FY09: Milestone A- FY19: Milestone B

#### **Projected Activities:**

- FY29: FDA Approval



#### **Botulinum Monoclonal Antibodies (BOT MAB)**

**Description:** Botulinum Monoclonal Antibodies (BOT MAB) will counter exposure to BOT A and B toxins utilizing advanced platform technologies.

**Benefits to Warfighter:** Botulinum Monoclonal Antibodies (BOT MAB) will counter exposure to BOT A and B toxins, utilizing advanced platform technologies.

#### **Program Status:**

- FY21: Milestone A

- FY22: Milestone B

#### **Projected Activities:**

- FY24: Milestone C

FY27: Initial Operational CapabilityFY31: Full Operational Capability



# Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing (CET RAIDR)

**Description:** CET RAIDR program will perform advanced development activities to repurpose therapeutics in both the host directed and direct acting categories, including biological response modifiers. CET RAIDR will deliver interim capabilities to bridge the gap between initial and definitive care for traditional and emerging threat agent.

#### **Program Status:**

- FY22: Baloxavir - Final Report

#### **Projected Activities:**

- FY24: Dexmedetomidine Final Report
- FY25: Leukine Final Report





#### Improved Nerve Agent Treatment System-Centrally Acting (INATS CA)

**Description:** Improved Nerve Agent Treatment System - Centrally Acting (INATS CA) advanced development provides an enhanced capability treatment regimen offering greater protection over a broader spectrum of toxic nerve agents and improves the performance of fielded FDA approved medical countermeasures.

**Benefits to Warfighter:** A central-acting anticholinergic drug, like scopolamine, is an important therapy to increase therapeutic efficacy of countermeasures, especially in brain tissue; reducing the logistical burden for additional atropine, and offering greater protection over a broader spectrum of toxic nerve agent threats, such as Fourth Generation Agents (FGA). SNAPP modernization will increase operational utility of SNAPP, as well as provide a sustained release PB (SR PB) formulation.

#### **Program Status:**

- FY04: Milestone A- FY22: Milestone B

#### **Projected Activities:**

- FY27: Milestone C

FY28: Initial Operational CapabilityFY31: Full Operational Capability



#### **Modernization Medical (MOD MED)**

**Description:** The Modernization Medical (MODMED) program supports improvements to fielded systems and supports post-fielding FDA requirements for devices and combination products.

**Benefits to Warfighter:** The MOD MED program maintains fielded capabilities and modernizes MCMs, including FDA-approved autoinjectors and diagnostic equipment, in order to mitigate obsolescence and maintain fielded capabilities.

#### **Projected Activities:**

- FY23: NGDS-1 Market Research and Analysis
- FY26: Autoinjector Post Marketing Commitments
- FY27: NGDS-1 Modernization



#### Next Generation Diagnostics System 2-Chemical Diagnostics (NGDS 2 ChemDX)

**Description:** Next Generation Diagnostic System 2 - Chemical Diagnostics (NGDS 2 ChemDx) will provide far-forward, immediate medical diagnostic capability for suspected nerve agent exposure.

Benefits to Warfighter: The NGDS 2 ChemDX provides the far-forward warfighter with the immediate capability to inform diagnosis of potential NA exposure, including non-traditional agents, before symptoms present themselves. NGDS 2 ChemDX test results can also be used to inform treatment decisions for self-aid, buddy-aid, and combat lifesaver or medic.

#### **Program Status:**

- FY17: Milestone A

- FY22: Milestone B

#### **Projected Activities:**

- FY25: Milestone C

- FY25: Initial Operational Capability - FY28: Full Operational Capability



#### Next Generation Diagnostics System 2-Man Portable Diagnostic System (NGDS 2 MPDS)

Description: Next Generation Diagnostic System 2 - Man Portable Diagnostic System (NGDS 2 MPDS) is a portable diagnostic device and assays to diagnose diseases in austere, farforward environments.

Benefits to Warfighter: The NGDS 2 MPDS will provide earlier patient diagnosis, and improve decision support for treatment and evacuation, in order to help mitigate the effects of exposure to unknown infectious disease and biological agents.

#### **Program Status:**

**Projected Activities:** 

- FY19: Milestone B - FY25: Milestone C





#### **Smallpox Antiviral PEP (SPX AV PEP)**

**Description:** Smallpox Antiviral PEP (SPX AV PEP) will expand the scope of the TPOXX product to include post-exposure prophylaxis for smallpox.

**Benefits to Warfighter:** This effort will complete all required non-clinical and clinical studies necessary to submit a supplemental New Drug Application (sNDA), seeking approval of TPOXX® for PEP to close the "window of vulnerability" by providing a treatment option for smallpox after it is too late for vaccination to be effective, and prior to clinically-evident disease.

#### **Projected Activities:**

- FY23: Phase 2 and 3 Completion (Final Report)

- FY25: FDA Approval



#### Vaccine Acceleration by Modular Progression Enhanced Biodefense (VAMP ENBD)

**Description:** Vaccine Acceleration by Modular Progression (VAMP) Enhanced Biodefense (ENBD) is an investment program that leverages 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 utilizing mature platforms from established commercial manufacturing. VAMP will continue to develop vaccine platform technologies using a modular approach to ensure flexibility and manage awards utilizing go/no-go checkpoints along the development pathway.

**Benefits to Warfighter:** VAMP program will expedite prototype vaccine medical countermeasure delivery by advancing and accelerating development of existing vaccine platforms.

#### **Projected Activities:**

- FY24: Ongoing development and studies of prototype vaccines for viruses of concern



#### Vaccine Storage and Stability Testing (VSST)

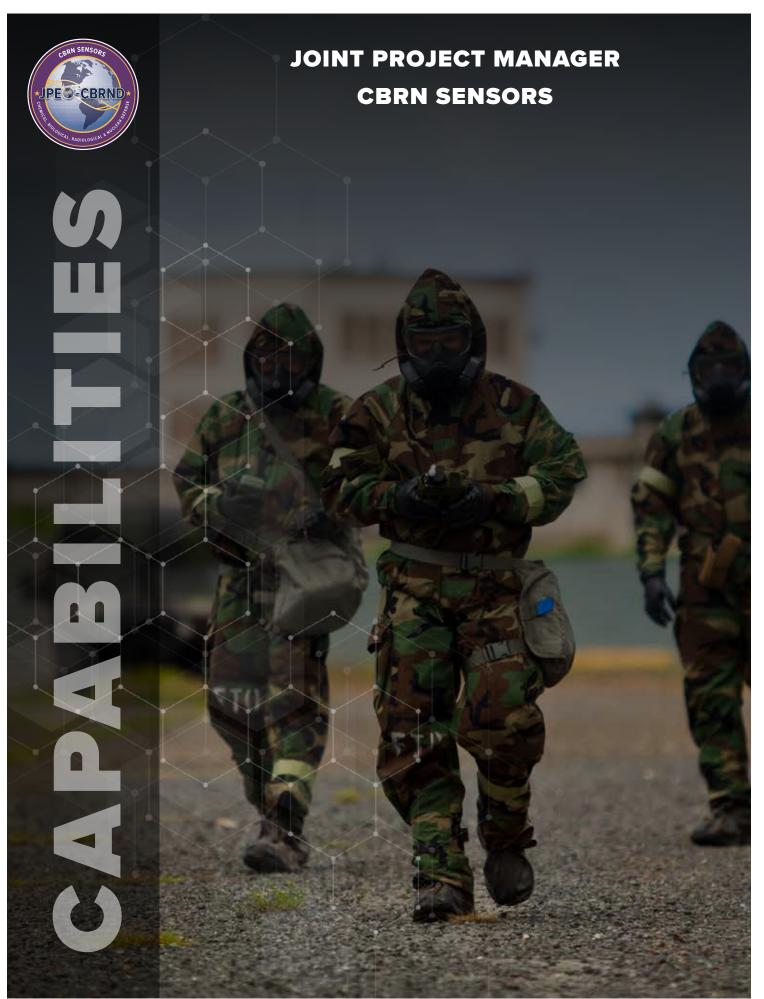
**Description:** The VSST utilizes Congressional directed funding for the Bot and Plague vaccines to maintain the existing vaccine material in Good Manufacturing Practice (GMP) storage and to conduct the periodic potency and stability testing of these materials to support submissions to the FDA and potential future emergency response.

#### **Program Status:**

- FY22: IND Submission

#### **Projected Activities:**

- Ongoing Stability Testing and Evaluation
- Ongoing Storage of Vaccine and Critical Reagents





#### **Aerosol Vapor Chemical Agent Detector (AVCAD)**

**Description:** Aerosol Vapor Chemical Agent Detector (AVCAD) is filling critical gaps in current Joint Force chemical sensor capabilities, in the areas of liquid, solid and dusty aerosol Chemical Warfare Agent detection, and detection of specific advanced threats/Non-Traditional Agents.

**Benefits to Warfighter:** AVCAD provides a man-portable, sensitive aerosol and vapor chemical detection capability.

#### **Program Status:**

FY14: Milestone AFY18: Milestone BFY23: Milestone C

#### **Projected Activities:**

- FY27: Initial Operational Capability- FY31: Full Operational Capability



#### **Analytical Laboratory System Modification (ALS MOD)**

**Description:** Analytical Laboratory System Modification (ALS MOD) addresses critical analytical equipment obsolescence and system functionality for NGB WMD-CSTs. It is modular, scalable, and adaptable to various environmental conditions and supports the specific mission of CONOPS.

**Benefits to Warfighter:** The ALS MWO addresses ALS Increment 1 obsolescence issues and will optimize the Warfighter's ability to analyze data by providing enhanced human factors and engineering controls, a larger shelter and work space, upgraded software, larger databases to help identify unknowns, and improved process flow integration.

#### **Projected Activities:**

- FY23: Full Operational Capability



#### **CBRN Sensor Integration on Robotic Platforms (CSIRP)**

**Description:** CSIRP is a prototyping and fielding effort that will repackage and integrate modular CBRN sensor solutions to enhance unmanned robotic platform Programs of Records to provide situational awareness across the echelons of command in order to enable freedom of maneuver and action on the battlefield.

**Benefits to Warfighter:** CSIRP allows Warfighters greater freedom to maneuver and operate on the battlefield and provides increased decision space for Commanders at all echelons.



# Chemical Biological Radiological Nuclear Dismounted Reconnaissance Systems (CBRN DRS)

**Description:** CBRN Dismounted Reconnaissance System (CBRN DRS) provides CBRN and EOD Warfighters with a comprehensive suite of detection/identification, protection, sample collection, hazard marking, decontamination, and support capabilities during dismounted reconnaissance, sensitive site assessment and render safe missions.

**Benefits to Warfighter:** CBRN DR SKO provides a comprehensive, all-hazards dismounted reconnaissance and site assessment capability to protect against, detect, and decontaminate chemical warfare agents, biological warfare agents, toxic industrial chemicals, and other hazards. SMPs will provide enhanced detection, protection, and situational awareness.

#### **Program Status:**

- FY11: Milestone B

- FY13: Milestone C

#### **Projected Activities:**

- FY23: Full Operational Capability (Other Services CBRN Systems)
- FY24: Full Operational Capability (EOD Systems)



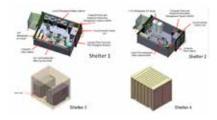
# Common Analytical Laboratory System Field Confirmatory Analytical Capability Set (CALS FC ACS)

**Description:** Common Analytical Laboratory System Field Confirmatory Analytical Capability Set (CALS FC ACS) is a common suite of CB COTS/GOTS to support DoD field analytic units. FC ACS results will assist and/or support Commanders or local authority decisions on protection, treatment, decontamination and planning of future operations.

**Benefits to Warfighter:** Information produced by FC ACS will assist commanders or the local authority with managing and mitigating the effects of a CBR attack or disaster by providing the ability to rapidly develop a common operating picture to determine the appropriate course of action.

#### **Projected Activities:**

- FY25: Initial Operational Capability
- FY27: Full Operational Capability



# Common Analytical Laboratory System Theater Validation Integrated System (CALS TV IS)

**Description:** Common Analytical Laboratory System Theater Validation Integrated System (CALS TV IS) integrates a common suite of CB COTS/GOTS to provide a common, modular, and transportable/mobile system to support USA AML and CARA Units and provide a high level of confidence in results via orthogonal technologies and expanded suite.

**Benefits to Warfighter:** The CALS TVIS will optimize the Warfighter's ability to analyze environmental samples by providing a mobile laboratory capable of providing Theater Validation results against Chemical and Biological threats. The system includes two large shelters, which gives the user ample space to perform sample manipulation under engineering controls in order to help identify unknown and presumptively identified environmental samples for CALS analysis.

#### **Program Status:**

- FY20: Milestone C



#### Compact Vapor Chemical Agent Detector (CVCAD)

**Description:** Compact Vapor Chemical Agent Detector (CVCAD) is a man-worn, mounted, or unmanned robotic capability for the detection of chemical hazards.

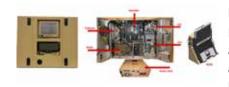
**Benefits to Warfighter:** CVCAD alerts Warfighters to the presence of chemical vapor hazards and is applicable to man-worn and unmanned applications.

#### **Program Status:**

- FY14: Milestone A

#### **Projected Activities:**

- FY24: Milestone B



#### **Enhanced Maritime Biological Detection (EMBD)**

**Description:** EMBD is a technology refresh to the JBPDS for the USN. It will provide an automated biological point detection capability to detect, collect & identify biological warfare agents and improved detection capability while increasing reliability and maintainability and lowering support costs over JBPDS.

**Benefits to Warfighter:** Enhanced Maritime Biological Detection (EMBD) is a next generation biological detection capability being fielded to the US Navy. EMBD increases the probability of detection of BWAs, reduces false alarms, reduces hardware failure rates and increases system reliability, availability and maintainability. EMBD's improved detection sensitivity and background discrimination provides the Navy the ability to "detect to inform" which will reduce the number of contaminated ships and minimize casualties.

### **Program Status:**

- FY18: Milestone B - FY20: Milestone C

- FY23: Initial Operational Capability

#### **Projected Activities:**

- FY28: Full Operational Capability



#### Joint Biological Tactical Detection System (JBTDS)

**Description:** Joint Biological Tactical Detection System (JBTDS) provides the Joint Warfighter detection, collection, and identification capability of Biological Warfare Agent (BWA) aerosols to enhances battle space awareness to protect and preserve the forces and support time sensitive force protection decisions.

Benefits to Warfighter: The JBTDS' ability to detect, collect, and identify biological warfare agents at very low concentrations gives Warfighters additional time to make decisions and take action to prevent or reduce the risk of exposure. Gold-standard molecular technology provides field confirmatory bioagent identification, enabling Commanders to rapidly support battlespace decisions.

#### **Program Status:**

- FY11: Milestone A - FY14: Milestone B

# **Projected Activities:**

- FY23: Milestone C

- FY29: Initial Operational Capability - FY32: Full Operational Capability



#### Joint Personal Dosimeter-Individual (JPD-I)

Description: The Joint Personal Dosimeter-Individual (JPD-I) is intended to replace DoDs legacy dosimeters (the Navys IM-270 and the Armys PDR-75 Series Systems). The JPD will provide a sensor to record and retrieve a Service members radiation exposure from occupational to tactical levels.

Benefits to Warfighter: JPD-I will support radiological defense missions, which include detecting and tracking the accumulated total dose an individual receives from ionizing radiation and recorded in the individuals' medical records. JPD-I provides near real time indication of total absorbed dose to the individual without the need to use a separate reader. Capable to achieve National Voluntary Laboratory Accreditation Program (NVLAP) to obtain Dose of Record for Warfighter's Medical Records.

#### **Program Status:**

- FY17: Milestone C

#### **Projected Activities:**

- FY23: Initial Operational Capability - FY30: Full Operational Capability



#### Man-portable Radiological Detection System (MRDS)

**Description:** Man-portable Radiological Detection System (MRDS) increases capabilities to detect, localize, presumptively identify, and field-confirm the presence of Special Nuclear Material. It is networked to provide near real-time, tactical level situational awareness during CWMD Interdiction and Elimination operations.

**Benefits to Warfighter:** MRDS increases the Warfighter's awareness of radiological threats at the tactical level.

#### **Program Status:**

- FY18: Milestone C

#### **Projected Activities:**

- FY26: Initial Operational Capability
- FY Full Operational Capability





#### Multi-Phase Chemical Agent Detector (MPCAD)

**Description:** Multi-Phase Chemical Agent Detector (MPCAD) is a 2-man portable system that will conduct real-time, near-laboratory grade analysis of solid, liquid, and vapor samples collected by an operator in a contaminated area. Results will support Commander's decisions for maneuver, protection, decontamination, and treatment measures.

**Benefits to Warfighter:** MPCAD provides a higher fidelity analysis of samples collected in the field than the currently fielded detectors to enable Commanders to make more informed decisions.

#### **Program Status:**

- FY14: Milestone A

- FY18: Milestone B

#### **Projected Activities:**

- FY23: Milestone C

- FY26: Initial Operational Capability

- FY28: Full Operational Capability

## JPM CBRN SENSORS



### **Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade** (NBCRV SSU)

**Description:** NBC Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU) provides maneuver formations the ability to conduct mounted reconnaissance and surveillance missions of CBRN named areas of interest (NAIs).

#### **Program Status:**

- FY21: Critical Design Review
- FY23: ACAT II Redesignation

#### **Projected Activities:**

- FY26: Full Material Release/Full Rate Production Decision



#### **Radioisotope Identification Detector (RIID)**

Description: Radioisotope Identification Detector (RIID) is a Family of handheld, ruggedized, and networked RIIDs that use different COTS technologies to locate, identify, and characterize radiological and nuclear (RN) material, including special nuclear materials.

#### **Program Status:**

- FY19: Milestone A
- FY22: Initial Operational Capability
- FY22: Milestone C

#### **Projected Activities:**

- FY27: Full Operational Capability

## JPM CBRN SENSORS



#### Radiological Detection System (RDS)

**Description:** Radiological Detection System (RDS) provides a standard DoD RDS that will replace the current radiation detection, indication, and computation (RADIAC) systems (AN/PDR-77, AN/VDR-2, ADM-300, and MFR Suite) used by the Joint Services and consolidate the capabilities into one joint solution.

**Benefits to Warfighter:** The RDS will provide Warfighters with an understanding of their total exposure to various types of radiation.

#### **Program Status:**

- FY14: Milestone A

#### **Projected Activities:**

- FY23: Milestone C



#### **Screening Obscuration Module (SOM)**

**Description:** Screening Obscuration Module (SOM) is a modular medium-area and duration screening obscuration capability that is located at the small element level of conventional force units and is employed at the tactical in a mounted or dismounted configuration.

Benefits to Warfighter: -Increases Soldier and Platform Survivability.

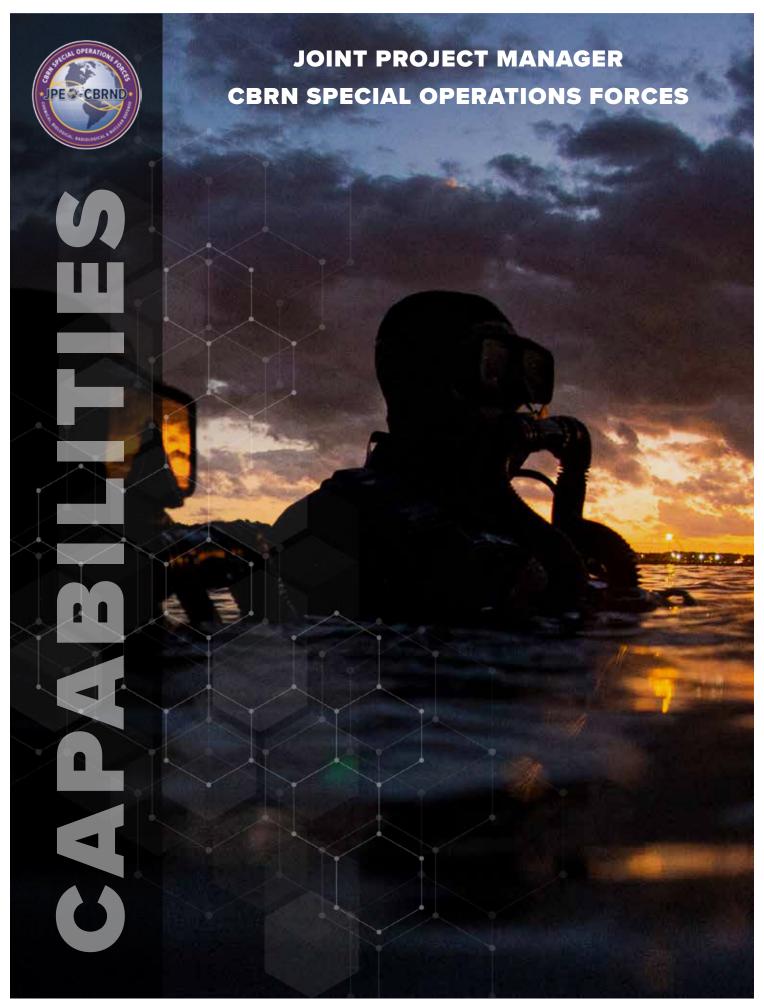
- -Degrades the enemy's ability to detect US targets.
- -Supports Mounted and Dismounted units

#### **Program Status:**

- FY06: Milestone A- FY22: Milestone C

#### **Projected Activities:**

FY24: Full Operational CapabilityFY24: Initial Operational Capability



## JPM CBRN SPECIAL OPERATIONS FORCES



#### **Critical Equipment Decontamination System (CEDS)**

**Description:** CEDS will provide the capability to rapidly decontaminate CB agents from critical operational equipment to a level that allows re-use and without wearing PPE to quickly re-equip the force - maximizing tactical flexibility and fighting strength, while minimizing the logistical burden and cost of conducting CWMD operations.

**Benefits to Warfighter:** Provides transportable system variants with the capability to rapidly decontaminate CB agents from critical operational equipment to a level that allows re-use and without wearing protective equipment to quickly re-equip the force maximizing tactical flexibility and fighting strength.

#### **Program Status:**

- FY21: Milestone A- FY23: Milestone B







### Forward Area Mobility Spray System - Rapid Prototyping (FAMS-S-RP)

**Description:** Forward Area Mobility Spray System - Rapid Prototyping (FAMS-S - RP) will provide Special Operations Forces (SOF) and SOF Task Forces a man-portable and mobile platform capable of rapidly decontaminating chemical and biological agents from the various vehicles or support equipment.

**Benefits to Warfighter:** Enables the Warfighter to adequately decontaminate aircrafts, helicopters, boats, vehicles, or support equipment to the point of re-use in an unprotected state during contingency operations.

#### **Projected Activities:**

- FY24: Prototype Delivery
- FY27: Full Operational Capability

## JPM CBRN SPECIAL OPERATIONS FORCES







#### SPU Rapid Capability Development and Deployment (SPU RCDD)

**Description:** Special Purpose Unit Rapid Capability Development and Deployment (SPU RCDD) enables the Warfighter to deter, prevent, protect against, mitigate, respond to, and recover from chemical, biological, radiological, and nuclear (CBRN) threats and effects as part of an integrated and layered defense.

Benefits to Warfighter: SPU RCDD enables the Warfighter to deter, prevent, protect against, mitigate, respond to, and recover from chemical, biological, radiological, and nuclear (CBRN) threats and effects as part of an integrated and layered defense.



#### **Tactical Advanced Threat Protective Ensemble (TATPE)**

**Description:** The TATPE is a system that falls within the UIPE FoS. It will bridge the gap between current military Chemical and Biological protective ensembles and tactical assault suits by providing increased protection on the battlefield applied against specific CWMD crisis response mission executions.

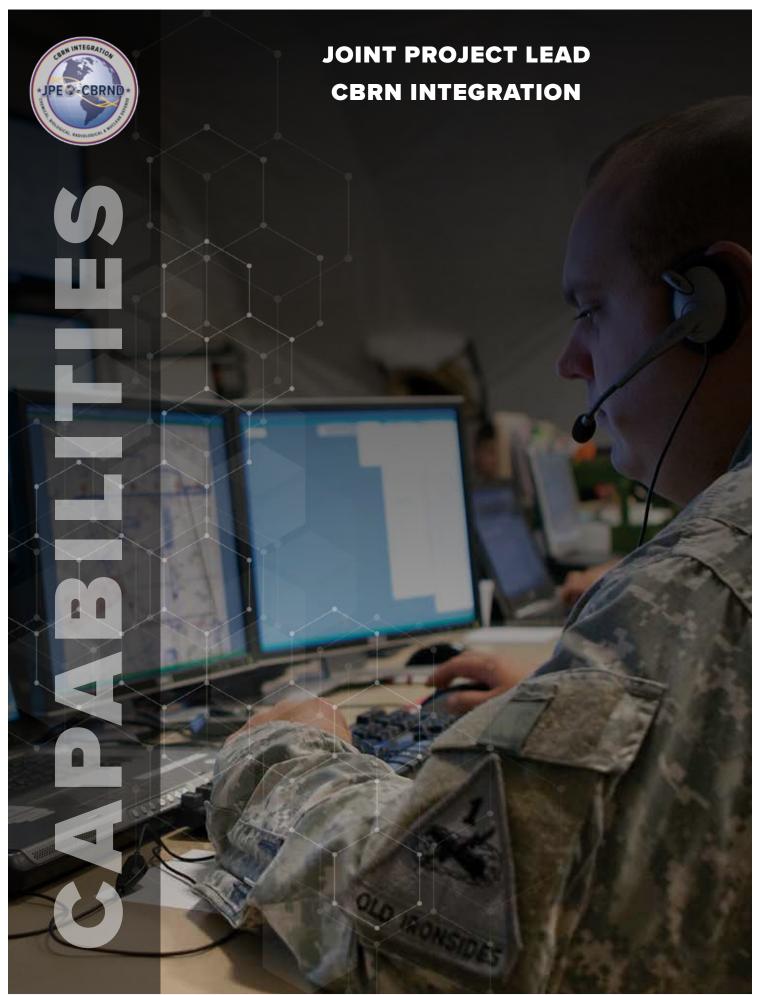
Benefits to Warfighter: First of its kind ensemble that provides hybrid Level A/ Level B protection against non-traditional and advanced threat agents to high risk personnel. This capability enables CBRN and Explosive Ordnance Disposal operators to maintain both a tactical posture and a high level of CBRN protection while performing CWMD missions.

#### **Program Status:**

- FY22: Milestone B - FY22: Milestone C

#### **Projected Activities:**

- FY24: Initial Operational Capability - FY25: Full Operational Capability



## JPL CBRN INTEGRATION



#### Chemical Biological Radiological Nuclear Information System (CBRN IS)

**Description:** Chemical, Biological, Radiological, and Nuclear Defense Information System provides a web-based capability that allows users to collect, collaborate, and disseminate CBRN hazard data for greater situational awareness of the CBRN environment and aid in decision support.

**Benefits to Warfighter:** CBRN IS provides a collaborative cloud-hosted environment that allows users to collect and disseminate CBRN warning and reporting data, provide detailed CBRN hazard predictions, aid in decision support, and make relevant CBRN defense information available in near-real-time. CBRN IS makes decision aids accessible through a web browser, simplifying interoperability, reducing integration and deployment costs, and increasing cybersecurity protection.



#### Chemical Biological Radiological Nuclear Support to C2 (CSC2)

**Description:** CBRN Support to Command & Control (CSC2) is the enablement of situational awareness (SA) and command and control (C2) to continue military operations in an actual or threatened CBRN environment and includes shaping and prevention, CBRN hazard and attack analysis, network integration, and decision support.

**Benefits to Warfighter:** -Integrates CBRN sensor data and information into a common architecture

- -Allows for a near plug-and-play capability for CBRN sensor to integrate in Service's COE and COPs
- -Provides initial suite of decision support applications
- -Artificial Intelligence/Machine Learning analytics applications reduce sensor false alarm rates and increase confidence on CBRN alarms
- -Common CBRN user interface that reduces training and logistics burden

## JPL CBRN INTEGRATION



#### JACKS Defense Business System (JACKS DBS)

**Description:** JACKS DBS is the DoD knowledge management system for information related to the acquisition and support of CBRN defense products and programs. JACKS supports the CBDP by providing an authoritative, comprehensive and centralized source of CBRN information to stakeholders and acquisition professionals.

**Benefits to Warfighter:** Centralized tool for authoritative CBDP information.

Provides CBRN product information, training, visualization, and reporting to all Services, other government agencies, and foreign partners.

Provides oversight and automates business processes for the BSAT Biorisk Program Office. Tracks BSAT inventory that is stored, maintained, and used by DoD BSAT labs.



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### JPL CBRND ENABLING BIOTECHNOLOGIES



## Chemical Biological Incident Preparedness and Response Advanced Development Manufacturing (CBIPR ADM)

**Description:** 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.

**Benefits to Warfighter:** Priority access to domestic MCM manufacturing capabilities that will provide an increased level of preparedness and response to counter current and emerging chemical and biological threats.



#### **Defense Biological Product Assurance Program (DBPAP)**

**Description:** The Defense Biological Product Assurance Program (DBPAP) integrates and consolidates DoD reagents (i.e., antibodies/antigens) and biological warfare agent detection requirements plus supports an internal initiative ("TARMAC") that uses state-of-the-art analytical capability for biological threats that will enable the compression of the discovery-to-decision time frame and provide awareness and understanding of the baseline biological threat footprint. In order to detect biological warfare agents (antigen), a critical reagent (genomics material) may be needed for use in a detection platform. Multiple medical and non-medical platforms require a continuous, quality supply of critical reagents for effective warning to significantly enhance force survivability. They are also required for rapid medical diagnosis to ensure appropriate treatment of exposed personnel. A common set of reagents for relevant platforms are required. The DBPAP is also responsible for managing the production, storage and validation of Hand Held Assays (HHAs), Polymerase Chain Reaction (PCR) genomic assays, Electrochemiluminescence (ECL) immunoassays, antibodies, and select biological threat agents and genomic reference materials. The DBPAP's PCR assays have been used in the DoD's response efforts to the 2014 Ebola epidemic in West Africa, the 2019 COVID Pandemic and most recently DoD NATO efforts in Ukraine.

**Benefits to Warfighter:** DBPAP provides a capability for early detection of known and emerging biological threats that enables treatment of exposed Warfighters. DBPAP facilitates biodefense assay and reagent requirements to support programs for other US government organizations, including the Department of Homeland Security, US Capitol Police, National Institute of Allergy and Infectious Diseases, and US Secret Service. DBPAP assays are used in DoD and civilian government facilities. The DBPAP Enhanced Biodefense efforts further builds upon the DBPAP by expanding the number of site locations for increased sequencing capabilities to monitor critical assay performance that detect biothreats and increasing the ability to exchange critical data (sequence information) collected at these sites by one additional site per year.

### JPL CBRND ENABLING BIOTECHNOLOGIES



## Generative Unconstrained Intelligent Drug Engineering Enhanced Biodefense (GUIDE ENBD)

**Description:** Generative Unconstrained Intelligent Drug Engineering Enhanced Biodefense (GUIDE ENBD) is an advanced, integrated computational system intended to decrease product development risk throughout the drug 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) as well as small molecule drugs by simultaneously optimizing the critical quality attributes of safety, efficacy, manufacturability and pharmacokinetics/pharmacodynamics. GUIDE will incorporate computational approaches to manufacturing controls and preclinical/clinical testing. GUIDE is a collaboration between the interagency, academia and industry partners and is closely linked to the Accelerated Antibodies and RNA vaccine (VAMP) programs.

**Benefits to Warfighter:** GUIDE will accelerate medical countermeasure development and reduce costs by addressing risk across the drug development life cycle. GUIDE enables pre-emptive candidate discovery/design and rapid response to unanticipated threats to stay ahead of emerging and engineered threats to the Warfighter.



#### **Accelerated Antibodies Enhanced Biodefense (AA ENBD)**

**Description:** Monoclonal Antibodies Enhanced Biodefense (AA ENBD) will develop prophylactic and/or therapeutic monoclonal antibody (mAb) medical countermeasure against a broad range of biological threats. Funded in FY22 as COVID TX MAB, this is a continuation, which will target the discovery, identification, and 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.

**Benefits to Warfighter:** Using the proven mAb platform, Accelerated Antibodies will provide the Warfighter with a portfolio of mAb MCMs through Phase 1 clinical trial. This will provide a response capability, enabling much more rapid fielding for Warfighter protection and treatment.

## JPL CBRND ENABLING BIOTECHNOLOGIES



#### Medical Countermeasure Platform Technologies (MCMPT)

**Description:** 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.

**Benefits to Warfighter:** The MCMPT program will establish standardized capabilities that will reduce MCM development risks for a vaccines and antibodies. These standardized capabilities can be leveraged to accelerate the MCM development cycle and rapidly delivery products to the Warfighter.



#### Plague Monoclonal Antibodies (PLG MAB)

**Description:** The Plague Monoclonal Antibodies (PLG MAB) program was transitioned in FY2023 from MCMPT. 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.

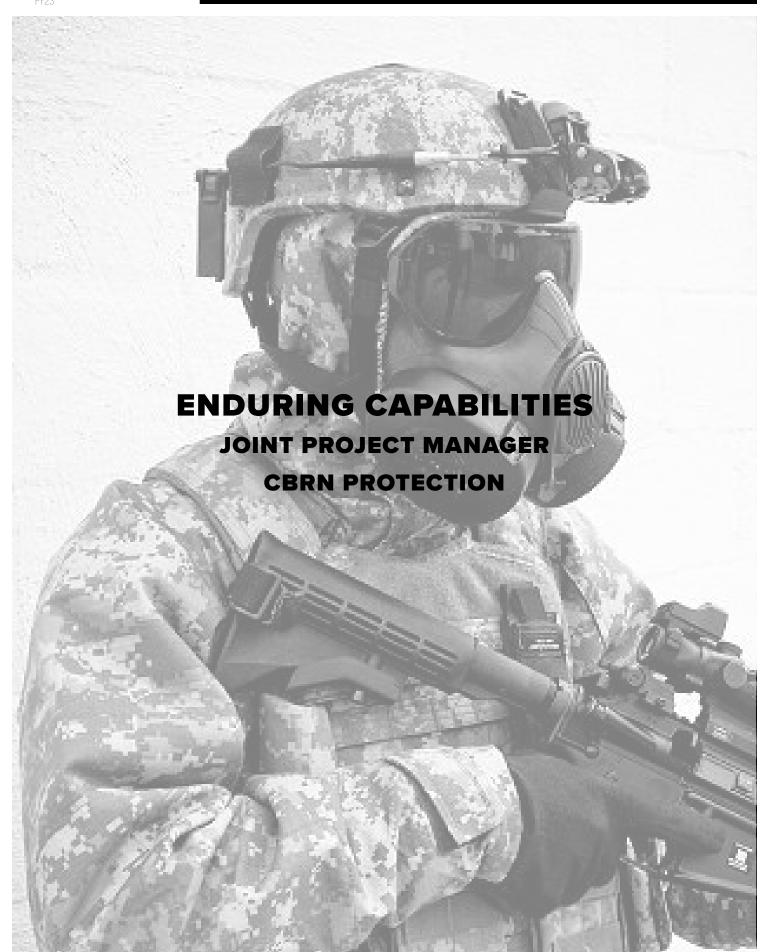
**Benefits to Warfighter:** PLG MAB will provide a pre-exposure prophylactic to counter exposure to aerosolized plague bacteria.

#### **Projected Activities:**

- FY25: Milestone B



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#### ENDURING CAPABILITIES

## **ENDURING CAPABILITIES JPM CBRN PROTECTION**



#### Chemical Biological Protective Shelter M8E1 (CBPS M8E1)

**Description:** Chemical and Biological Protective Shelter (CBPS M8E1) satisfies the services need for a highly mobile, self-contained collective protection system which can provide a contamination free working area for Echelon I and II medical treatment facilities and other selected units.



#### **Collectively Protected Field Hospital (CPFH)**

**Description:** The Collectively Protected Field Hospital provides collective protection to the core components while allowing medical operations in chemical, biological, and radiological environments. CPFH integrates collective protection components into expeditionary field hospitals to enable sustained medical treatment in a CBR contaminated environment without the use of mission oriented protective posture gear. There are variants for the U.S. Army, U.S. Navy, and U.S. Air Force.



#### **Decontamination Family of Systems Joint Service Equipment Wipe (DFoS JSEW)**

**Description:** DFoS Joint Service Equipment Wipe (DFoS JSEW) is a portable wipe system applied directly to the contaminated equipment surface and is capable of removing gross contamination within five minutes following application, in durable packaging easily opened in MOPP IV, and is non-hazardous, non-flammable and inherently safe.



#### **Joint Protective Aircrew Ensemble (JPACE)**

**Description:** The Joint Protective Aircrew Ensemble provides below-the-neck CB protection for aviators and aircrew personnel when worn in place of the flight suit or over the Chemical Protective Undergarment.



#### Joint Service Aircrew Mask Apache (MPU-6 JSAM Apache)

**Description:** The Joint Service Aircrew Mask Apache provides face, eye, and respiratory protection for U.S. Army AH-64 A/D aircrew against battlefield concentrations of CB agents, toxins, toxic industrial materials and radioactive particulate matter. It is compatible with the Apache Integrated helmet and Display Sighting System. It provides flame and thermal protection and reduces heat stress imposed by existing CB protective masks. The system is capable of being donned and doffed in-flight.



### Joint Service Chem/Bio Coverall for Combat Vehicle Crewmen (JC3)

**Description:** The Joint Service Chem/Bio Coverall for Combat Vehicle Crewmen provides CB agent and radiological particle protection for combat vehicle crewmen. It is a flame-resistant garment made from a petroleum, oil, and lubricant resistant, selectively permeable membrane material.

#### **ENDURING CAPABILITIES**

## **ENDURING CAPABILITIES JPM CBRN PROTECTION**



#### Joint Service Chemical Environmental Survivability Mask (M52 JSCESM)

**Description:** The Joint Service Chemical Environmental Survivability Mask (JSCESM) protects against chemical vapor and airborne biological and particulate threats where standard Mission Oriented Protective Posture (MOPP) equipment would be used. The JSCESM provides emergency escape protection for situations such as emergency evacuations and non-combatant operations.



#### Joint Service General Purpose Mask (JSGPM)

**Description:** The Joint Service General Purpose Mask JSGPM is an above-the-neck chemical and biological respirator that protects against battlefield concentrations of chemical-biological agents, toxins, Toxic Industrial Materials, and radioactive particulate matter. The JSGPM Family of Systems includes: M50 (ground use) and M51 (ground vehicle use), M53 (special forces), M53A1 (domestic and military use).



#### Joint Service Lightweight Integrated Suit Technology (JSLIST)

**Description:** The Joint Service Lightweight Integrated Suit Technology (JSLIST) is a durable, launderable, protective suit providing protection against battlefield concentrations of known CBR threats. The JSLIST is made to be worn over the service uniform and consists of a two piece suit, overboots, gloves, and respiratory equipment. The suit is air permeable to improve user comfort and reduce heat stress.



## Joint Service Lightweight Integrated Suit Technology - Alternative Footwear Solutions (JSLIST AFS)

**Description:** The JSLIST Alternative Footwear Solutions is a protective overboot worn over normal combat footwear to provide foot protection against liquid, dust, particulate, or sporulated toxic material, CB warfare agents, and radiological fallout particles when worn as part of the JSLIST, JPACE, or JC3.



## Joint Service Lightweight Integrated Suit Technology Block 1 Glove Upgrade Flame Resistant (JSLIST JB1GU FR)

**Description:** The JSLIST Block 1 Glove Upgrade Flame Resistant satisfied an urgent Special Operations Command (SOCOM) chemical and biological protective glove requirement.



# Joint Service Lightweight Integrated Suit Technology Block 1 Glove Upgrade Non-Flame Resistant (JSLIST JB1GU nFR)

**Description:** The JSLIST Block 1 Glove Upgrade Non-Flame Resistant protects the hands from exposure to liquid, vapor, and aerosol chemical and biological hazards. It is a component of the JSLIST ensemble and offers increased tactility/dexterity and an inner chemical protective liner for sweat management.



## Joint Service Lightweight Integrated Suit Technology Integrated Footwear System (JSLIST IFS)

**Description:** The Joint Service Lightweight Integrated Suit Technology Integrated Footwear System is a sock/liner system worn under normal combat footwear to protect the foot against chemical and biological hazards. It is issued as a component of the JSLIST and the JPACE.



#### **Joint Service Personnel Decon System (JSPDS)**

**Description:** The Joint Service Personnel Decon System is an individually carried skin decontamination kit used by the warfighter to perform immediate decontamination of skin, field protective masks, mask hoods, chemical protective gloves, and small-scale weapons.



#### Joint Service Transportable Decon System Small Scale (JSTDS SS)

**Description:** The Joint Service Transportable Decon System Small Scale provides a portable, enhanced operational decontamination capability that supports thorough decontamination operations of medium to large mobile or fixed equipment and aircraft.



#### M40 Series Mask Program (M40 SMP)

**Description:** The M40 series protective mask replaced the M17 series protective mask as the standard Army field mask, providing improved comfort, fit and protection. The mask consists of a silicone rubber face piece with an in-turned peripheral face seal, binocular rigid eye lens system and elastic head harness. Other features include front and side voicemitters, drink tube, clear and tinted inserts, and a filter canister with NATO standard threads.



#### M41A1 Protection Assessment Test System (M41A1 PATS)

**Description:** M41A1 Protection Assessment Test System (M41A1 PATS) is a test system that measures the fit factor of the protective mask on the Warfighter, emphasizing the importance of the masks proper fit and wear. The PATS is the Joint Force's only means of testing/verifying mask fit. The M41A1 PATS addresses obsolescence of the M41 PATS.



#### M42 Series Mask Program (M42 SMP)

**Description:** The M42 protective mask provides respiratory, eye and face protection against chemical and biological agents, radioactive fallout particles, and battlefield contaminants. A Combat Vehicle Crewman Mask variant includes a built-in microphone for wire communication.



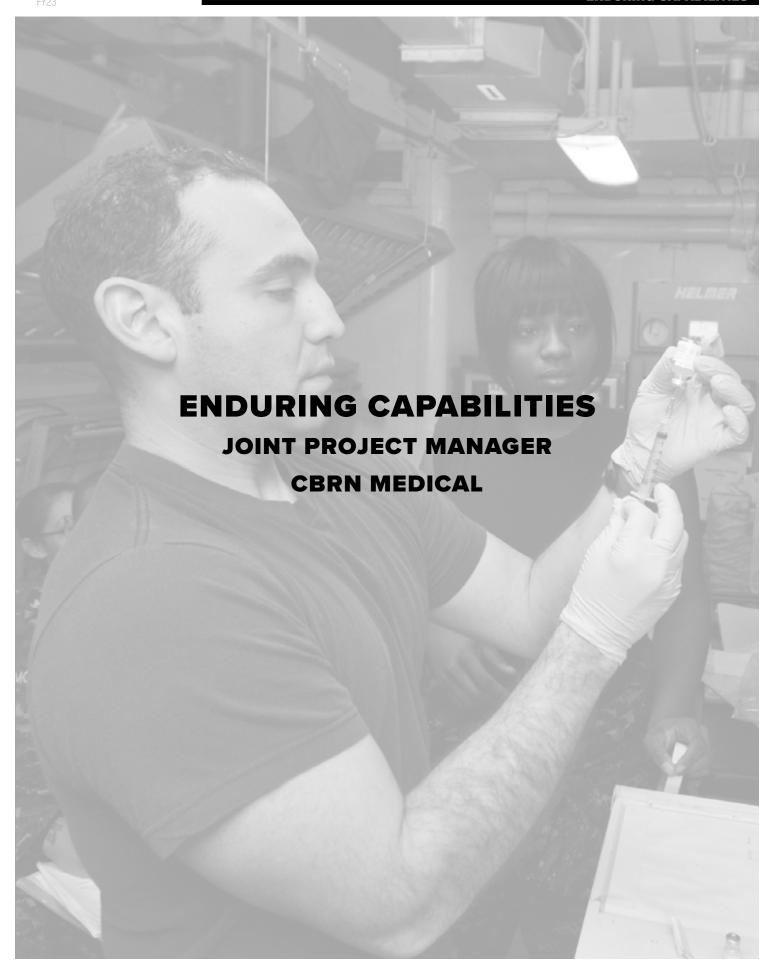
#### M45 Aircrew Chemical-Biological Mask System (M45 CBM)

**Description:** The M45 aircrew protective mask provides aircrew and hard-to-fit personnel with above-the-neck, head, eye, and respiratory protection against all known chemical and biological threat agents and radiological particulates. The M45, issued to Blackhawk crew members, provides protection without the aid of forced ventilation air. It is compatible with aircraft sighting systems and night vision devices. It has close fitting eyepieces, a voicemitter, drink tube, and a low-profile filter canister.



#### M48 Chemical-Biological Apache Aviator Mask (M48 CB-AAM)

**Description:** The M48 aviator protective mask provides face, eye, and respiratory protection from battlefield concentrations of chemical and biological agents, toxins, and radioactive particulate matter. It is compatible with the Apache Integrated helmet and Display Sighting System. It provides flame and thermal protection with reduced heat stress and can be donned and doffed in-flight.



## **ENDURING CAPABILITIES JPM CBRN MEDICAL**



#### **Anthrax Vaccine Adsorbed (AVA)**

**Description:** The Anthrax Vaccine Program provides Department of Defense (DoD) with the Anthrax Vaccine Adsorbed (AVA) that is used to vaccinate and protect the warfighter from potential exposure to Bacillus anthracis, the causative agent of anthrax. AVA is produced by Emergent BioSolutions and is Food and Drug Administration approved. AVA is administered in a five dose regimen over an 18-month period with an annual booster dose.



#### **Atropine Autoinjector (Atropine Autoinjector)**

**Description:** The Atropine Autoinjector is authorized for Emergency Use for the initial treatment of muscarinic symptoms of known or suspected poisoning in individuals exposed to nerve agents or certain insecticides (organophosphorus and/or carbamate).



#### Next Generation Diagnostic System 1 (NGDS 1)

**Description:** Next Generation Diagnostic System I (NGDS 1) will identify biological hazards in human clinical specimens and provide diagnostic information to facilitate delivery of appropriate MCMs.

## **ENDURING CAPABILITIES JPM CBRN MEDICAL**



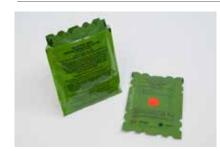


#### Rapid Opioid Countermeasure System (ROCS)

**Description:** Rapid Opioid Countermeasure System (ROCS) program supports the development and fielding of a Food and Drug Administration approved 10 mg naloxone autoinjector as a rescue treatment that will counteract the adverse effects from exposure to opioids.

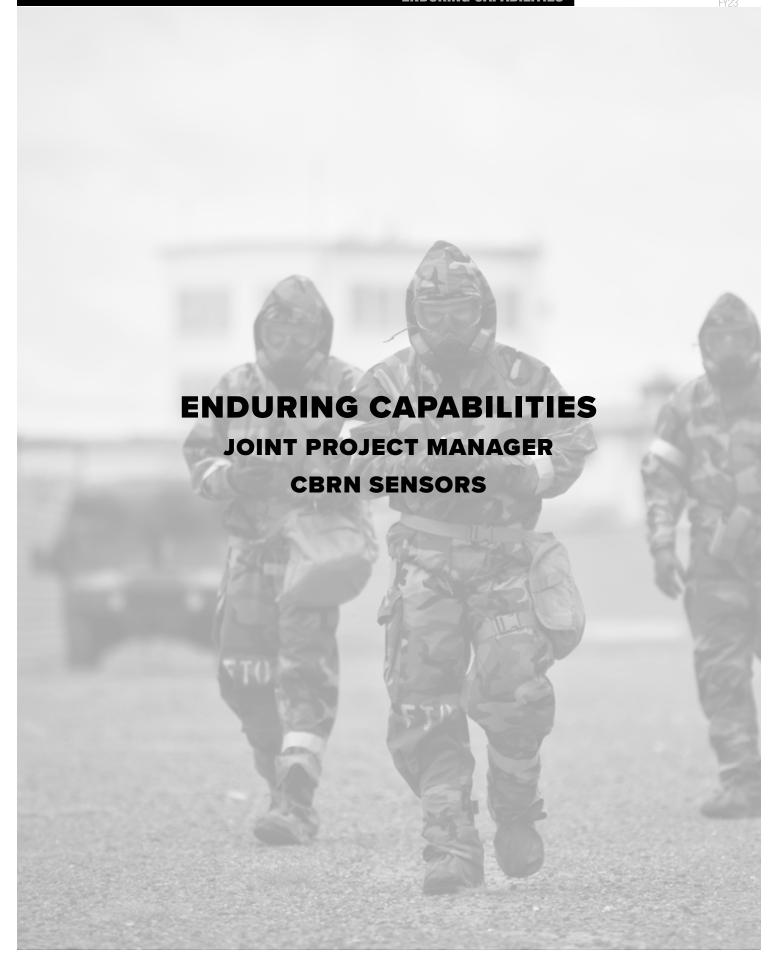
#### **Program Status:**

 FY22 Program Completion – Transition to Operational Use



#### **Reactive Skin Decontamination Lotion (RSDL)**

**Description:** Reactive Skin Decontamination Lotion (RSDL) is a Food and Drug Administration (FDA) approved medical device, that is individually carried, skin decontamination kit. It provides the Warfighter the ability to decontaminate the skin, after exposure to Chemical/Biological (CB) warfare agents, in support of immediate and thorough personnel decontamination operations.





#### AN/PDR-75A Radiac Set (AN/PDR 75A)

**Description:** The AN/PDR-75 Radiac Set measures prompt and residual gamma doses and neutron doses. The system monitors and records the total dose exposure of individual personnel to gamma and neutron radiation. It responds to and measures prompt radiation from nuclear bursts. It calculates unit radiation status and to perform medical triage and assist in unit reconstitution.



#### AN/PDR-77 Radiac Set (AN/PDR-77)

**Description:** The AN/PDR-77 Radiac Set detects and measures alpha, beta, gamma, and X-ray radiation. The system replaced the older AN/PDR-56F and AN/PDR-60, which relied on aging technology and were not sensitive enough to accomplish the Army's alpha detection mission.



#### AN/UDR-13 Radiac Set (RADIACS-13)

**Description:** The AN/UDR-13 Radiac Set is a compact, handheld, pocket-size tactical radiation meter, which measures and displays gamma dose rate and total gamma/neutron cumulative dose in a battlefield environment. A push-button pad enables mode selection, functional control, and the setting of audio and visual alarm thresholds for both dose rate and mission dose.



#### AN/VDR-2 Radiac Set (RADIACS-2)

**Description:** The AN/VDR-2 Radiac Set detects and measures nuclear radiation from fallout and radioisotopes. It performs ground radiological surveys from vehicles or, in the dismounted mode, as a handheld instrument. The set can also provide a quantitative measure of radiation to help personnel, equipment, and supply decontamination operations.



#### Automatic Chemical Agent Alarm (M8A1 ACAA)

**Description:** The Automatic Chemical Agent Alarm is a remote, continuous air sampling alarm which automatically detects nerve agent vapors and warns personnel with both audible and visual signals. This system can be used in a stationary ground position or mounted in backpacks or on vehicles. A detector unit senses the presence of nerve agent vapor and sounds an audible alarm and a remote visual signal.



#### Automatic Chemical Agent Detector Alarm (ACADA)

**Description:** The Automatic Chemical Agent Alarm (ACADA) is an automatic chemical agent alarm system capable of detecting, warning, and identifying standard blister and nerve agents simultaneously. The ACADA is man-portable, operates independently after system startup, provides an audible and visual alarm, and provides communication interface to support battlefield automation systems.



#### Biological Integrated Detection System (BIDS) (M31A2 BIDS)

**Description:** The Biological Integrated Detection System (BIDS) detects and identifies largearea Biological Warfare agent attacks, provide a basis for large-area protection and warning. The system includes a detection suite, a meteorological station, GPS, CBRN filtration, and environmental controls.



#### Chemical Agent Detector Kit M256A2 (M256A2)

**Description:** A collection of chemical materials and testing equipment for the purpose of determining the presence and identity of toxic chemical warfare agents. Excludes Analyzing Kit, Chemical Agent.



#### **Chemical Reconnaissance and Explosives Screening Set (CRESS)**

**Description:** The Chemical Reconnaissance and Explosives Screening System (CRESS) is a disposable/consumable kit designed to quickly and easily screen for specific explosives and their precursors. CRESS uses colorimetric technology to determine if unknown bulk solids, liquids, and trace chemicals are likely to be prohibited compounds.



#### Discharger, Grenade, Smoke, Countermeasure: M6 (M6)

**Description:** The M6 Countermeasure Discharger is a four-tube smoke grenade launcher that enables combat vehicles to conceal themselves from hostile surveillance, target acquisition and weapon guidance systems. The M6 interfaces with vehicle integrated defense systems.



#### **Dry Filter Unit (DFU)**

**Description:** The Dry Filter Unit is a biological air sampler that collects and concentrates biological particulates from ambient air, which is drawn through a filter via electrical blower. The filter placed into buffer solution, shaken to extract particles, and analyzed using handheld assays for presumptive identification of biological warfare agents.



#### **Emergency Management Modernization Program (EM2P)**

**Description:** The Emergency Management Modernization Program provides integrated, all-hazards Emergency Management systems to Army installations by serving as the lifecycle manager for development, acquisition, training, fielding, sustainment and product improvement.



## Generator, Smoke, Mechanical: Mechanized smoke obscurant system, M58 (M58 Smoke Generator)

**Description:** The M58 Smoke Generator enables the defeat of enemy reconnaissance, surveillance, intelligence and target acquisition systems operating in the visual, infrared, and millimeter wave regions of the electromagnetic spectrum.



#### **Improved Chemical Agent Monitor (ICAM)**

**Description:** The Improved Chemical Agent Monitor (ICAM) is a hand-held, soldier-operated, post-attack device used for monitoring chemical agent contamination on people and equipment. It detects vapors of chemical agents by sensing molecular ions of specific mobility (time of flight) and uses timing and microprocessor techniques to reject interferences. The monitor detects and discriminates between vapors of nerve and mustard agents.



#### Joint Chemical Agent Detector (JCAD)

**Description:** The JCAD is a miniaturized, rugged, and portable point chemical agent detector that automatically and simultaneously detects, identifies, and alerts the presence of nerve, blister, and blood chemical warfare agents.



#### Joint Chemical Agent Detector M4A1 (JCAD M4A1)

**Description:** Joint Chemical Agent Detector M4A1 (JCAD M4A1) is a miniaturized chemical agent detector capability for the detection of vaporized chemical agents. It includes the Solid Liquid Adaptor to vaporize surface samples, and includes the Improved Point Detection System-Lifecycle Replacement for shipboard chemical vapor detection.



#### Joint Chemical Agent Detector Solid Liquid Adapter (JCAD SLA)

**Description:** The JCAD SLA will be an Additional Authorized List (AAL) item to the M4A1 JCAD. The JCAD SLA kit effort continues the development of the JCAD CED, which was an NGCD acceleration effort for USSOCOM. The SLA interfaces with the fielded M4A1 JCAD to allow for solid and liquid sampling of NTAs, PBAs, and explosives off surfaces. The SLA kit provides a point solution to detect NTAs and PBAs off surfaces.



#### Joint Chemical Biological Radiological Agent Water Monitor (JCBRAWM)

**Description:** The Joint Chemical, Biological and Radiological Agent Water Monitor (JCBRAWM) detects, identifies, and quantifies chemical, biological and radiological contamination during three water-monitoring missions: source site selection/reconnaissance, treatment verification, and quality assurance of stored and distributed product water.

#### FY23

## **ENDURING CAPABILITIES JPM CBRN SENSORS**

#### Joint Handheld Bio-Agent Identifier (JHBI)



**Description:** Joint Handheld Bio-Agent Identifier (JHBI) provides the capability to rapidly and accurately identify bio-agents at the point of contact in a handheld Polymerase Chain Reaction (PCR) device that includes integrated/automated sample preparation.



#### **Light Vehicle Obscuration Smoke System (LVOSS)**

**Description:** The Light Vehicle Obscuration Smoke System counters threat weapon systems operating in the visual and near infrared portion of the electromagnetic spectrum.



#### M106 Screening Obscuration Devices - Visual Restricted Terrain (SOD-Vr)

**Description:** The Screening Obscuration Devices Visual - Restricted Terrain provides screening obscuration effects for Warfighters operating in restricted terrain to increase survivability and enhance breaking contact and assault protection. The program was transferred to the Joint Program Executive Office Armaments & Ammunition in 2016.



#### **Unified Command Suite (UCS)**

**Description:** The Unified Command Suite (UCS) is a fully integrated mobile communications suite composed of a Communications platform and a Command vehicle that is self-sufficient and highly interoperable by integrating commercial-off- the-shelf and government-off-the-shelf military communications hardware. UCS provides communications interoperability with Federal, State, Local and Military Emergency Response elements at incident scenes. UCS provides reachback capability, which allows Incident Commanders to assess an incident scene, advise responders, and facilitate access to Defense Department information.



## **ENDURING CAPABILITIES JPM CBRN SPECIAL OPERATIONS FORCES**



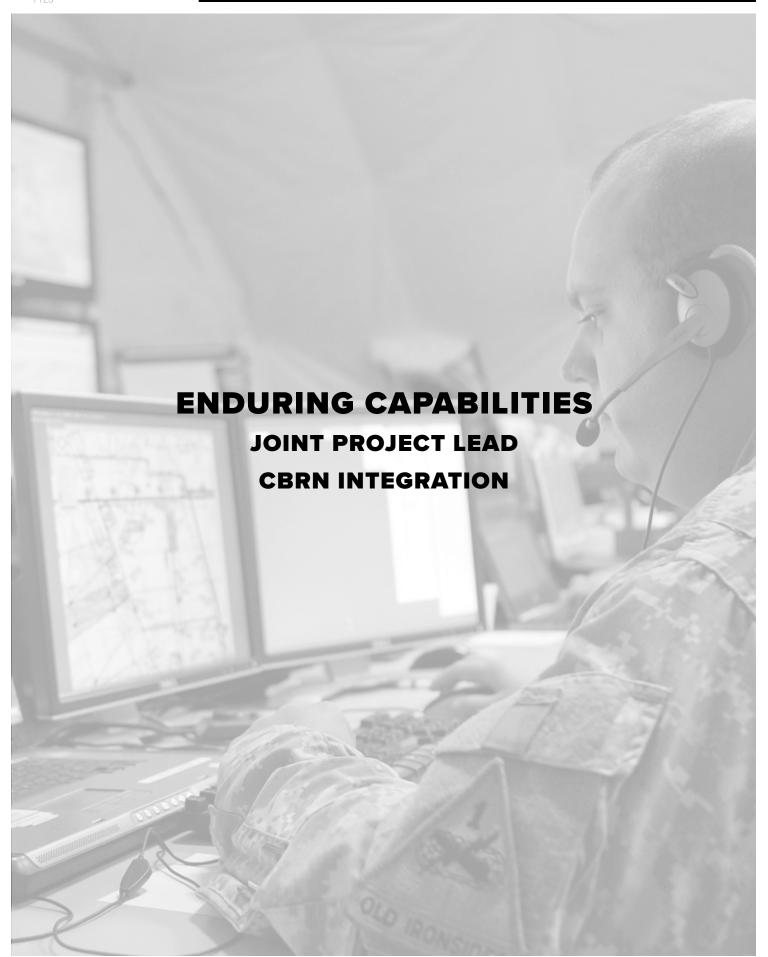
#### Chemical Biological Aircraft Survivability Barrier (CASB)

**Description:** Chemical Biological Aircraft Survivability Barrier (CASB) supports the warfighter by enabling the use of airlift aircraft for exfiltration of chemically or biologically contaminated personnel and cargos while preserving the aircraft for continued unrestricted operations without need for decontamination.



### Uniform Integrated Protection Ensemble 1 (UIPE 1)

**Description:** Uniform Integrated Protection Ensemble Increment 1 Provides individual protective capabilities to the Warfighter through reduction of physiological and psychological burdens associated with the weight, bulk, thermal strain, and encumbrance of wearing Improve operational suitability CBRN protective gear.



#### **ENDURING CAPABILITIES**

## **ENDURING CAPABILITIES JPL CBRN INTEGRATION**



#### Joint Effects Model 2 (JEM 2)

**Description:** Joint Effects Model (JEM) 2 is a software application that models and simulates the effects of CBRN weapon strikes and incidents that is approved for use by operational warfighters. JEM 2 applies advanced physics using weather, terrain, and agent characteristics to predict the time-phased impact of CBRN and Toxic Industrial Chemicals/Materials. JEM 2 displays hazard information on a common operational picture and allows commanders to assess risk and take steps to mitigate the effects of weapons of mass destruction on operational forces. The JEM 2 program was directed to complete development and enter sustainment two years early by the FY19 Defense Wide Review. JEM 2 will complete development and transition to sustainment beginning Q1 FY22.



#### Joint Warning And Reporting Network 2 (JWARN 2)

**Description:** Joint Warning and Reporting Network (JWARN) 2 is a software application that provides warning and reporting to enable an immediate and integrated response to threats of contamination by CBRN incidents. JWARN 2 provides a digital display of CBRN reports on the a common operational picture, presented through Service-provided Command and Control systems resident at all echelons of command. Enhanced situational battlespace awareness provides Commanders the ability to support warfighter battle management and continuity of operations in a contaminated environment. JWARN 2 will complete development and transition to sustainment beginning Q1 FY22.



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ACRONYM	DEFINITION
2-PAM	2-pralidoxime chloride
AAL	Additional Authorized List
AAS	Advanced Anticonvulsant System
ACAA	Automatic Chemical Agent Alarm
ACADA	Automatic Chemical Agent Detector Alarm
ADM CE	Advanced Development Manufacturing Capacity Expansion
ALS	Analytical Laboratory System
ALS MOD	Analytical Laboratory System Modification
ATNAA	Antidote Treatment Nerve Agent Autoinjector
AUTOINJ	Alternative Autoinjector
AV TX	Antiviral Therapeutics
AVA	Anthrax Vaccine Adsorbed
AVCAD	Aerosol Vapor Chemical Agent Detector
BIDS	Biological Integrated Detection System
BOT MAB	Botulinum Monoclonal Antibodies
BSCAV-P	Bioscavenger-Plasma
BW	Biological Warfare
BWA	Biological Warfare Agent
СЗРО	CBRN Covers Coatings and Protective Overlays
CALS FC ACS	Common Analytical Laboratory System Field Confirmatory Analytical Capability Set
CALS TV IS	Common Analytical Laboratory System Theater Validation Integrated System
CANA	Convulsive Antidote for Nerve Agents
CASB	Chemical Biological Aircraft Survivability Barrier
СВ	Chemical Biological
CB COTS/GOTS	Chemical Biological Commercial Off-The-Shelf/Government Off-The-Shelf
СВМ	Chemical-Biological Mask System
CBDP	Chemical and Biological Defense Program
CBPS	Chemical and Biological Protective Shelter
CBRN	Chemical, Biological, Radiological and Nuclear
CBRND	Chemical, Biological, Radiological and Nuclear Defense
CBRN IS	Chemical Biological Radiological Nuclear Information Systems
CBRN DRS	Chemical, Biological, Radiological Nuclear Dismounted Reconnaissance Systems
CDP	Capability Development Packages
CEDS	Critical Equipment Decontamination System
CET RAIDR	Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing
CHRS	Contaminated Human Remains System
CMDR-B	Countermeasures for Multi-Drug Resistance-Bacterial
COVID VAC	Validated Nucleic Acid Vaccine Construction
CPFH	Collectively Protected Field Hospital
CRESS	Chemical Reconnaissance and Explosives Screening Set
CSC2	Chemical Biological Radiological Nuclear Support to Command & Control
CSIRP	CBRN Sensor Integration on Robotic Platforms

ACDONIVA	DEFINITION
ACRONYM	
CVCAD	Compact Vapor Chemical Agent Detector
CWMD	Countering Weapons of Mass Destruction
DAWIA	Defense Acquisition Workforce Improvement
DBPAP	Defense Biological Product Assurance Program
DFoS CIDAS	Decontamination Family of Systems Contamination Indicator Decontamination Assurance System
DFoS GPD	Decontamination Family of Systems General Purpose Decontaminant
DFoS JSEW	Decontamination Family of Systems Joint Service Equipment Wipe
DFU	Dry Filter Unit
EM2P	Emergency Management Modernization Program
EMBD	Enhanced Maritime Biological Detection
EOD	Explosive Ordnance Disposal
FAMS-S-RP	Forward Area Mobility Spray System - Rapid Prototyping
FDA	Food and Drug Administration
FGA	Fourth Generation Agents
GMP	Good Manufacturing Practice
ICAM	Improved Chemical Agent Monitor
INATS CA	Improved Nerve Agent Treatment System - Centrally Acting
INATS OX	Improved Nerve Agent Treatment System -Oxime
JBADS	Joint Biological Agent Decontamination System
JBAIDS	Joint Biological Agent Identification and Diagnostic System
JBPDS	Joint Biological Point Detection System
JBTDS	Joint Biological Tactical Detection System
JC3	Joint Service Chem/Bio Coverall for Combat Vehicle Crewmen
JCAD	Joint Chemical Agent Detector
JCAD M4A1	Joint Chemical Agent Detector M4A1
JCAD SLA	Joint Chemical Agent Detector Solid Liquid Adapter
JCBRAWM	Joint Chemical Biological Radiological Agent Water Monitor
JECP	Joint Expeditionary Collective Protection
JEM	Joint Effects Model
JHBI	Joint Handheld Bio-Agent Identifier
JPACE	Joint Protective Aircrew Ensemble
JPD-I	Joint Personal Dosimeter-Individual
JPEO-CBRND	Joint Program Executive Officer for Chemical, Biological, Radiological and Nuclear Defense
JPL	Joint Project Lead
JPM	Joint Project Manager
JSAM Apache	Joint Service Aircrew Mask Apache
JSAM RW	Joint Service Aircrew Mask Rotary Wing
JSAM SA	Joint Service Aircrew Mask Strategic Aircraft
JSAM TA	Joint Service Aircrew Mask Tactical Aircraft
JSCESM	Joint Service Chemical Environmental Survivability Mask
JSEW	Joint Service Equipment Wipe
JSGPM	Joint Service Equipment Wipe  Joint Service General Purpose Mask
JJ01 III	Some Service Service Service in the service in the service in the service service in the service service in the

ACRONYM	DEFINITION
JSGPM M53A1	Joint Service General Purpose Mask M53A1
JSLIST	Joint Service Lightweight Integrated Suit Technology
JSLIST AFS	Joint Service Lightweight Integrated Suit Technology - Alternative Footwear Solutions
JSLIST IFS	Joint Service Lightweight Integrated Suit Technology Integrated Footwear System
JSLIST JB1GU FR	Joint Service Lightweight Integrated Suit Technology Block 1 Glove Upgrade Flame Resistant
JSLIST JB1GU nFR	Joint Service Lightweight Integrated Suit Technology Block 1 Glove Upgrade Non-Flame Resistant
JSPDS	Joint Service Personnel Decon System
JSTDS SS	Joint Service Transportable Decon System Small Scale
JWARN	Joint Warning and Reporting Network
LVOSS	Light Vehicle Obscuration Smoke System
MCM	Medical Countermeasure
MCMPT	Medical Countermeasure Platform Technologies
MCS JVAP	Medical Countermeasure System-Joint Vaccine Acquisition Program
MOPP IV	Mission Oriented Protective Posture IV
MPCAD	Multi-Phase Chemical Agent Detector
MPCMS	Mass Personnel Contamination Mitigation System
MRDS	Man-Portable Radiological Detection System
NA	Nerve Agent
NAIs	Named Areas of Interest
NBCRV SSU	Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade
NGB	National Guard Bureau
NGB WMD-CSTs	National Guard Bureau Weapons of Mass Destruction Civil Support Team
NGDS	Next Generation Diagnostic System
NGDS 2 ChemDX	Next Generation Diagnostics System 2 Chemical Diagnostics
NGDS 2 MPDS	Next Generation Diagnostics System 2-Man Portable Diagnostic System
NTA	Non-Traditional Agent
PATS	Protective Assessment Test System
PBA	Pharmaceutical Based Agent
PCR	Polymerase Chain Reaction
POM	Program Objective Memorandum
POR	Programs of Record
PPE	Personal Protective Equipment
RADIAC	Radiation Detection, Indication and Computation
RDS	Radiological Detection System
RIID	Radio Isotope Identification Detector
RN	Radiological and Nuclear
ROCS	Rapid Opioid Countermeasure System
ROSETTA	Reactive Chemistry Orthogonal Surface and Environmental Threat Ticket Array
RSDL	Reactive Skin Decontamination Lotion
S&T	Science & Technology
SEDS	Service Equipment Decontamination System
SEP	System Enhancement Package

ACRONYM	DEFINITION
SLA	Solid Liquid Adapter
SMP	Series Mask Program
SNAPP	Soman Nerve Agent Pre-Treatment Pyridostigmine
sNDA	Supplemental New Drug Application
SNS	Strategic National Stockpile
SOD-Vr	Screening Obscuration Devices - Visual Restricted Terrain
SOF	Special Operations Forces
SOM	Screening Obscuration Module
SPU RCDD	Special Purpose Unit Rapid Capability Development and Deployment
SPX AV PEP	Smallpox Antiviral Post-Exposure Prophylaxis
SR PB	Sustained Release Pyridostigmine Bromide
TATPE	Tactical Advanced Threat Protective Ensemble
TCMS	Tactical Contamination Mitigation System
UCS	Unified Command Suite
UIPE	Uniform Integrated Protection Ensemble
UIPE FoS	Uniform Integrated Protection Ensemble Family of Systems
UIPE FoS Gloves - RP	Uniform Integrated Protection Ensemble Family of Systems Glovers - Rapid Prototyping
UIPE FoS GP	Uniform Integrated Protection Ensemble Family of Systems General Purpose
USA	U.S. Army
USAF	U.S. Air Force
USMC	U.S. Marine Corps
USN	U.S. Navy
USSOCOM	U.S. Special Operations Command
VAC BOT	Botulinum Toxin Vaccine
VAC FILO	Filovirus Vaccine
VAC PLG	Plague Vaccine
VAC RIC	Ricin Vaccine
VAC WEVEE	Western, Eastern, and Venezuelan Equine Encephalitis Vaccine
VAMP	Vaccine Acceleration by Modular Progression
VAMP ENBD	Vaccine Acceleration by Modular Progression Enhanced Biodefense
VSST	Vaccine Storage and Stability Testing
WADS	Wide Area Decontamination System
WMD-CST	Weapons of Mass Destruction Civil Support Team













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