

# HOMELAND

## Defense & Security Digest

The Latest From the Homeland Defense & Security Information Analysis Center // May 16, 2024

## MENTAL HEALTH AWARENESS MONTH

May is Mental Health Awareness Month (MHAM), a time dedicated to raising awareness of the challenges faced by those living with mental health issues and provide education on available resources for help. The U.S. Department of Defense understands that mental wellness plays a vital role in overall health and wellness and recognizes and supports MHAM by providing a number of resources to help military personnel, their families, and veterans lead happier and healthier lives.

For more information, visit: [Mental Health Awareness Month: Defend Your Mental Health | Health.mil](#)

## DID YOU MISS OUR LAST WEBINAR?

“Tip of the Spear: The Next Generation of Brain Health Baseline...”

[WATCH NOW!](#)

[or download the slides](#)

## NOTABLE TECHNICAL INQUIRY

### What fungi and bacteria have contaminated fuel and hydraulic fluid?

The Homeland Defense and Security Information Analysis Center (HDIAC) received a technical inquiry regarding microbial contaminants of the fuel and hydraulic liquid in aircraft. A particular focus was on all known microbes detected in aircraft or any other similar systems, the enzymes... [READ MORE](#)

## UPCOMING WEBINAR



### DoD Nuclear Energy Use Case – A Combatant Command Perspective

May 16, 2024  
12:00 PM – 1:00 PM

*Presenter(s): Jeth Fogg, Ph.D.*

*Host: HDIAC*

The U.S. Department of Defense (DoD) was an early adopter of nuclear power and pioneered research of mobile nuclear energy. In addition to the well-documented U.S. Navy nuclear propulsion program, the U.S. Army constructed eight land-based reactors, deploying a 330-ton "portable"... [READ MORE](#)

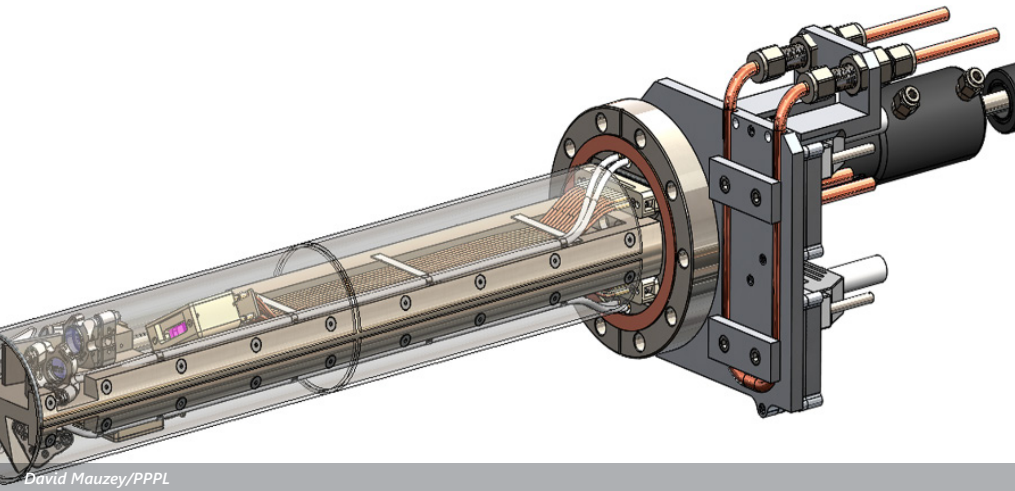
## FUTURE WEBINARS

### Rewiring the Brain for Optimized Performance

June 14, 2024  
12:00 PM – 1:00 PM

### Emerging Capabilities for Evaluating Cognitive...

July 17, 2024  
12:00 PM – 1:00 PM



David Mauzey/PPPL

## HIGHLIGHT

### New Instrument Could Help Scientists Tailor Plasma to Produce More Fusion Heat

Creating heat from fusion reactions requires carefully manipulating the properties of plasma, the electrically charged fourth state of matter that makes up 99% of the visible universe. Now, scientists at the U.S. Department of Energy's (DOE's) Princeton Plasma Physics Laboratory (PPPL) have finished building a new plasma measurement instrument, or diagnostic, that could aid the effort to boost the heat of fusion reactions in facilities known as tokamaks and potentially improve the power output of future fusion... [LEARN MORE](#)

## EVENTS

### The 18th Annual RadWaste Summit

June 3–5, 2024  
Louisville, KY

### Biometrics Institute US Strategy Forum

June 20, 2024  
Alexandria, VA

### The 92nd MORS Symposium

June 24-27, 2024  
Monterey, CA

### The 2nd Annual Nuclear Energy Security Summit

June 26–27, 2024  
Washington, DC

### 17th International Detonation Symposium

August 4–9, 2024  
Kansas City, MO

### Want your event listed here?

Email [contact@hdiac.org](mailto:contact@hdiac.org) to share your event.



## VOICE FROM THE COMMUNITY

### B. McKay Allred, Ph.D.

*Research Scientist, U.S. Army Criminal Investigation Laboratory (USACIL)*

Dr. Allred is a research scientist, program manager for internal research, and research chemistry lab manager for USACIL, where he supports the advancement of several forensic science disciplines. Past research efforts have included explosive and drug analysis, synthetic and organic polymer identification and characterization, latent print visualization, 3-D firearm and toolmarks, and statistical representation of pattern-based evidence.

## ARE YOU A SME?

If you are a contributing member of the information systems community and are willing to help others with your expertise, you are a subject matter expert (SME).

Join our team today.

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MATTER EXPERT**

## ABOUT TECHNICAL INQUIRIES (TIs)

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### WHO CAN SUBMIT A TI?

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- Military personnel
- Contractors working on a government or military contract

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- Reduce redundancy of efforts across the government

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## RECENT HDIAC TIs

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- Is there any research on the effects or correlations of airborne parachute operations and long-term degenerative disc disease of military paratroopers of the T-11 vs. T-10 parachutes?
- What is the medical impact of long-term exposure to shooting mortars, artillery, and tanks?
- What are current and projected U.S. Department of Defense regulations for storing and distributing alternative fuels?

## RECENT CSIAC & DSIAC TIs

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- What is known about automated extraction of data and metadata from hand-written lab notebooks?
- What DoD efforts have explored task-based and psychophysiological-based adaptive aids for human machine teaming in the last four years?
- What information is available on aircraft maneuvering to avoid a debris cloud caused by a cruise missile explosion?

# FEATURED NEWS

## 563rd OSS Mask Modernization

The U.S. Air Force Chemical, Biological, Radiological and Nuclear Defense Systems Branch fielded new respirator masks to the 563rd Operational Support Squadron (OSS) and 755th OSS, on March 7, 2024. [READ MORE](#)

# RECENT NEWS



U.S. Army

### Fluorine-Free Foam Flows to U.S. Air Force Bases as DoD Removes PFAS From...

Air Force Reserve Command



Spc. Brett Hornback

### Defense Innovation Unit and National Guard Bureau Leverage Bellwether's Aerial Imagery...

Defense Innovation Unit



U.S. Army

### DEVCOM CBC Researchers Explore 3-D-Printed Sensors

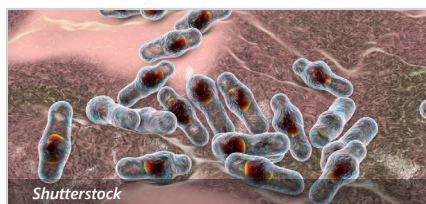
U.S. Army



U.S. Air Force

### Around the World: JPEO-CBRND Gathers Global Data to Enhance Threat Detection Capabilities

JPEO CBRND



Shutterstock

### Breathing Room

DTRA/DVIDS



Brian Feeney, CCDC CBC

### NATO Researchers Hold Lab Field Trial With DEVCOM CBC Scientists

U.S. Army



-  Alternative Energy
-  Biometrics
-  CBRNE Defense
-  Critical Infrastructure Protection
-  Cultural Studies
-  Homeland Defense & Security
-  Medical
-  Weapons of Mass Destruction

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