

# HOMELAND

## Defense & Security Digest

The Latest From the Homeland Defense & Security Information Analysis Center // August 12, 2025

## AUGUST IS ANTITERRORISM AWARENESS MONTH

August is Antiterrorism Awareness Month, dedicated to increasing awareness of the threat of terrorism and encouraging people to remain vigilant in recognizing potential threats like extremism, terrorism, insider threats, and cybersecurity vulnerabilities.

HDIAC supports Antiterrorism Awareness Month and provides information on the latest science and technology in counterterrorism, environmental security, aviation security, law enforcement, building and facilities security, border security, disaster/emergency response and recovery, and cybersecurity/information management.

Click [HERE](#) for more information.

## DID YOU MISS OUR LAST WEBINAR?

“Emergency Management Intelligence: The Need for Civilian Authorities Support”

 WATCH NOW!

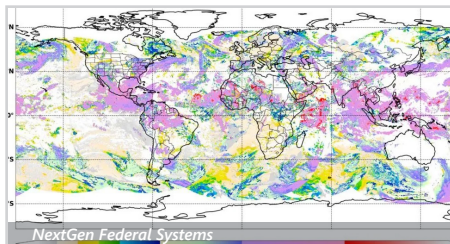
[or download the slides](#)

## NOTABLE TECHNICAL INQUIRY

**Can a chronological list be provided on what chemical exposure events (on and off the battlefield) involving chemical warfare agents have occurred in the last 50 years, along with major events that involve toxic industrial chemicals or pesticides?**

The Homeland Defense and Security Information Analysis Center (HDIAC) was asked to provide (chronologically) specific events that have occurred in the last 50 years (1975–2025) on: (1) what chemical exposure events have involved chemical warfare agents (CWAs) on and off the battlefield and (2) what major events have involved toxic industrial chemicals (TICs) and... [READ MORE](#)

## UPCOMING WEBINAR



### Machine-Learning Weather Prediction

COMING SOON  
12:00 PM – 1:00 PM

*Presenter(s): Alec Engell*

*Host: HDIAC*

Machine learning (ML) is revolutionizing weather forecasting because it can identify complex patterns in vast amounts of weather data. It provides accurate predictions, fast updates, and the ability to capture subtle details that traditional methods might miss, all while being computationally efficient compared to traditional modeling. In the last 24 months, there have been... [READ MORE](#)



## HIGHLIGHT

### University of Nebraska Researchers at Forefront to Address Agriculture-Related Cyber Vulnerabilities

Cyberattacks on agribusinesses in recent years have demonstrated hackers' ability to shut down processing plants, halt livestock purchases, and cost corporations millions through ransomware attacks.

In the face of these threats, the University of Nebraska System (NU) is a key resource for strengthening agricultural cyber defenses. Multiple NU projects with various funding sources, including federal government grants, are at the forefront of analyzing and addressing key vulnerabilities. [LEARN MORE](#)

## EVENTS

**Emerging Technologies for Defense Conference & Exhibition**  
August 27–29, 2025  
Washington, D.C.

**2025 Advanced Functional Fabrics Summit**  
September 23–24, 2025  
Foxborough, MA

**GridSecCon 2025**  
October 7–10, 2025  
Las Vegas, NV

**TechNet Indo-Pacific 2025**  
October 28–30, 2025  
Honolulu, HI

**Want your event listed here?**  
Email [contact@hdiac.org](mailto:contact@hdiac.org) to share your event.



## VOICE FROM THE COMMUNITY

### Felipe Nazario-Romero

*Lead Engineer, U.S. Air Force (USAF)  
Spectrum Management Office  
(ACQSMO)*

Mr. Nazario-Romero is a spectrum management (SM) equipment spectrum certifier and electromagnetic environmental effects (E3) technical expert, where he implements SM/E3; engineering design, requirements definition, integration, and test and evaluation; and airworthiness analysis to USAF weapons systems and across the Defense Department. His experience involves systems engineering, SM and E3 technical support, frequency management, and community science, technology, engineering, and mathematics education.

## ARE YOU A SME?

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

Join our team today.

**BECOME A SUBJECT MATTER EXPERT**



# TECHNICAL INQUIRIES (TIs)

Getty Images

## WHAT IS THE TI RESEARCH SERVICE?

- FREE service conducted by technical analysts
- 4 hours of information research
- Response in 10 business days or less

## WHO CAN SUBMIT A TI?

- U.S. government (federal, state, or local)
- Military personnel
- Contractors working on a government or military contract

## WHY UTILIZE THE TI RESEARCH SERVICE?

- Get a head start on your technical questions or studies
- Discover hard-to-find information
- Find and connect with other subject matter experts in the field
- Reduce redundancy of efforts across the government

To submit a TI, go to

<https://hdiac.dtic.mil/technical-inquiries>



## EXAMPLE HDIAC TIs

- Who is currently (or was previously) working in energy resilience for mission assurance?
- How do first-responder teams on a military base use automated drones (machine learning, computer vision, 5G command and control)?
- What information is available on the 5G mobile network as a new or emerging threat for radio-controlled improvised explosive devices and/or unmanned aircraft systems?

[MORE HDIAC INQUIRIES](#)

## EXAMPLE CSIAC & DSIAC TIs

- Can CSIAC provide information on how to gather data for radio-frequency network anomalies?
- Can CSIAC provide a list of approved U.S. Department of Defense data analysis software for quantitative and qualitative data?
- How can someone access the Joint Radio-Frequency Effectiveness Model?

## VIEW MORE TIs

The Information Analysis Centers answer more inquiries outside the scope of HDIAC's focus areas. To search more research topics, visit our sister websites to expand your search.

[CSIAC INQUIRIES](#)

[DSIAC INQUIRIES](#)



# FEATURED NEWS

## Venado's Yearlong Voyage Powers Vital AI Science

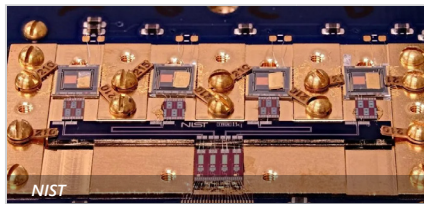
In the year following its April 2024 ribbon-cutting, Venado — the lab's newest, artificial intelligence (AI)-capable supercomputer — racked up an impressive collection of success stories. This four-part series reviews some of the supercomputer's successful applications to... [READ MORE](#)

# RECENT NEWS



### LLNL and Purdue University Accelerate Discovery of Medical Countermeasures for Emerging...

Lawrence Livermore National Laboratory



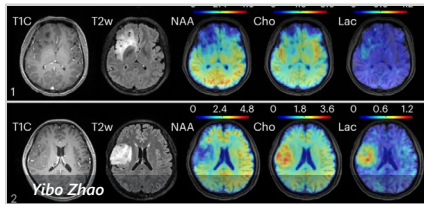
### New NIST Method Precisely Measures Radioactivity in Tiny Samples

National Institute of Standards and Technology



### Porton Man Robotic Test System

U.S. Army



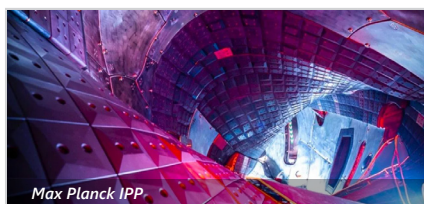
### New MRI Approach Maps Brain Metabolism, Revealing Disease Signatures

University of Illinois Urbana-Champaign



### Window-Sized Device Taps the Air for Safe Drinking Water

Massachusetts Institute of Technology



### Wendelstein 7-X Sets New Performance Records in Fusion Research

Princeton Plasma Physics Laboratory



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

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