Chemical and Biological Defense
CBIAC Newsletter
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J.A.C.K.S.

Blurring Defense Support Organizational Lines

by Mr. Len Guldenpfennig, Edgewood Chemical Biological Center Information Technology Solutions Team

Historically within the Department of Defense (DoD), information, knowledge and support of Chemical, Biological, Radiological, Nuclear (CBRN) Defense has been organized in a manner parallel to various DoD command structures. This seems logical for various commands and agencies charged with supporting equipment and services within their respective areas of responsibility. However, learning each specific structure (in addition to their CBRN job functions) becomes overwhelming for personnel new to the Armed Services or CBRN defense business. The Joint Program Executive Officer for Chemical and Biological Defense (JPEO-CBD), Brigadier General Steve Reeves, is working to make those organizational boundaries transparent concerning CBRN defense.

Working towards this goal, the JPEO-CBD has established the Joint Acquisition Chemical Biological Radiological Nuclear Knowledge System (JACKS). The JACKS mission is to provide the Warfighting and CBRN defense communities with a single effective and powerful means of accessing CBRN defense information on procedures, material, equipment, availability and acquisition. JACKS is a web-based knowledge management system that provides information for the CBRN defense community, regardless of the agency, equipment manager or data owner.

https://jacks.jpeocbd.osd.mil

JACKS does not re-invent the wheel. A key characteristic of JACKS is that it accesses multiple DoD databases and systems, pulling CBRN oriented information into one focused resource to support the CBRN community. This is commonly referred to as a 'web portal'. Within the DoD, there are a high number of CBRN supporting web sites, systems and databases, usually aligned with an organization or office. Many "unofficial" systems have been created as well and do not receive the maintenance and updating necessary to be a reliable CBRN community resource. To provide accuracy and traceability of data, JACKS has been built to use official System of Record data sources. Currently the Federal Logistics Information System (FLIS) is accessed to periodically update information on over 100,000 National Stock Numbers. The DoD Demilitarization Program database is the source for demilitarization code "F" instructions that JACKS uses. Efforts are in process to connect to the Hazardous Materiel Information and Reporting System (HMIRS) as the authoritative source of Materiel Safety Data Sheets (MSDS) concerning CBRN defense equipment. JACKS is creating an archive of CBRN oriented advisory messages. Multiple Maintenance, Logistical, Supply, Safety of Use and other advisory messages are included in the archive, regard less of the agency or command that originated the message. Basically, if it is CBRN oriented and targeted to the DoD community, the message will get archived into JACKS.

JACKS serves as the System of Record in various CBRN functional areas. The most prominent is the CBRN Shelf Life Information System (CBRN SLIS). The purpose of this system is to host and display CBRN Shelf Life expiration, extension and condemnation information by NSN and Lot Number, as well as other required surveillance information. CBRN Shelf Life extending and condemning actions are the responsibility of the technical expert engineering agencies that have the authority to make such decisions. The U.S. Army's Chemical Material Stockpile Reliability Program (Army Regulation 702-16) Surveillance Team updates Shelf Life information directly in JACKS for instant availability to the CBRN defense community. Other agencies provide background database connections or data feeds to maintain data, and may change their Standard Operating Procedures to make Shelf Life updates directly in JACKS. Regardless of the agency that is responsible for data, it is available in JACKS for Servicepersons and other consumers to use at their discretion.

JACKS is a CBRN defense system with information considered sensitive but unclassified in nature. The system is accessible to all DoD personnel with a Public Key Infrastructure digital identity certificate. This is usually associated with a Common Access Card (CAC), and that means JACKS is accessible to over

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The **Chemical and Biological Defense Information Analysis Center (CBIAC)** is a Department of Defense (DoD)-sponsored Information Analysis Center (IAC) operated by Battelle Memorial Institute and supported by Horne Engineering Services, Inc., Innovative Emergency Management, Inc., MTS Technologies, Inc., QuickSilver Analytics, Inc., and SciTech, Inc., and administered by the Defense Technical Information Center (DTIC) under the DoD IAC Program Office (Contract No.SP0700-00-D-3180).

The CBIAC Contracting Officer's Technical Representative (COTR) may be contacted at the following address:

CDR USA RDECOM
Edgewood Chemical Biological Center
ATTN: AMSRD-ECB-RT (CBIAC COTR)
5183 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5424

U.S. Government agencies and private industry under contract to the U.S. Government can contact the CBIAC for information products and services. CBIAC services also extend to all state and local governments and the first responder community, to include local emergency planners, firefighters, medics and law enforcement personnel.

Approved for Public Release; Unlimited Distribution

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The ***CBIAC Newsletter***, a quarterly publication of the CBIAC, is a public release, unlimited distribution forum for chemical and biological defense information. It is distributed in hardcopy format and posted in Portable Document Format (PDF) on the CBIAC Homepage.

The CBIAC welcomes unsolicited articles on topics that fall within its mission scope. All articles submitted for publication consideration must be cleared for public release prior to submission. The CBIAC reserves the right to reject or edit submissions. For each issue, articles must be received by the following dates: Winter (First Quarter) – October 15th; Spring (Second Quarter) – January 15th; Summer (Third Quarter) – April 15th; Fall (Fourth Quarter) – July 15th.

All paid advertisements and articles are subject to the review and approval of the CBIAC COTR prior to publication. The appearance of an advertisement or article in the ***CBIAC Newsletter*** does not constitute endorsement by the DoD or the CBIAC.

The CBIAC is located in building E3330, Room 150, Aberdeen Proving Ground-Edgewood Area, Maryland 21010. For further information or assistance, visit or contact the CBIAC.

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Government and Industry Team Provides a Solution for the National Guard Bureau

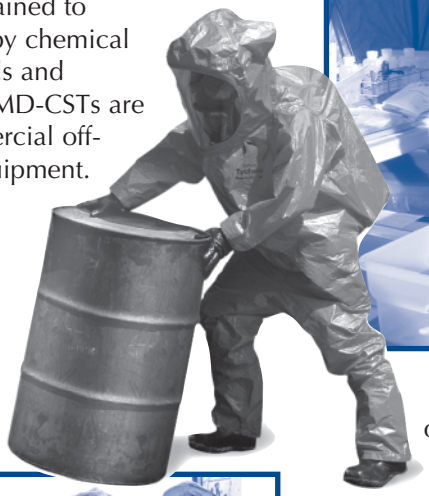
By Trudy Lewis, Tom Tassinari, Rick Arcilesi, Don MacLeod

The Product Manager Weapons of Mass Destruction-Civil Support Systems (PM WMD-CSS) is sponsoring a program to evaluate protective ensembles and supplemental equipment used by the National Guard Bureau (NGB) Weapons of Mass Destruction – Civil Support Teams (WMD-CSTs). The WMD-CSTs were formed in 1998 during the Clinton administration to assist in protecting Americans against the threat of chemical and biological terrorism. They were established for rapid deployment to support local incident commanders and provide technical expertise on WMD.

The WMD-CSTs are comprised of Army and Air National Guard members who are trained to identify the threat, assess the projected consequences, advise on response measures, and assist the local incident commander with requests for additional federal and military support. They are trained to operate in environments contaminated by chemical warfare agents, toxic industrial chemicals and materials, and biological agents. The WMD-CSTs are equipped with both military and commercial off-the-shelf (COTS) personal protective equipment. There are currently fifty-five WMD-CSTs deployed.

The U.S. Army and CBIAC have partnered to execute the three-phased program under CBIAC Technical Area Tasks 214, 293 and 383. The first two phases have been completed, and the third phase is on-going.

Phase I assessed the design and performance characteristics of Level A and Level B protective ensembles that are in use by the WMD-CSTs. During Phase II the team conducted a market survey and laboratory testing to verify and validate available COTS protective ensembles for possible future competitive procurement.



left: 63rd WMD-CST Members
center: Responder CSM Level A Ensemble

During Phases I and II the protective ensembles and components were evaluated in accordance with *National Fire and Protection Association (NFPA) 1994 Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents, 2001 Edition* which "specifies the minimum requirements for the design, performance, testing, documentation, and certification of protective ensembles designed to protect fire and emergency services personnel from chemical/ biological terrorism agents".[1] Phase III will focus on the execution of a Limited Operational Demonstration. The objective is to assess alternative and supplemental personal protective equipment candidates in a field operational environment to provide the PM WMD-CSS, NGB, and WMD-CSTs with a broader selection of chemical and biological defense equipment for validation to support operational requirements. Alternative equipment includes gloves, boots, and air purifying respirators while supplemental equipment is defined as microclimate cooling systems, powered air purifying respirators, interoperable communications equipment, and hand-held radios.

63rd WMD-CST Members Conducting a Training Exercise

The Government/Industry team consists of several organizations that are responsible for key aspects of the program: Edgewood Chemical Biological Center (ECBC), Battelle Natick Operations, Natick Soldier Center (NSC), Battelle's Hazardous Materials Research Center (HMRC), Safety Equipment Institute (SEI), Underwriters Laboratory (UL), Intertek Testing Services (ITS), and the Battelle Eastern Science and Technology (BEST) Center. ECBC provides the programmatic lead. Battelle Natick Operations administers the contract and provides general programmatic support in addition to coordinating with the certification organizations, SEI and UL, and the testing laboratories for materials testing and chemical testing. NSC, which serves as the technical lead for the program, performed material preconditioning and physical properties testing. The HMRC, in West Jefferson, Ohio, conducted chemical warfare

Continued pg. 15

Contract Awards • *by Mary Frances Tracy*

Development of Plasma-Derived Human Butyrylcholinesterase
DynPort Vaccine Company LLC
Frederick, MD
$2,600,000 (increment as part of $19,621,828) April 6, 2005
By U.S. Army Space and Missile Defense Command,
Huntsville, AL

BioShield Contract for AVA Anthrax Vaccine
BioPort Corporation
Lansing, MI
$122,700,000 May 6, 2005
By Department of Health and Human Services, Washington, DC

Advanced Polymeric Nanotechnology Solutions for Military Applications
Michigan Molecular Institute
Midland, MI
$2,000,000 May 6, 2005
By U.S. Army Research, Development, and Engineering
Command Acquisition Center – Edgewood,
Aberdeen Proving Ground, MD

Viability Assay for Monitoring Decontamination of Pathogenic Bacteria
Luna Innovations Incorporated
Blacksburg, VA
$52,002 May 10, 2005
By U.S. Navy, Dahlgren, VA

Funding to States for Bioterrorism Preparedness
$1,300,000,000 May 13, 2005
By Department of Health and Human Services, Washington, DC

Optical Detection of Biological and Chemical Threats in Water and Food
ChemImage Corporation
Pittsburgh, PA
$3,040,580 May 27, 2005
By U.S. Army Research, Development, and Engineering
Command Acquisition Center - Research Triangle Park,
Research Triangle Park, NC

New Regional Centers of Excellence for Biodefense and Emerging Infectious Diseases Research
University of California
Irvine, CA
Colorado State University
Fort Collins, CO
$80,000,000 ($10,000,000/year/university for the next four years) June 1, 2005
By National Institute of Allergy and Infectious Diseases (NIAID),
Bethesda, MD

Improve of Nation's Early-Warning Detection Capabilities for a Biological Attack
Southwest Foundation for Biomedical Research
San Antonio, TX
$300,000 June 8, 2005
By Naval Research Laboratory, Washington, DC

HEP BAA Chemical Biological (CB) Operational Effects Modeling and Simulation (M&S) and Battlespace Management Support
Cubic Applications, Incorporated
San Diego, CA
$5,977,716 June 6, 2005
By U.S. Air Force /Air Force Materiel Command,
Wright-Patterson Air Force Base, OH

Joint Service Lightweight Integrated Suit Technology (JSLIST) Gloves
Canadian Commercial Corporation
Ottawa, Canada
$5,074,949 June 22, 2005
By Marine Corps Systems Command, Quantico, VA

Reliability Information Analysis Center (RIAC)
Wyle Laboratories Incorporated
El Segundo, CA
$13,600,871 June 22, 2005
By Defense Information Technology Contracting Organization-
National Capital Region, Washington, DC

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•Mix agents and ID precursor outcomes
•ID radioactive isotopes

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•Bio-agent surveillance, assay, decon. & cleanup recommendations
•Fully Integrated, instant access
•Wireless share pre-plans & response information
•Fast & easy to use

Incident Response
•Agent specific signs/symptoms & first aid recommendations
•Comprehensive IED/IND/Rad standoff
•Extensive radiological response
•Customizable CPC recommedations
•Evidentiary-ready accountability
•Extensive agent properties
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•Incident reporting and messaging
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New "Biosensor" Screens Air Force Personnel and Equipment for Contamination—Within Minutes

Andrea Turner, Pacific Northwest National Laboratory

Air Force personnel will soon know within minutes if they or their equipment are contaminated with a biological agent, thanks to a new technology developed by the Air Force and a national laboratory.

Personnel will use the biosensor system to collect and isolate samples, detect and identify agents, and assess the seriousness of the threat.

"The system will provide an increased capability for Air Force Special Operations personnel to rapidly determine the presence of biological warfare agents in a combat environment," said Dr. Richard Stotts, counterproliferation branch chief within the Air Force Research Laboratory's Human Effectiveness Directorate. The device is compact, quickly identifies agents, can be used repeatedly and requires very little maintenance to keep it running in the field."

The system consists of a spray, developed at the directorate's Brooks City-Base, Texas, facilities, and a hand-held "green box," which determines if agents are present. The green box, or DNA Capture Element instrument, was developed by researchers at the Department of Energy's Pacific Northwest National Laboratory (PNNL). The box uses an Air Force-developed biochemical assay based on aptamers, or single chain DNA fragments.

"We've used our lab's expertise to develop an instrument that's complementary to the Air Force's technology and that simultaneously satisfies the speed, specificity, sensitivity, portability, durability, health and safety needs," said Mike Lind, a senior advisor at PNNL. "The rapid detection capability of this instrument will be useful in a variety of applications, even outside of the armed forces."

With the prototype system, the user sprays the suspected contaminated area, creating a sample that can be picked up by a swab. The sample material on the swab is suspended in liquid by rinsing it in a container. Once in a liquid form, the sample is injected into a special flow cell, the place where the assay occurs.

The flow cell is currently designed for one-time use. Since the cell is sealed, it can be decontaminated by immersion in a bleach solution and then safely transported to a forensic laboratory for further analysis where it can be opened to retrieve the sample material.

A liquid crystal display, or LCD, provides a quantitative readout of the concentration of targeted material present, and a set of red, yellow, and green light emitting diodes provides an easily interpreted reading of the threat level. For instance, "no threat" is green, a barely detectable to medium level of an agent is one or two yellow dots, and a high detection level is red.

The DNA Capture Element instrument was developed at the Pacific Northwest National Laboratory for the Air Force Research Laboratory. The "green box" is used to process samples of agents – in a matter of minutes – to determine if they are or aren't harmful.

The biosensor system is designed to be reliable, disposable and cost-effective. The Air Force will continue testing the device over the next several months.

PNNL (www.pnl.gov) is a DOE Office of Science laboratory that solves complex problems in energy, national security, the environment and life sciences by advancing the understanding of physics, chemistry, biology and computation.

Research and Engineering (R&E) Portal Launched

By Sandy Schwalb

The Office of the Director, Defense Research & Engineering (DDR&E) and the Defense Technical Information Center (DTIC) are pleased to announce that the **R&E Portal** is now available to Department of Defense (DoD) employees and their contractors. The Portal provides one-stop access to current and historical research and engineering (R&E) information, including DTIC technical data resources.

Dr. Ronald M. Sega, Director of Defense Research and Engineering, and the sponsor of the Portal, wants the R&E community to have easy access to comprehensive technical information. His vision is that DoD personnel will quickly locate answers, from their workstations, to questions such as: What is DoD doing in R&E? When will the work be completed? Why is the work being done? Who is the point of contact for more information?

The Portal brings together Web applications that support DDR&E strategic planning and the congressional reporting process. Consolidated information on R&D projects, provided by the services, can also be found in the Portal. A working research tool, the **R&E Portal** includes an enhanced query capability that displays the results of text searches within the context of a selected taxonomy. It also offers a customized search tool designed specifically for analysis. The new E-Gov database, created to consolidate and submit R&D data in support of the E-Government Act of 2002, provides a centralized view of federally funded R&D projects.

The **R&E Portal** can be found at https://rdte.osd.mil. Access is controlled by the DTIC registration process. Go to: https://register.dtic.mil/DTIC for registration information. For more information about the R&E Portal, contact rdte_help@dtic.mil.

DDR&E's mission is to ensure that the warfighters today and tomorrow have superior and affordable technology to support their missions and to give them revolutionary war-winning capabilities. Visit DDR&E online at http://www.dod.mil/ddre

DTIC is the premier provider of defense scientific, research, and engineering information. A DoD Field Activity, DTIC reports to the DDR&E. Visit DTIC online at www.dtic.mil

Research and Engineering Portal *cont.*

Frequently Asked Questions

What is the DoD E-Gov Initiative?

The DoD E-Gov Initiative is sponsored by DDR&E. It implements Section 207(g) of the E-Government Act of 2002 that mandates a database and Web site to integrate information about federally funded R&D.

What will the R&E Portal provide?

- New E-Gov database of current R&E project summaries
- RDT&E Budget databases:
  - RDDS-R&D Descriptive Summaries
  - Tracking Congressional Marks
  - BES-Budget Estimate Submission
- S&T Planning documents:
  - Joint Warfare S&T Plans
  - Defense Technology Objectives
  - Basic Research Plan
  - Defense Technical Area Plan
- S&T Activities:
  - DoD Lab facilities & equipment
  - Lab capabilities & funding
- S&T Workforce:
  - Lab demographics & trends
  - S&T Acquisition workforce policies
- News:
  - R&D headline news (NewsEdge)
  - DoD news highlights (DefenseLINK)

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Washington, DC 20301-3030

Defense Technical Information Center
8725 John J. Kingman Road, Suite 0944
Fort Belvoir, VA 22060-6218
Phone (703) 767-9129 Fax (703) 767-9174

The Director of Defense Research and Engineering

The Director of Defense Research and Engineering (DDR&E), is the chief technology officer for DoD and the principal technical advisor to the Secretary of Defense and the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD-AT&L) for scientific and technical matters, basic and applied research, advanced technology development, and advanced component development prototyping. The Director also has management oversight for the Defense Advanced Research Projects Agency (DARPA) and the Defense Technical Information Center (DTIC).

History of DDR&E

DDR&E grew out of the Research and Development Board formed with DoD in 1947. Within the provisions of the National Security Act of 1947, the newly established National Military Establishment consisted of the Secretary of Defense, three special assistants and three agencies: the Joint Chiefs of Staff, the Munitions Board, and the Research and Development Board. The 1949 Amendments changed the name of the National Military Establishment to DoD, added a Deputy Secretary and the Chairman of the Joint Chiefs, and converted the special assistants to the title Assistant Secretary of Defense (ASD). The two Boards continued.

President Eisenhower's Reorganization Plan No. 6 went into effect in 1953. The statutory boards and positions in the Office of the Secretary of Defense were abolished and functions were transferred to the Secretary of Defense. A General Counsel was established and six new ASDs were added. Two of these ASD positions were predecessors to the DDR&E: ASD (Applications Engineering) and ASD (Research and Development). Some time thereafter, the Applications Engineering position became simply Engineering. In 1957, these two ASDs were combined to become the ASD (Research and Engineering). Under the DoD Reorganization Act of 1958, the position of ASD (R&E) was abolished and the functions were transferred to the new DDR&E.

In 1977, the DDR&E position was redesignated as the Under Secretary of Defense for Research and Engineering, but the Military Reform Act of 1986 reestablished the position of DDR&E. The DDR&E reports to the USD-AT&L. For further information about DDR&E, go to http://www.dod.mil/ddre.

Calendar of Events

If you would like to have a Chemical and/or Biological Defense or Homeland Security course or event posted on the CBIAC Calendar of Events, submit the pertinent information via email to **cbiac@battelle.org**. *Due to space limitations, the CBIAC will accept submissions on a first-come, first-served basis and reserves the right to reject submissions. For a more extensive list of events, visit our website at* **http://www.cbiac.apgea.army.mil/**.

September 1, 2005
FBI Academy Technology Exposition
Quantico, VA
http://www.fbcinc.com/event.asp?eventid=Q6UJ9A008SS9

September 7-8, 2005
Contamination Monitoring Technologies Seminar
Apple Valley, MN
http://www.awwa.org/education/seminars/index.cfm?SemID=47

September 7-9, 2005
Urban Security China 2005
Beijing, P.R. China
http://www.ejkrause.com/events/5755.html

September 9-14, 2005
North American Congress of Clinical Toxicology
Orlando, FL
http://www.clintox.org

September 11-14, 2005
Detector/Sensor Research and Technology for Homeland and National Security
Knoxville, TN
http://www.ornl.gov/sci/homeland_sec_workshop/

September 11-16, 2005
Management of Chemical & Biological Casualty (MCBC) Course
Aberdeen Proving Ground, MD and Fort Detrick, MD
https://ccc.apgea.army.mil/courses/in_house/brochureMCBC.htm

September 12-13, 2005
COURSE: Assessing Terrorism Related Risk
Clearwater, FL
http://s2institute.com/content/_pages_advanced/_courses/assessingrisk.php

September 12-14, 2005
Air & Space Conference and Technology Exposition
Washington, DC
http://www.afa.org/events/conference2005.asp

September 12-16, 2005
Managing Civil Actions in Threat Incidents (MCATI) - Basic Course Train the Trainer
Los Alamitos, CA
http://rohrabacher.house.gov/homelandsecurity/
http://rohrabacher.house.gov/UploadedFiles/MCATI%20basic%20Sep%2005.pdf

September 13-14, 2005
Enterprise Integration EXPO
Washington, DC
http://www.afei.org

September 13-14, 2005
Emergency Preparedness for Government Facilities
Dallas, TX
http://www.homelanddefensejournal.com/conf_emergprepTX.htm

September 14-15, 2005
Syndromic Surveillance Conference
Seattle, WA
http://www.syndromic.org/con_2005.html

September 15-16, 2005
Physical Security for Government Facilities
Dallas, TX
http://www.homelanddefensejournal.com/conf_securityTX.htm

September 20-21, 2005
U.S. Maritime Security Expo
New York, NY
http://www.maritimesecurityexpo.com

September 22-24, 3005
Innovations in Disaster Psychology 2005: Research Strategies and Methodology
Rapid City, SD
http://www.usd.edu/dmhi/conf05/

September 26-28, 2005
Biomarker Discovery Summit
Philadelphia, PA
http://www.healthtech.com/2005/bmk/index.asp

September 26-30, 2005
Field Management of Chemical & Biological Casualty (FCBC) Course
Aberdeen Proving Ground, MD
https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm

September 28, 2005
Chemical Biological Roundtable Breakfast
Arlington, VA
http://register.ndia.org/interview/register.ndia?PID=Brochure&SID=_1LB0RC2W2&MID=530B

September 28-29, 2005
Military Data Fusion
London, UK
http://www.smi-online.co.uk/fusion3.asp

September 27-29, 2005
Threat and Risk Assessment for WMD (TRA)
Los Alamitos, CA
http://rohrabacher.house.gov/homelandsecurity/
http://rohrabacher.house.gov/UploadedFiles/Threat%20and%20Risk%20Assessment%20for%20WMD%20Sep%2005.pdf

Calendar *cont.*

October 3-5, 2005
AUSA Annual Meeting
Washington, DC
https://www.ausa.org/www/ia.nsf

October 4-5, 2005
2nd International Symposium on Nanotechnology and Occupational Health
Minneapolis, MN
http://www.cce.umn.edu/conferences/nanotechnology/

October 4-6, 2005
Incident Management/Unified Command (IM/UC) for WMD/Terrorism Incidents
Los Alamitos, CA
http://rohrabacher.house.gov/homelandsecurity/
http://rohrabacher.house.gov/UploadedFiles/ICS%20TEEX%20Oct%2005.pdf

October 5-6, 2005
Naval Institute's Warfare EXPO 2005
Virginia Beach, VA
http://www.powersource.net/prafceav.htm

October 10-11, 2005
COURSE: Anti-Terrorism Officer Program
Clearwater, FL
http://s2institute.com/content/_pages_advanced/_courses/atoprogram.php

October 10-11, 2005
Enhanced Threat and Risk Assessment for WMD
Los Alamitos, CA
http://rohrabacher.house.gov/homelandsecurity/
http://rohrabacher.house.gov/UploadedFiles/ETRA%20Oct%202005%20_2_.pdf

October 12-14, 2005
Enviro-Pro Mexico 2005
Mexico City, Mexico
http://www.uswaternews.com/confercurrent/t5_10_12.html

October 16-18, 2005
The Advanced Personal Protective Equipment: Challenges in Protecting First Responders Conference
Blacksburg, VA
http://www.conted.vt.edu/appe/

October 17-21, 2005
Managing Civil Actions in Threat Incidents (MCATI) - Protester Devices
Los Alamitos, CA
http://rohrabacher.house.gov/homelandsecurity/
http://rohrabacher.house.gov/UploadedFiles/protester%20Devices%20Oct%2005.pdf

October 18-20, 2005
Defending Against Terrorism: Intelligence, Analysis, and Operations
Orlando, FL
http://www.ictoa.org/images/ICTOAcon2005.doc

October 23-26, 2005
48th Annual Biological Safety Conference
Vancouver, British Columbia
http://www.absa.org/

October 25-26, 2005
Federal Information Assurance Conference (FIAC)
College Park, MD
http://www.fbcinc.com/fiac/

October 30 – November 3, 2005
10th Annual New Mexico Environmental Health Conference
Albuquerque, NM
http://www.nmehc.net

October 30 – November 4, 2005
AMSUS Annual Meeting
Nashville, TN
http://www.amsus.org (Annual Meetings button)

October 31 – November 2, 2005
7th Annual Technologies for Critical Incident Preparedness Conference and Exposition 2005
San Diego, CA
http://www.ctc.org
http://www.regonline.com/eventinfo.asp?EventId=21494

November 2-4, 2005
CPM 2005 EAST Conference and Exhibition
Orlando, FL
http://www.contingencyplanning.com/events/EAST/

November 7-8, 2005
Annual Bioterrorism Conference
Philadelphia, PA
http://www.asisonline.org/store/program_detail.xml?id=6347

November 10-13, 2005
FireRescue 2005
Las Vegas, NV
http://www.firerescueexpo.com/App/homepage.cfm?moduleid=42&appname=100388

November 12-16, 2005
IAEM 2005 Annual Conference & EMEX
Emergency Management: Local, Regional, and Global Successes
Phoenix, AZ
http://www.iaem.com/events/annual/intro.htm

November 14-16, 2005
The 2005 Scientific Conference on Chemical & Biological Defense Research
Timonium, MD
http://www.cbdefense.com

December 4-7, 2005
U.S. EPA Region III Emergency Preparedness and Prevention and Hazmat Spills Conference
Baltimore, MD
http://www.2005conference.org

In the News • *By Mary Frances Tracy*

Portable High-Resolution NMR Sensor Unveiled at Berkeley

Research News Berkeley Lab

April 8, 2005

"Homeland security experts may soon be getting a valuable new tool for identifying the chemical constituents in suspicious substances. A portable device makes it possible for the first time ever to take high-resolution NMR spectroscopy — one of the principal tools for chemical analysis — out of the laboratory and into the field for use on samples of any size."

http://www.lbl.gov/Science-Articles/Archive/MSD-NMR-sensor.html

Anthrax Vaccine Tested on Volunteers

Mark Prigg

Evening Standard

April 28, 2005

"A revolutionary new anthrax vaccine is to be tested on hundreds of Londoners.

Experts hope the vaccine could help protect the capital against a biological weapons attack by terrorists, and even be used to treat people exposed to the deadly anthrax bacterium."

http://www.thisislondon.co.uk/news/articles/18233291?source=Evening%20Standard

DoD to Resume Anthrax Vaccinations

Department of Defense News Release

May 3, 2005

"The Department of Defense announced today a resumption of its Anthrax Vaccine Immunization Program (AVIP) under the conditions set forth in the emergency use authorization (EUA) issued by the Food and Drug Administration (FDA) on Jan. 27, 2005."

http://www.defenselink.mil/releases/2005/nr20050503-2901.html

NIAID Awards First $27 Million Using New Bioshield Authorities

National Institute of Allergy and Infectious Diseases Press Release

May 10, 2005

"National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), has awarded 10 grants and 2 contracts totaling approximately $27 million to fund development of new therapeutics and vaccines against some of the most deadly agents of bioterrorism including anthrax, botulinum toxin, Ebola virus, pneumonic plague, smallpox and tularemia."

http://www2.niaid.nih.gov/Newsroom/Releases/bioshield.htm

Detection Device to Revolutionize Biological Warfare

Elaine Wilson

Fort Sam Houston Public Information Office

May 19, 2005

"The Joint Biological Agent Identification and Diagnostic System (JBAIDS), a 40-pound device small enough to slip into a rucksack, is designed to vastly increase the speed and accuracy of biological warfare agent detection."

http://www.defenselink.mil/transformation/articles/2005-05/ta051905a.html

NRL Develops Self-cleaning "Smart" Fabrics Capable of Environmental Toxin Remediation

NRL Press Release

June 6, 2005

"Scientists at the Naval Research Laboratory's Center for Bio/Molecular Science and Engineering (CBMSE) have developed a new cost-effective, self-decontaminating ultrathin materials coating that actively destroys pesticides and related chemical agents on contact."

http://www.nrl.navy.mil/pressRelease.php?Y=2005&R=27-05r

Researchers Report Breakthrough against World's Deadliest Viruses

Science Daily

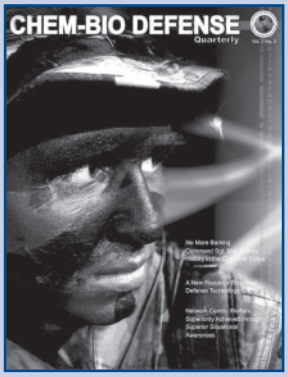
June 6, 2005

"Scientists from the Public Health Agency of Canada - with assistance from the U.S. Army Medical Research Institute of Infectious Diseases – have developed vaccines against the Ebola and Marburg viruses that have been shown to be effective in nonhuman primates."

http://www.sciencedaily.com/print.php?url=/releases/2005/06/050605233815.htm

Continued pg. 14

Vol. 2 No. 3 of the Chem-Bio Defense Quarterly Magazine is Now Available!



In this issue the Editor talks with warfighters about applying technology to real world problems and providing warfighting capabilities. Time was spent with the 83rd Chemical Battalion, Fort Polk, LA, learning what chemical Soldiers think of their equipment and how it supports the war fight. PFC Oscar Hernandez and PFC Derrick Smith describe how the training they received before reporting to the battalion prepared them for real world situations.

Also included is a look at how embedded Contractor Logistics Support works and is an integral part of supporting fielded equipment.

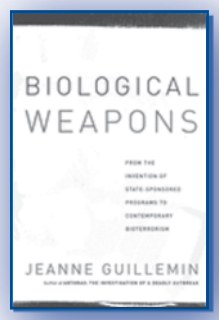
http://www.jpeocbd.osd.mil/page_manager.asp?pg=4&sub=0

New CBIAC Information Resources • *By Richard M. Gilman*

Books

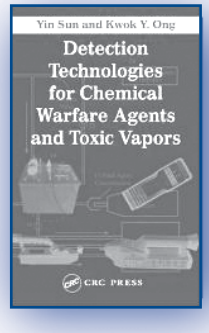
Guillemin, Jeanne. **Biological Weapons: From the Invention of State-Sponsored Programs to Contemporary Bioterrorism.** New York: Columbia University Press, 2004.

Written with special sensitivity to public policy issues the author provides chapter-length treatments of "The Nixon Decision," "Bioterrorism and the Threat of Proliferation," "National Security and the Biological Weapons Threat," and "Biological Weapons—Restraints Against Proliferation." Other chapters are devoted to the histories of the biological weapons programs of the United Kingdom, the United States, Japan and the former Soviet Union. Includes an index.



CB-193152
Columbia University Press
61 W. 62nd Street
New York, NY 10023
Phone: (212) 459-0600 Fax: (212) 459-3678

Sun, Yin and Kwok Y. Ong. **Detection Technologies for Chemical Warfare Agents and Toxic Vapors.** Boca Raton: CRC Press, 2005.



Topics receiving chapter-length treatment include "Vapor Generation Techniques," "Detector Selection Factors," "Ion Mobility Spectrometry," "Flame Photometry," "Surface Acoustic Wave and Electrochemical Techniques," and "Colorometric Technology."

Includes three appendices, a glossary, a bibliography and an index.

CB-192368
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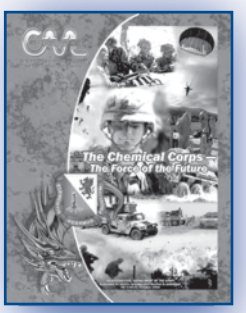
Boca Raton, FL 33431
Phone: 1 (800) 272-7737 Fax: 1 (800) 374-3401
http://www.crcpress.com

Documents

Army Chemical Review—The Professional Bulletin of the Chemical Corps. October 2004 issue.

http://www.wood.army.mil/chmdsd/Army_Chemical_Review/Oct04toc.htm

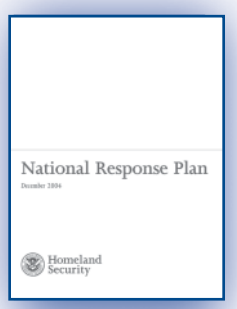


This periodical is published biannually by the U.S. Army Chemical Corps. The October 2004 issue includes articles on "Colonial Germ Warfare," "Chemical Officer Training: A Change for the Better," "Computer Simulation of Decontamination Operations," and "U.S. Army Chemical School Reorganization."

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954

Department of Homeland Security. **National Response Plan.** Washington, DC: DHS, 2004.
http://www.dhs.gov/dhspublic/interweb/assetlibrary/NRP_FullText.pdf

The National Response Plan (NRP) is an all-discipline, all hazards plan that establishes a single, comprehensive, framework for the management of domestic incidents. It provides the structure and mechanisms for the coordination of Federal support to State, local and tribal incident managers and for exercising direct Federal authorities and responsibilities. The NRP assists in the important homeland security mission of preventing terrorist attacks within the United States; reducing the vulnerability to all natural and manmade hazards; and minimizing the damage and assisting in the recovery from any type of incidents that occurs. (Letter of Agreement)

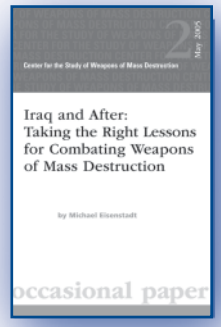


CB-193461
Department of Homeland Security
7th & D Streets
Washington, DC 20258
Phone: 1(800) 368-6498
http://www.dhs.gov

Eisenstadt, Michael. **Iraq and After: Taking the Right Lessons for Combating Weapons of Mass Destruction.** Occasional Paper 2. Washington, DC: National Defense University, 2005.

"Recent proliferation surprises in the Middle East—the failure to find weapons of mass destruction (WMD) in Iraq, Libya's decision to eliminate its WMD, and evidence of significant progress by Iran toward a nuclear weapons capability—underscore the need for the nonproliferation community to reassess some of its key assumptions about WMD proliferation and the nature of the evolving international landscape." (Introduction)

CB-193314
National Defense University Press
300 fifth Ave. Bldg. 62
Fort Lesley J. McNair
Washington, DC 20319
Phone: (202) 685-4210
Fax: (202) 685-4806
http://www.ndu.edu/WMDCenter/index.cfm?secID=36&pageID=4&type=section



DoD IACs: Focused Scientific and Technical Information Resources

Introducing

Weapon Systems Technology Information Analysis Center

WSTIAC is an integrated support activity dedicated to increasing the scientific and engineering productivity of the DoD research community. WSTIAC is a single-point-of-contact for all information related to conventional and directed energy weapons, their development, production, fielding, and maintenance.

WSTIAC monitors and extracts information on the science, technology, and acquisition of conventional and directed energy weapon systems technology and related guidance, intelligence gathering systems, training, analyses, databases, model repositories, laboratory studies, testing, hardware, components, systems, and subsystems. WSTIAC provides the DoD and user communities with timely and authoritative information on key R&D concepts, results, and trends; applications and processes; and assessment of international R&D technology.

Scope

- Weapons (missiles, rockets, munitions, submunitions, bombs, projectiles, guns, mines, torpedoes, etc.)
- Weapon Platforms (aircraft, satellites, ground vehicles, ships, undersea vehicles)
- Weapon Components (sensors, seekers, guidance systems, fuzes, warheads, control systems, etc)
- Enabling technologies (GPS, miniaturization technologies, imaging, target recognition, aerodynamics, electronics, photonics, inertial navigation, etc.)

Training Courses

WSTIAC develops, maintains and presents training courses on a cost recovery basis in order to transfer conventional and directed energy weapons technology to the technical community. Currently WSTIAC offers courses on

- **Smart/Precision Weapons** - provides a comprehensive understanding of smart weapons and related technologies on selected U.S. and foreign smart weapons, to include system description, concept of employment, performance characteristics, effectiveness and program status.
- **Sensors and Seekers for Smart Munitions and Weapons** - provides an introduction to the most commonly used sensors and seekers employed in smart munitions and weapons (projectiles, missiles and wide area mines).
- **Weaponeering** - provides an overview of the fundamentals of the probability computations for determining the quantity of weapons required to achieve a specific level of damage to a given target, considering target vulnerability, weapons effect, munitions delivery accuracy, damage criteria, probability of kill, and weapon reliability and its application to air-to-surface and surface-to-surface engagements.
- **Directed Energy Weapons** - provides an introduction to the basic principles and techniques of Directed Energy Weapons (DEWs) and discusses key DEW programs in High Energy Lasers and High Power Microwaves

Technical Publications

WSTIAC keeps the user community abreast of weapons systems technology by publishing technical reports such as State-of-the-Art Reports (SOARs). These technical reports are carefully selected to meet the most pressing needs of the users.

Current Awareness

WSTIAC publishes a quarterly newsletter and maintains a Web site. An electronic copy of the newsletter is available on the WSTIAC Home Page. WSTIAC also conducts conferences,

WSTIAC *cont.*

symposia, workshops and other meetings for the purposes of weapon systems technology information collection, analysis, and dissemination.

Inquiry Support

WSTIAC offers free inquiry support to users by drawing on its multiple databases and information repositories, as well as its technical subject matter experts.

Technical Area Tasks

WSTIAC is available to assist DoD organizations and industry by conducting Technical Area Tasks on a cost-recovery basis. WSTIAC can conduct analytical or/or experimental technical tasks, conduct trade studies, develop and demonstrate prototype hardware and provide interdisciplinary technical support on a wide variety of topics related to weapons technology and systems:

- Conventional and Directed Energy Weapons Systems Development Technology Components
- Analytical Test Techniques
- Component Design Criteria
- Conventional and Directed Energy Weapon Systems Technology Components Analysis
- Design and Analysis of Computational Techniques, Databases and Software/Hardware
- Environmental Protection
- Instrumental and Seeker Test Support
- Materials Applications Analysis Specifically Related to Conventional and Directed Energy Weapons Systems Technology Components
- Military Systems and Supporting Equipment Development Analysis
- Operational Serviceability
- Phenomenology
- Special Test Equipment and Techniques
- Subsystems and Systems Simulation Modeling and Analysis
- Theoretical Performance Computations.

Recent studies performed by WSTIAC

- Supporting the Director of Defense Research and Engineering's tri-Service Energy and Power Technology Initiative
- Supporting Army's Objective Force air and missile defense requirements for the 2015-2020 timeframe
- Supporting the transformation to the Global Information Grid
- Developing an armed Unmanned Aerial Vehicle demonstration for the Army
- Evaluating sensor-based systems to improve mine/minefield detection
- Supported Red Team threat target selection for smart munitions against Future Combat System units
- Developed a comprehensive assessment of Anti-Jam Techniques for GPS
- Developed the Intelligent Bridge Assessment, Repair and Retrofit Tool to determine bridge load assessments and vulnerabilities.
- Developed Future Strike Fighter trade studies.

Contact Information

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Fax: 703.933.3325
E-mail: gjgray@alionscience.com

In the News *cont.*

Biological Warfare, Mad Cow Disease on UH Student's Hit List: Mrinal Shah Develops Technology to Construct Biosensors More Quickly

Lisa Merkl
University of Houston News Release
June 9, 2005
"A University of Houston student has made an award-winning breakthrough in biosensors that could help bioterrorism researchers in their ability to quickly and accurately detect toxic biological agents."
http://www.uh.edu/media/nr/2005/06june/060905biotoxicagnts.html

Review Under Way to Expand, Refine Nonlethal Weapons Training

Donna Miles
American Forces Information Service
June 23, 2005
"With increased awareness about the capabilities and uses of nonlethal weapons, the Marine Corps detachment here [Fort Leonard Wood] that instructs trainers for all the military services may soon be expanding its program. A review of the two-week 'train the trainer' course in nonlethal weapons is expected to provide insights into how to enhance the training and extend its reach…"
http://www.defenselink.mil/news/Jun2005/20050623_1825.html

New Facility to Support WMD Response Capabilities

Donna Miles
American Forces Information Service
June 21, 2005
"First responders will soon have a state-of-the-art facility here [Fort Leonard Wood] to hone the skills they'll need to deal with weapons of mass destruction and other chemical, biological, nuclear and radiological incidents.
Officials here will break ground next week for the Joint Emergency Responders Training Facility. When it opens in 2007, the facility will help give servicemembers from throughout the Defense Department as well as civilians from several federal agencies the skills they'll need when responding to a terrorist attack or other emergency…"
http://www.defenselink.mil/news/Jun2005/20050621_1804.html

Army Investigators Look for Unlisted Chemical Weapons

Global Security Newswire
June 27, 2005
"The U.S. Army's Nonstockpile Chemical Materiel Project is set to determine whether certain munitions stored at the Pine Bluff Arsenal in Arkansas contain chemical agents, the Associated Press reported today. In addition to housing 3,850 tons of chemical agent, Pine Bluff also holds Livens projectiles, 4.2-inch mortars, 75 mm munitions and World War II German Traktor rockets. All of these weapons possibly contain chemical agent."
http://www.nti.org/d_newswire/issues/print.asp?story_id=8141638D-0176-4FC9-933C-E1A0A46F13BD

JACKS *cont.*

90% of DoD's military and civilian personnel as of April 2005.

Functions within JACKS are access controlled, and this is managed via permissions based on the user's identity certificate. An example would be the CBRN Shelf Life update area. The engineers log into the same JACKS website that all users access. However, since they are identified as members of the technical community and been given additional permissions, they have additional links and options in JACKS that provide access to the Shelf Life update forms.

JACKS is an evolutionary system that is constantly being improved and enhanced. The capabilities and functions are expanding based on user feedback and CBRN community information requirements. Points of contact for recommendations, suggestions and questions can be accessed on JACKS.

JACKS can be accessed at: https://jacks.jpeocbd.osd.mil. Users are encouraged to submit suggestions for improvement to JACKS. Together, we can achieve the JPEO-CBD goals of focusing less on organizational structure and more on supporting the CBRN defense community and our Warfighters.

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Solution *cont.*

agent and toxic industrial chemical testing. ITS of Cortland, New York, conducted physical properties, biological liquid, toxic industrial chemical, and ensemble testing. The BEST Center, located in Aberdeen, Maryland, conducted the market survey.

As a result of this unique government and industry collaboration, 6 commercial hazardous material protective ensembles have been found to meet the design and performance requirements of NFPA 1994. The manufacturers - Kappler, Dupont, Trelleborg, Sigmon Group, and Paul Boyer/TVI- are moving forward to have these ensembles certified. Consequently, the safety, reliability, and performance of these ensembles will be assured. Additionally, it is anticipated that the NGB and WMD-CSTs will have a broader pool of alternative and supplemental equipment to consider for future competitive procurements.

1 National Fire and Protection Association (NFPA) 1994 Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents, 2001 Edition; Section 1.1.1.

1 2 3 *photos 1 and 3 courtesy of 63rd WMD-CST*
photo 2 courtesy of Dupont Personal Protection

Trudy Lewis is at the Hazardous Materials Research Center.
Tom Tassinari is at Battelle Natick Operations.
Rick Arcilesi is at the Battelle Eastern Science and Technology Center.
Don MacLeod is at Natick Soldier Center.

CBIAC Mailing Lists—
Corrections and Updates Requested!

The CBIAC maintains an email address list to provide the CB Defense and HLS communities with timely announcements and pertinent information from the CBIAC. We are also screening our CBIAC Newsletter mailing list for incomplete entries and outdated organization names, office symbols, locations, etc.

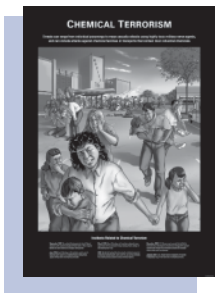
Please check your newsletter mailing label and send an email to update and/or correct our records to cbiac@battelle.org or complete the Interactive form on the CBIAC website.

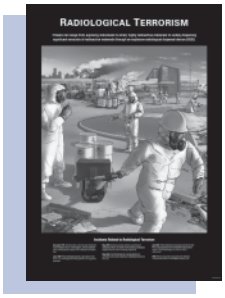
Thank you!

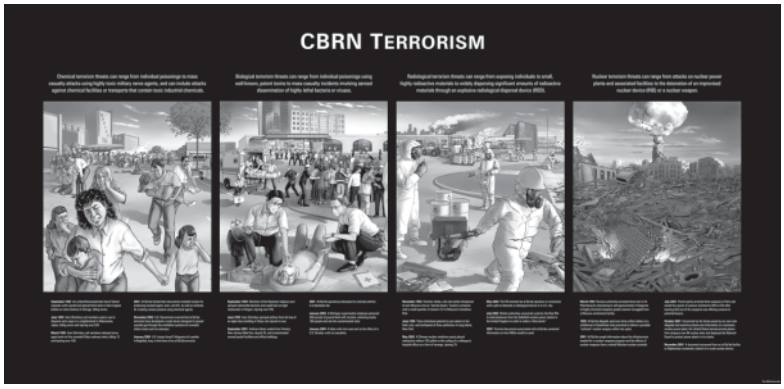
NCTC Reaching Out to Domestic Audiences on CBRN Terrorism Threat

The National Counterterrorism Center (NCTC) is spearheading a joint effort with Department of Homeland Security (DHS)/Office of Information Analysis(IA) and FBI/WMD Operations Unit (OU) to produce and disseminate unclassified reference materials and threat information dealing with the issue of chemical, biological, radiological, or nuclear (CBRN) terrorism. All three organizations have a limited number of analysts who share the work of crisscrossing the country and providing CBRN terrorism threat briefings to domestic audiences, highlighting the many possible threats and putting them into perspective.

A key part of this outreach effort are the handouts and other training materials given to class participants and instructors who seek to incorporate these materials into their own training programs. In addition to a variety of handbooks, pamphlets, and brochures, these materials include unique products such as a DVD with three short videos developed by CIA, a CD-ROM with many of the handbooks in PDF format, and a series of eye-catching posters that address each of the four parts of CBRN terrorism. For more information or to obtain these materials, please email nctc_cbrn@nctc.gov.







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