CBRNIAC Newsletter
Chemical, Biological, Radiological & Nuclear Defense Information Analysis Center
Volume 9 Number 4
2008

Homeland Defense/Civil Support Capabilities-Based Assessment Overview

CDTF Provides Realistic Training for 93rd CST

MRICD Scientist Retires After 58 Years of Service

A U.S. Department of Defense Information Analysis Center sponsored by the Defense Technical Information Center
Approved for Public Release; Distribution Unlimited

Visit the new
CBRNIAC Web Site–
now even easier to use!

Visit the CBRNIAC online for access to Chemical, Biological, Radiological, Nuclear (CBRN) Defense and Homeland Security information resources.

Read our newsletters, access our inquiry services, review Technical Area Task (TAT) program information, order products, and more.

http://www.cbrniac.apgea.army.mil/

The **Chemical, Biological, Radiological and Nuclear Defense Information Analysis Center (CBRNIAC)** is a Department of Defense (DoD)-sponsored Information Analysis Center (IAC) operated by Battelle Memorial Institute and supported by Horne International, 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 CBRNIAC Contracting Officer's Technical Representative (COTR) may be contacted at the following address:

CDR USA RDECOM
Edgewood Chemical Biological Center
ATTN: AMSRD-ECB-AP-T (CBRNIAC 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 CBRNIAC for information products and services. CBRNIAC 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.

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

CBRNIAC
Aberdeen Proving Ground - Edgewood Area
P.O. Box 196 • Gunpowder, MD 21010-0196
410.676.9030 (phone) 614.458.0300 (fax)

General Information & Core Program:
cbrniac@battelle.org

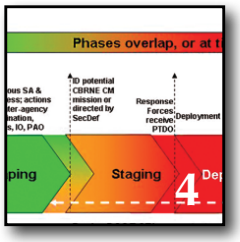
Technical Area Task Program:
cbrniac-tat@battelle.org

Knowledge Management & Development Program:
cbrniac-kmd@battelle.org

http://www.cbrniac.apgea.army.mil/

Table of Contents

Volume 9 Number 4 2008



4 Homeland Defense/Civil Support Capabilities-Based Assessment Overview

7 CDTF Provides Realistic Training for 93rd CST

8 Contract Awards

10 MRICD Scientist Retires After 58 Years of Service

12 Calendar of Events

14 Exercise Readies First Units for NORTHCOM Assignment

16 New CBRNIAC Information Resources

17 MRICD Scientist Appointed Associate Editor of New Journal

18 In the News

19 Force Health Protection and Readiness Launches Chemical-Biological Warfare Exposures Web Site

20 U.S. Northern Command Gains Dedicated Response Force

20 Umatilla Completes VX Artillery Projectile Disposal Campaign

21 History of Army Chemical and Biological Decontamination – Part II

23 CBRNIAC Expo on the Potomac

23 Would You Like To Highlight Your Organization, Research, Program Or Project In The CBRNIAC Newsletter?

On the Cover: Cover art by Marc Jenesel, SI International.

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

The CBRNIAC 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 CBRNIAC reserves the right to reject or edit submissions. For each issue, articles must be received by the following dates:

- First Quarter (Number 1) – October 15th
- Second Quarter (Number 2) – January 15th
- Third Quarter (Number 3) – April 15th
- Fourth Quarter (Number 4) – July 15th

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

Homeland Defense/Civil Support Capabilities-Based Assessment Overview

By Guy Varland, SI International, and Mike Kelly, J-8 JRO CBRN Defense

The Homeland Defense/Civil Support (HD/CS) Capabilities-Based Assessment (CBA) is an analytical effort, currently in the Joint Capability Integration and Development System (JCIDS) staffing process, that examines Department of Defense (DoD) Homeland Defense (HD) and Civil Support (CS)/Defense Support to Civil Authorities (DSCA) missions (along with related Mission Assurance activities) in the 2012-2025 timeframe with primary focus on 2014-2016. The goal of the effort is to identify DoD HD/CS capability demands, determine capability gaps, and develop recommendations for actions the Department should take to address the identified capability gaps.

As directed, the Commander of North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM) is leading a Capabilities-Based Assessment (CBA) to help develop a clear understanding of DoD and interagency roles, responsibilities, and capabilities to enhance unified action and mitigate potential uncertainty. Partnership organizations during the analysis included principal (Office of the Secretary of Defense (OSD)) offices, DoD Agencies, other Combatant Commands, Joint Staff, Services, and the National Guard Bureau. In addition, the Department of Homeland Security (DHS) and other United States government partners played a crucial role in helping ensure DoD capability requirements and shortfalls were informed by contributions from key mission partners.

HD/CS CBA Relationship to CBRN

The HD/CS Joint Capabilities Document (JCD), drafted as a result of the HD/CS CBA, provides recommendations in the areas of biological incident support; chemical, biological, radiological and nuclear (CBRN) contamination; CBRN Urban Search and Rescue; and isolation and quarantine support; which will shape the future of CBRN capabilities and their supporting systems.

The HD/CS Challenge

The size, scope and mission-perspective of this CBA created a significant number of challenges for the study team. The first challenge was the difficulty in evaluating operational missions vice a system or weapons platform. Measuring mission success in an evaluative framework proved difficult since the answer was often "it depends" or varies widely with changing details. Furthermore, the size, scope, and operational perspective of the study provided significant challenges in performance measurement for finding, characterizing, and prioritizing gaps. Finally, the relative immaturity of the operational concepts in some domains lacked substantial previous analysis or real-world data that could provide meaningful information to the study. Because this CBA addressed capability gaps in both the HD and CS missions on behalf of the entire DoD, the analytical techniques utilized needed to account for, and remain valid in spite of the size and scope challenge.

The Integrated Architecture Development

Using the DoD Architecture Framework (DoDAF), the HD/CS CBA Integrated Architecture (IA) served as one of the "tools" utilized by the team to support the analysis done in the CBA. Even though the JCIDS only requires an operational concept description (OV-1) for the HD/CS JCD, the team recognized from the study's inception the power and utility of developing an integrated architecture in parallel with other CBA efforts. Given the fundamental linkages to every step of the CBA process (as depicted in Figure 1), the team used the integrated architecture to help articulate the operational concepts of HD and CS, facilitate the area and needs analyses, and capture the study findings for presentation with the JCD. The team also recognized that early development of the HD/CS integrated architecture using a relational database would benefit those performing follow-on solutions analyses and concept development by capturing the data formally, thereby avoiding the need for data reconstruction.

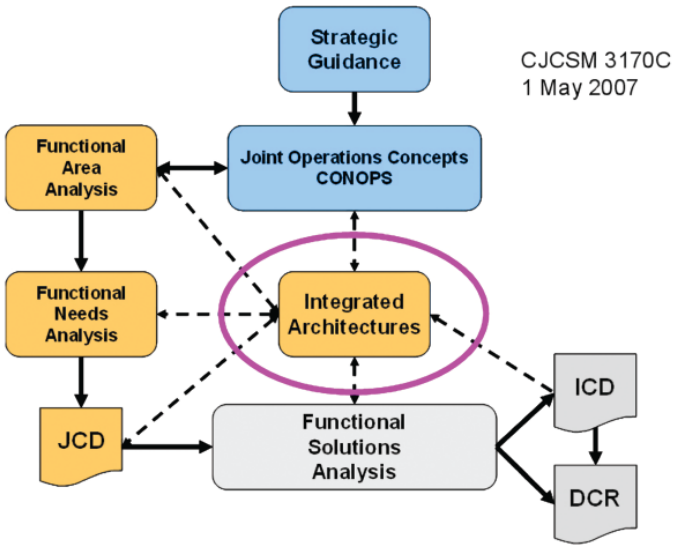


Figure 1. Role of Integrated Architectures in a CBA

The initial foundation of the HD/CS IA was derived from previous work completed for NORAD and USNORTHCOM in support of the Maritime Homeland Defense (MHD) CBA, the Homeland Air and Cruise Missile Defense of North America (HACMD of NA) Functional Solutions Analysis (FSA), the Integrated Air and Missile Defense (IAMD) Evaluation of Alternatives (EoA), and the Asymmetric Defense Study (ADS). These architectures were expanded and refined by the study team to form a more extensive look at the demands of the HD and CS missions.

To build the architecture activity models and mission threads, the team utilized approved Joint Operations Concepts, Concept Plans (CONPLANS) and Concept of Operations (CONOPS),

Continued pg. 5

and subject matter expert input to describe the operational HD/CS continuum.

In this manner, the integrated architecture, in essence, became the overarching depiction of the concept of operations, as tasks played out in time-sequenced order against the backdrop of the three macro-scenarios. An architecture visualization capability was used to depict the tasks across multiple domains to enhance stakeholder comprehension of task definitions, sequencing, and interdependencies.

During the Functional Needs Analysis (FNA) phase, the integrated architecture was further refined based upon the three complimentary analyses performed. During stakeholder workshops, the team again used the mission threads to help examine task level gaps and provide further insights into their relative contributions mission success.

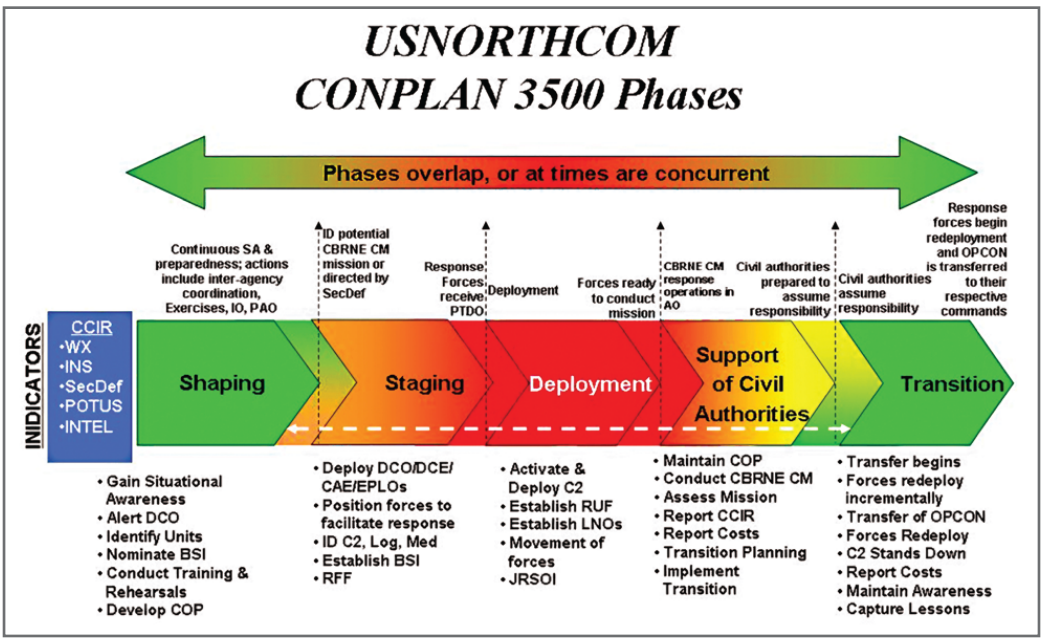


Figure 3. USNORTHCOM CONPLAN 3500 Phases

As a complement to the formal JCD, the team reproduced the HD/CS architecture in electronic format to promote enhanced understanding, sharing, and use of study content/findings with the broader community. A single electronic file contains a complete, guided review of the architecture as well as key documents and pertinent study artifacts.

Finally, in building an integrated architecture during the CBA, the team developed a relational database and populated it with all the area and needs analysis data. This database served as a common repository for the CBA results and drove the execution of the activity models including event traces and mission threads. In so doing, it also provides traceability and reusability of the data for follow-on analytic and acquisition efforts.

10 Kiloton Scenario Architecture Animation Example

Figure 2 depicts one of the scenarios utilized for analysis in the CBA, DoD's response to a ship-launched ballistic missile which detonates in the National Capitol Region with a 10 kiloton (kt) nuclear explosive yield.

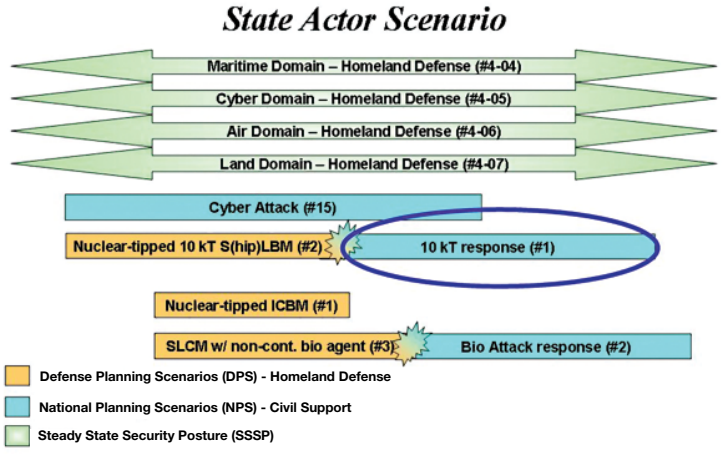


Figure 2. 10kt Scenario in National Capitol Region

To develop the architecture activity model to depict DoD's response, strategic level documents (e.g., National Response Framework, USNORTHCOM's Concept Plan 3500 which provides for CBRNE Consequence Management) and Subject Matter Expert input provided the operational and tactical level tasks.

The architecture activity model derived from this scenario utilizes the phase "flow" depicted in Figure 3 (e.g., shaping, staging, deployment, etc.) and captures the associated tasks depicted in each stage (e.g., deploy Defense Coordinating Officer, position forces, etc.) Utilizing DoDAF compliant methodology, the activity model for this scenario was created and incorporated into an electronic database.

An example static "screen capture" from the architecture model is depicted in Figure 4 on the next page. The yellow ovals under the pointer represent tasks required for the 10kt attack response sequence beginning with Assess Response Requirements, followed by Obtain Approval for DoD Assistance, etc. Each of these activity steps has corresponding textual information to provide further detail. At the top portion of the diagram, lanes are depicted to show where the activity is being performed—in this case the previously mentioned activity steps occur at the Coordinating Federal Agency (most likely Federal Emergency Managemnet (FEMA)) initiating the response coordination with DoD.

Upon completion of the "static" architecture diagrams, the team applied an architecture animation capability which provides a dynamic visualization of the complex mission thread and enables the time-sequenced depiction of operational processes (e.g., Functional Area Analysis (FAA) tasks) and information exchanges between DoD stakeholders for the 10kt attack response.

Continued pg. 6

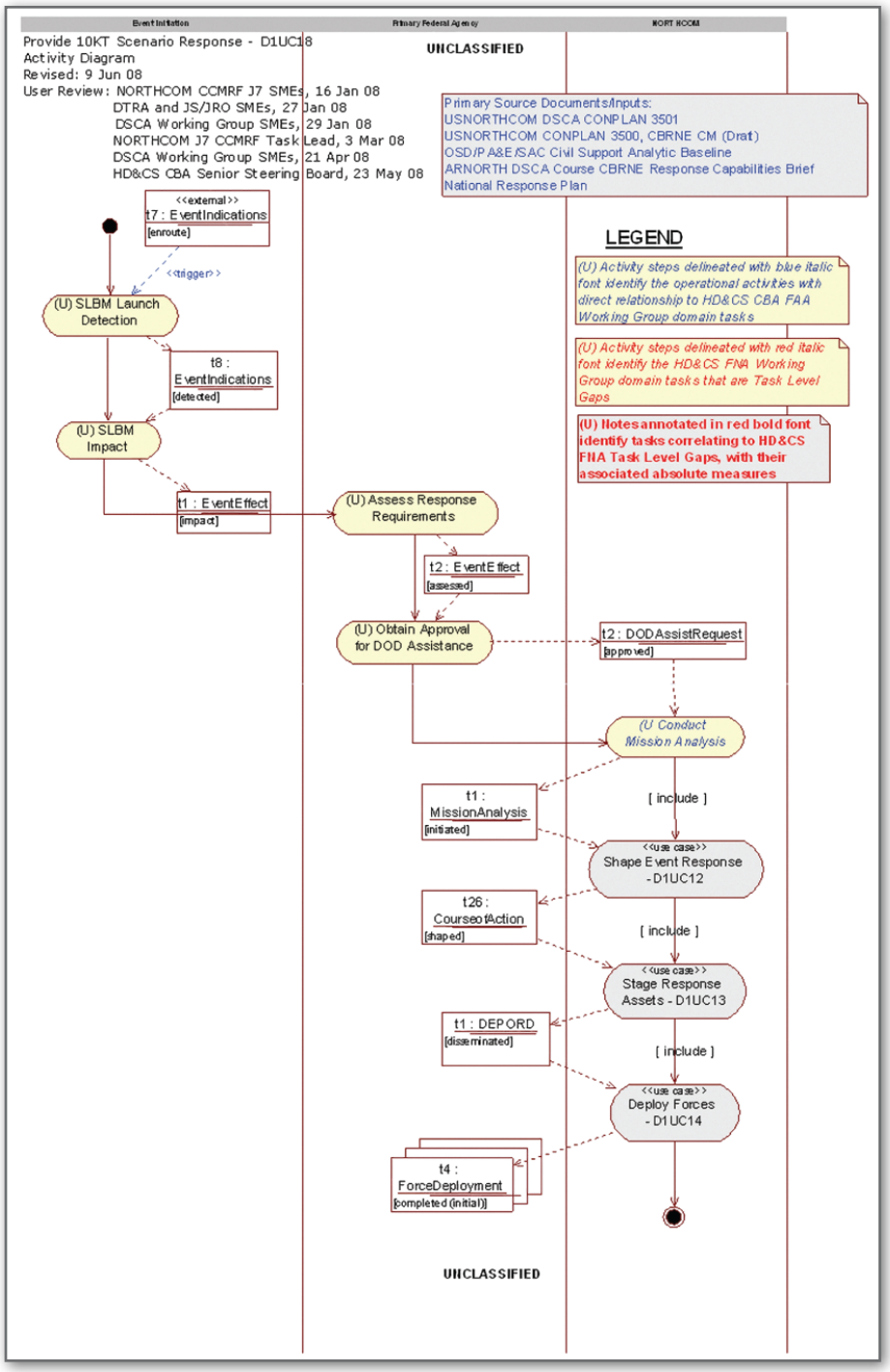


Figure 4: "Screen Capture" from HD/CBA Integrated Architecture

The animation serves as a "visual CONOPS" of the 10kt attack response scenario and is one of 13 scenario animations included (in addition to multiple other CBA products) on the HD/CS CBA IA compact disk. The architecture file is available by request to:

Mr. Bill Mathis, DAFC
Deputy Project Lead, HD/CS CBA
NORAD/USNORTHCOM J8C
DSN: 692-4435
Comm: 719-554-4435
Email: william.mathis@northcom.mil

Summary

The 438 Homeland Defense/Civil Support tasks identified in the Functional Area Analysis, the 105 Task Level Gaps identified in the Functional Needs Analysis, and the 31 cross-domain functional Capability Gaps identified in the Joint Capability Document are mapped within these architecture products. Additionally, the following Joint Requirements Oversight Council -validated Integrated Architectures are incorporated into a *single* Homeland Defense/Civil Support Capabilities-Based Assessment Integrated Architecture: 1) North American Aerospace Defense Command Homeland Air and Cruise Missile Defense of North America Joint Capability Document, 2) Homeland Air and Cruise Missile Defense of North America Functional Solutions Analysis and 3) United States Northern Command Maritime Homeland Defense Capabilities-Based Assessment.

The Homeland Defense/Civil Support Integrated Architecture supports 10 Joint Capabilities Integration and Development System documents and incorporates tasks, capabilities and capability gaps derived from each of three prior Capabilities-Based Assessments, thus *providing the true utility for requirements decision-makers tasked with establishing requirements, including the Joint Requirements Oversight Council and the Secretary of Defense.* ◆

About the authors:

Guy Varland is the contractor Architecture Lead supporting NORAD and USNORTHCOM for the HD and CS CBA. He is a retired naval aviator and has since supported the integrated architecture development for numerous HD-related JCIDS projects.

Contact information:
guy.varland@si-intl.com
SI International
Colorado Springs, CO

Mike Kelly is a Program Analyst in the Concepts, Studies, and Analysis Branch of the DoD Joint Requirements Office for CBRN Defense, Crystal City, VA. He is a veteran of 34 years active duty Air Force service and has contributed to numerous HD- and CS-related capability assessments for the DoD.

Contact information:
kellymk@pentagon.js.mil
J-8 JRO CBRN Defense
Washington, DC

CDTF Provides Realistic Training for 93rd CST

By Carolyn Erickson, GUIDON Staff

The 93rd Civil Support Team-Weapons of Mass Destruction (CST-WMD) conducted a site survey and sampling of a "clandestine lab" during the first training exercise of its kind, Tuesday [July 8, 2008].

The training, conducted at the Chemical Defense Training Facility (CDTF) at Fort Leonard Wood [Missouri], was the first exercise to use the highest level of protective gear while working with a toxic agent for training.

"This (exercise) is designed to allow them to achieve site exploitation with an apparatus that is as realistic as possible," said Daniel Murray, CDTF director.

The 93rd CST-WMD commander explained his unit's training objectives.

"The unit's goal is to execute survey entry operations using a realistic scenario with a (toxic agent for training)," said Lt. Col. Trey Johnson III. "Our objective is site characterization of contamination through sampling."

Staff Sgt. Alika Kane, 93rd CST-WMD, takes a picture of lab equipment in the "clandestine lab" at the CDTF.

The entire exercise was designed to reflect reality, including in-briefs, suiting up, hands-on work in the contaminated area, and debriefs at the end.

"This facility offers the opportunity for our teams to go into a 'hot zone.'" Johnson said. "It tasks our survey team to accomplish its primary mission set of site characterization, sampling and identifying contamination."

Johnson explained how each team member entering the contaminated area went through a medical check before and after entry. Their vital signs were carefully monitored and documented by the team's physician's assistant.

Servicemembers put on more than 60 pounds of equipment, including an air tank and suit that would protect them from contamination by any agents present in the training environment.

Three reconnaissance team members then entered the contaminated area and surveyed the site for contaminants, using a variety of equipment. They maintained communication with their headquarters, relaying details of what they found. They marked and photographed possible contaminants and left the scene.

After decontamination, the reconnaissance team briefed the unit on their findings. The sampling team then used that information for their training event, entering the contaminated area and taking samples of the marked possible contaminants.

Civil Support Teams (CSTs) specialize in the response to a weapon of mass destruction or chemical, biological, radiological or nuclear attack on American soil. The teams must respond to an incident within 90 minutes of notice, Johnson said.

There are currently 55 CST-WMD, with one team in each state and U.S. territories. They are certified by the Secretary of Defense and belong to the Department of Homeland Defense, but fall under the control of their respective state governments.

The training event was a unique conglomeration of people. Civilians supervised the event from all locations, including two personnel who entered the contaminated site with the teams.

Sgt. Aaron Hew Lin, 93rd CST-WMD, checks for contamination in a "clandestine lab" at the CDTF facility.

The 93rd CST-WMD, Hawaii, was made up of Soldiers and Airmen, and a member from the 103rd CST-WMD, Alaska, joined in the training.

These servicemembers took part in a training event that was "a year in the making," Johnson said.

Capt. Mike Rosner, 93rd CST-WMD operations officer, discussed the planning process.

"April 2007 was when we hatched this plan," Rosner said, "and we've been working toward it ever since."

The commander shared the motivation behind their year-long planning efforts.

"We wanted to do this type of mission, validate the facility, and open it up to Level A, the highest level of protective gear," Johnson said. "This event is expected to open the door for CSTs nationally to conduct training of their survey teams here."

This article appeared in the July 10, 2008 issue of the Guidon, Volume 10, Number 36 and has been reprinted with permission.
http://myguidon.com/index.php?Itemid=39&id=8814&option=com_content&task=view

Contract Awards

Model, Design and Development of a Novel Sensor Inspired by a Canine's Olfactory System
Science Applications International Corporation
San Diego, CA
$17,977,335 September 26, 2008
By Defense Advanced Research Projects Agency, Arlington, VA

Development of AV7909 - A Next Generation Anthrax Vaccine
Emergent BioSolutions
Rockville, MD
$24,900,000 September 26, 2008
By The National Institute of Allergy and Infectious Diseases, Bethesda, MD and Biomedical Advanced Research and Development Authority, Washington, DC

Create a Genetically Modified Anthrax Vaccine
PharmAthene, Inc.
Annapolis, MD
$83,900,000 September 26, 2008
By The National Institute of Allergy and Infectious Diseases, Bethesda, MD and Biomedical Advanced Research and Development Authority, Washington, DC

Research and Development of DNA-Based Vaccines Delivered Via Proprietary Electroporation System
Inovio Biomedical Corporation
San Diego, CA
$933,000 September 23, 2008
By U.S. Department of Defense, Washington, DC

Develop a Treatment for Acute Radiation Syndrome (ARS) to Counteract the Effects of Nuclear Terrorism
Cellerant Therapeutics, Inc.
San Carlos, CA
$13,500,000 September 22, 2008
By U.S. Department of Health and Human Services, Washington, DC

Discover and Develop Broad-Spectrum Antibiotics
SRI International
Menlo Park, CA
$8,300,000 September 22, 2008
By Defense Threat Reduction Agency, Fort Belvoir, VA

Lassa Fever Antiviral Research
SIGA Technologies, Inc.
New York, NY
$3,655,000 September 15, 2008
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

Optimization and Animal Efficacy Trials for Dengue Antiviral Program
SIGA Technologies, Inc.
New York, NY
$963,000 September 12, 2008
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

M20 Simplified Collective Protection Equipment
Production Products Manufacturing and Sales Company, Inc.
St. Louis, MO
$16, 273, 283 September 12, 2008
By U.S. Army TACOM, Rock Island, IL

Advance Drug Candidates Against Botulism Toxins
XOMA Ltd.
Berkeley, CA
$65,000,000 September 9, 2008
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

Formulation and Advanced Development of a New ST-246 Drug Product/Use of ST-246 to Combat Smallpox
SIGA Technologies, Inc.
New York, NY
$55,000,000 September 3, 2008
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

Research an Experimental Drug to Fight Anthrax
Emergent BioSolutions, Inc.
Rockville, MD
$24,300,000 September 3, 2008
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

Develop Its Optoacoustic Technology for Quick Identification of Biological Warfare Agents
Fairway Medical Technologies, Inc.
Houston, TX
$3,000,000 August 29, 2008
By U.S. Naval Health Research Center, Brooks Air Force Base, San Antonio, TX and University of Texas Health Science Center, San Antonio, TX

Provide an Extensive CBRN Knowledge Base to Identify and Analyze Chemical and Biological Defense Archival Information
Battelle Memorial Institute
Columbus, OH
$1,062,802 August 29, 2008
By Offutt Air Force Base, NE

Specialized Technical and Engineering Support Services for Identity Management Development and Operations Capability and Other Anti-Terrorism/Force Protection Programs
Southwest Research Institute
San Antonio, TX
$25,660,046 August 29, 2008
By U.S. Naval Surface Warfare Center, Dahlgren, VA

Provide Business and Analytical Support to The Joint Program Executive Office for Chemical and Biological Defense Systems
Kalman & Co., Inc.
Virginia Beach, VA
$14,125,627 August 29, 2008
By U.S. Marine Corps System Command, Quantico, VA

Continued pg. 9

Contracts *cont.*

Advance the Technology and/or Increase Knowledge and Understanding of CBR Threats to Personnel, Equipment, Operations Based on Various Environmental Factors and Develop Capabilities to Effectively Communicate CBR Impacts and Issues Including Response and Consequence Management Topics to a Wide Range of Planning and Decision-Making Levels
Science Applications International Corp.
San Diego, CA
$9,500,000 August 28, 2008
By Wright-Patterson Air Force Base, OH

Development of ParallelaVax™ Technology for Rapid Generation of Vaccine Candidates and High-Throughput Testing in Animal Models
Maxygen, Inc.
Redwood City, CA
$3,400,000 August 27, 2008
By U.S. Army Space and Missile Defense Command, Frederick, MD

Develop Biosensors for Blood Pathogens and Warfare Threats
Fairway Medical Technologies, Inc.
Houston, TX
$900,000 August 20, 2008
By U.S. Department of the Navy, Washington, DC

Renovation of the Baker Laboratory Facility at the U.S. Army Dugway Proving Ground
Nakaya Construction, L.L.C.
Bountiful, UT
$10,779,567 August 20, 2008
By Mission & Installation Contracting Command, Dugway Proving Ground Directorate of Contracting, Dugway, UT

Develop Biosensors for Blood Pathogens and Warfare Threats
Fairway Medical Technologies, Inc.
Houston, TX
$900,000 August 20, 2008
By U.S. Department of the Navy, Washington, DC

Procurement of Research and Development for Enhanced Air Purification Media and System Performance
Science Applications International Corp.
Newton, MA
$8,622,630 August 19, 2008
By U.S. Army Research and Development Command, Aberdeen Proving Ground, MD

Provide Research and Research Support for the Biosciences and Protection Division of the Air Force Research Laboratory
Henry M. Jackson Foundation
Rockville, MD
$20,992,931 August 14, 2008
By Wright-Patterson AFB, OH

Advanced Development of Cethromycin as a Potential Broad-Spectrum Medical Countermeasure
Advanced Life Sciences Holdings, Inc.
Chicago, IL
$3,800,000 August 13, 2008
By Defense Threat Reduction Agency, Ft. Belvoir, VA

Anthrax Detection Equipment
Universal Detection Technology
Los Angeles, CA
$ Not Found August 12, 2008
By Hawaii Emergency Medical Services, Honolulu, HI

Bioterrorism Research
PanThera Biopharma
Aiea, HI
$5,100,000 August 11, 2008
By National Institutes of Health, Bethesda, MD

Robotic Detection of Chemical Warfare Agents and Explosives
VIASPACE, Inc.
Pasadena, CA
$750,000 August 11, 2008
By Army Small Business Technology Transfer (STTR) Program, Durham, NC

Joint Service General Purpose Masks
Avon Protection Systems, Inc.
Cadillac, MI
$9,136,908 August 6, 2008
By U.S. Army Research and Development Command, Aberdeen Proving Ground, MD

Closure of the Newport Chemical Agent Disposal Facility
Parsons Infrastructure & Technology Group
Pasadena, CA
$15,072,345 July 31, 2008
By U.S. Army Sustainment Command, Rock Island Arsenal, Rock Island, IL

MRICD Scientist Retires After 58 Years of Service

By Cindy Kronman, USAMRICD

As the new fiscal year began on 1 October, the US Army Medical Research Institute of Chemical Defense (MRICD) wasn't quite the same place it had been just days before. Missing from its hallways, from its staff, was one of its most venerable scientists, Dr. Margaret Filbert, who retired at the end of September after 58 years of federal service.

Filbert worked all of those 58 years at the Institute, beginning at the laboratories out of which the MRICD developed: the Medical Research Division in the 1950s and the Biomedical Research Laboratory in the 1960s and 70s. She was one of the last remaining employees from these eras and was for the Institute a very personal link to its history and its development as a world leader in medical chemical defense research.

"ICD is a real family with a great history," said Dr. John Petrali, who in 1959 began his career at the Institute as a medical corpsman private assisting Filbert.

"We got where we are now by standing on the shoulders of giants," continued Petrali. "Marge is one of those giants."

At the 2008 Medical Defense Bioscience Review, Maj. Gen. George Weightman, commander, US Army Medical Research and Materiel Command, presented Dr. Margaret Filbert with a bound volume of all of her publications. (photo by Cary Sisolak)

Her long career is one of not only scientific achievements, but also extraordinary professional development and growth. Tenacity and perseverance were the words current commander, Col. Harry Slife, said came to mind whenever he thought to describe Filbert.

> *"We got where we are now by standing on the shoulders of giants... Marge is one of those giants."*

Indeed, today when there is a lot of talk about women in the political arena putting cracks in the glass ceiling, Filbert, in the field of science, had been there and done that.

"The glass ceiling at MRICD has a hole in it the shape of Margie," noted Petrali.

Discouraged from attending medical school after earning her bachelor's in the late 1940's from the University of Maryland—because the general opinion was that a woman would probably end up dropping out to start a family—Filbert decided instead to earn a master's in physiology.

She began her federal career as a GS07, in 1950, when she was hired by Clinical Research Division, Medical Research Laboratory (MRL), at Edgewood Arsenal. She was left largely to her own devices, however, with little effort on the part of her division chief to provide mentoring or direction. He later excused his lack of assistance by saying that she was only working "to earn enough money to buy carpeting and draperies." Finally, she approached other scientists, who asked her to develop assays for their research.

Despite her many research contributions over the succeeding years, Filbert didn't rest on her laurels. At a time in life when many would be considering retirement, Filbert chose to pursue her doctorate degree. She did so through the Secretary of the Army's Fellowship for Long-Term Training, and in 1984, at the age of 60, Filbert received her Ph.D. in biological sciences from the University of Maryland Baltimore County, an accomplishment she completed while working full time.

With her doctorate, Filbert took on her own projects and continued to mentor junior scientists, most significantly Dr. Gerald Ballough, who came to the Institute under a National Research Council postdoctoral research associateship. Together they examined neuroprotective properties of drugs having the potential to prevent or reverse the seizure-related brain damage initiated by the nerve agent soman.

When Dr. Ballough left MRICD to accept a position as assistant biology professor at La Salle University, they continued their research partnership for ten years and were able to demonstrate proof of concept for neuroprotection against seizure-related brain damage. Together they demonstrated the efficacy of a synthetic, non-psychoactive cannabinoid as a neuroprotectant against nerve-agent-induced, seizure-related brain damage and hold the patent for the use of this

Continued pg. 11

compound as a countermeasure against chemical threat agents.

Ballough calls Filbert "the best boss I've ever had" and said working with her was a "real honor and pleasure."

"You have my highest respect and love," he said recently to her.

During this period of collaboration, Filbert's career went in a new direction. In 1994, she agreed to serve as acting chief of one of the research branches. She served in the position for over a year, and later, in 1997, accepted the position of chief, Research Operations Division, taking on the responsibility for overseeing the Institute's entire research program and becoming the first female civilian division chief at the MRICD and only the second woman at the Institute to hold such a position of responsibility. More recently, with reorganization at MRICD, Filbert stood up the Office of Consultative Research.

An early photo, c. 1960s, of Dr. Margaret Filbert in the lab. Throughout her 58-year career, Filbert made many outstanding contributions to the medical chemical defense research program.

Over the course of her long career, she has authored or co-authored more than 35 open literature publications, 1 book chapter, and 12 technical reports; she has served as the contracting officer's representative on 55 grants, and as the associate editor for the Medical Aspects of Chemical Warfare volume of the Textbook of Military Medicine. Filbert was instrumental in the development and implementation of The Journal of Medical Chemical, Biological and Radiological Defense, an on-line journal that is hosted by the Defense Threat Reduction Agency (DTRA) and available free of charge to the scientific community worldwide. She also serves as a special advisor to the journal editors. Since 1998, Filbert has planned and executed six biennial medical defense bioscience reviews, which are hosted by the MRICD and currently co-sponsored by DTRA and the US Army Medical Research and Materiel Command.

Among Filbert's other contributions to the Institute is the initiation and organization of a scientific informative program of seminars, giving a positive impression of the Institute and a forum for scientific interaction among the MRICD scientists.

"Dr. Filbert was the engine that ran the seminar program," recalls Col. (ret) James Romano, a former MRICD commander, who had several tours at the Institute beginning in 1978. According to Romano, the seminars were an important way to encourage young scientists to come to the Institute to engage in scholarly work.

For Dr. Henry Meier, who was one of those scientists, the seminar program converged one day with another love of Filbert's, gardening. Not only does Filbert spend a great deal of time on the gardens at her home, on studying and visiting gardens, but she planned the front landscaping at MRICD and was often seen maintaining these plantings.

Such was the case when Meier, considering a job at the MRICD, arrived at the Institute to give a seminar in 1981. He was impressed with the grounds, he recalls, and noticed the gardener working diligently as he approached the building. Later, as he took the podium in the conference room, he noticed the gardener in the audience.

Surprised, Meier said, he wondered whether the Institute had had to recruit the gardener to fill the room because there was so little interest in the seminar. As it turned out, the gardener asked some very interesting and pertinent questions about his research, and so went his first introduction to Filbert.

Over the years, Meier came to know Filbert well.

"It was a wonderful experience working with her," Meier said. "Well worth coming to MRICD."

Filbert is not just beloved by the Institute staff. Her achievements have brought her international recognition.

"Dr. Filbert is the greatest ambassador we've ever had for our community," said Slife. "Everyone knows her and wants to talk to her. She is recognized around the world."

His sentiments were echoed by Romano, who described Filbert as having contributed significantly to the "international and national reputation and image of the Institute."

For those at MRICD, Filbert's retirement is truly an end of an era. For Dr. Robert Werrlein she was the historian who could bring to life the scientists and research projects highlighted in the MRICD archived films he selected for Sigma Xi lunchtime seminars.

"How much you've meant to all of us," Werrlein recently told Filbert. "You will always be here in our hearts and in our memories."

For more information about MRICD, visit their Web site at http://chemdef.apgea.army.mil/

Calendar of Events

Do you have a CBRNE Defense or Homeland Security course or event to add to our calendar? Submit the pertinent information via email to **cbrniac@battelle.org.** *For a more extensive list of events, view our online calendar at* **https://www.cbrniac.apgea.army.mil/Products/Events/Pages/default.aspx.**

Feb 17
Technical Support Working Group Advance Planning Briefing for Industry (TSWG APBI)
Washington, DC
http://www.ndia.org/Template.cfm?Section=9090&Template=/ContentManagement/ContentDisplay.cfm&ContentID=27181

Feb 18-20
Public Health Preparedness Summit 2009
San Diego, CA
http://www.phprep.org/2009/?CFID=924385&CFTOKEN=11472767

Feb 23-25
Carver Methodology-Target Analysis and Vulnerability Assessment
Dallas, TX
http://www.homelanddefensejournal.com/hdl/CARVER-Methodology-Workshops.html

Feb 23-26
2009 Homeland Security S&T Stakeholders Conference-West
Bellevue, WA
http://www.homelanddefensejournal.com/hdl/CARVER-Methodology-Workshops.html

Feb 23-27
COURSE: Field Management of Chemical and Biological Casualties
Aberdeen Proving Ground, MD
https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm

Feb 24-27
CHI's 16th International Molecular Medicine Tri-Conference
San Francisco, CA
http://www.tri-conference.com/

Mar 4-5
Border Security 2009
Warsaw, Poland
http://www.smi-online.co.uk/events/overview.asp?is=1&ref=3036

Mar 6-10
NEMA 2009 Mid-Year Conference
Alexandria, VA
http://www.nemaweb.org/?2068

Mar 9-10
CHI's Inaugural Drug Development Latin America
Miami, FL
http://www.healthtech.com/lam/overview.aspx?c=6606

Mar 9-11
Fire Service PPE Symposium
Charlotte, NC
http://www.fireppesymposium.com/

Mar 9-12
Terrorism Seminar 2009: Preparing Law Enforcement for Threats to National Security
San Antonio, TX
http://www.stmarytx.edu/ctl/content/events/eventsIntro.html

Mar 10-12
NavExFor 2009 Symposium & Expo
Virginia Beach, VA
http://www.defensetradeshows.com/NAVEXFOR09_General_Info.html

Mar 15-20
COURSE: Medical Management of Chemical and Biological Casualties
Ft. Detrick and Aberdeen Proving Ground, MD
https://ccc.apgea.army.mil/courses/in_house/BrochureMCBC.htm

Mar 18-19
CHI's The Challenge of Antibacterial Drug Development
San Diego, CA
http://www.healthtech.com/bac/overview.aspx?c=694

Mar 24-28
EMS Today 2009
Baltimore, MD
http://www.emstodayconference.com/App/homepage.cfm?moduleid=2115&appname=100426

Apr 1-3
3rd Annual Defense Industrial Base Critical Infrastructure Protection (DIBCIP) Conference
San Antonio, TX
http://www.ndia.org/Template.cfm?Section=9030&Template=/ContentManagement/ContentDisplay.cfm&ContentID=27906

Apr 4-8
2009 Integrated Medical, Public Health, Preparedness, and Response Training Summit
Dallas, TX
http://www.hhstrainingsummit.org/

Apr 5-7
Disaster Response and Recovery Expo
Dallas, TX
http://events.jspargo.com/drre09/public/enter.aspx

Continued pg. 13

Calendar *cont.*

Apr 5-10
CBMTS-Industry VI: Fifth World Congress on Chemical, Biological and Radiological Terrorism
Dubrovnik, Croatia
http://www.asanltr.com/cbmts/default.htm

Apr 6-8
DTIC 2009 Conference
Alexandria, VA
http://www.dtic.mil/dtic/announcements/conference.html

Apr 6-9
Infrastructure Syria 2009 International Exhibition and Conference
Damascus, Syria
http://www.infrastructuresyria.com/

Apr 6-10
COURSE: Field Management of Chemical and Biological Casualties
Aberdeen Proving Ground, MD
https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm

Apr 8-10
2009 Water Security Congress
Washington, DC
http://www.awwa.org/Conferences/Content.cfm?ItemNumber=753&navItemNumber=3543

Apr 14-16
SPIE Defense, Security, and Sensing 2009
Orlando, FL
http://spie.org/defense-security-sensing.xml?WT.mc_id=RDSS09BCE

Apr 21-23
10th Annual Science & Engineering Technology Conference DoD/Tech Exposition
North Charleston, SC
http://www.ndia.org/Template.cfm?Section=9720&Template=/ContentManagement/ContentDisplay.cfm&ContentID=21703

Apr 27-30
Maritime Homeland Security Summit (MHHS)
Ponte Vedra Beach, FL
http://www.maritimehssummit.com/ShowEvent.aspx?id=152706

May 3-8
COURSE: Medical Management of Chemical and Biological Casualties
Ft. Detrick and Aberdeen Proving Ground, MD
https://ccc.apgea.army.mil/courses/in_house/BrochureMCBC.htm

May 4-6
Fire-Rescue Med 2009 Conference & Expo
Las Vegas, NV
http://www.iafc.org/displaycommon.cfm?an=1&subarticlenbr=6

May 4-7
2009 Joint Services Environmental Management and Geospatial Information & Services Conference & Exposition
Denver, CO
http://www.ndia.org/Template.cfm?Section=9440&Template=/ContentManagement/ContentDisplay.cfm&ContentID=17361

May 5-7
2009 Joint Service Power Expo
New Orleans, LA
http://www.ndia.org/Template.cfm?Section=9670&Template=/ContentManagement/ContentDisplay.cfm&ContentID=26037

May 5-8
In Situ and On-Site Bioremediation
Baltimore, MD
http://www.battelle.org/conferences/bioremediation/

May 7-8
Joint Program Executive Office for Chemical and Biological Defense APBI
Washington, DC
http://www.ndia.org/Template.cfm?Section=9370&Template=/ContentManagement/HTMLDisplay.cfm&ContentID=27218&MicrositeID=0

May 13-14
Border Security Expo
Phoenix, AZ
http://www.bordersecurityexpo.com/

May 28-31
International Association of Fire Chiefs 2009 HazMat Conference
Hunt Valley, MD
http://iafc.confex.com/iafc/haz09/cfp.cgi

Jun 1-4
USPHS Scientific and Training Symposium
Atlanta, GA
http://www.phscofevents.org/

Jun 8-11
NBC 2009: Meeting The Future Challenges
Jyväskylä, Finland
http://www.nbcsec.fi/nbc/index1.htm

Jun 8-12
COURSE: Field Management of Chemical and Biological Casualties
Aberdeen Proving Ground, MD
https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm

Jun 16-18
SpecOps West 2009
Ft. Lewis, WA
http://www.defensetradeshows.com/MILSECWEST09_General_Info.html

Jun 21-24
19th World Conference on Disaster Management
Toronto, Canada
http://www.wcdm.org/

Exercise Readies First Units for NORTHCOM Assignment

By Patti Bielling, Army News Service

The exercise scenario was a sobering one: a 10-kiloton nuclear device detonated in America's heartland, quickly overwhelming civilian responders.

Military leaders who recently trained for this response say they are now thinking differently about how to move equipment, extract the injured and take care of people following this type of attack.

Their insights came from "Vibrant Response," a week-long command post exercise designed to train the commanders and staff of the nation's dedicated force for responding to chemical, biological, radiological, nuclear and high-yield explosive incidents, or CBRNE incidents.

The units completed the exercise, Sept. 18, 2008 at Fort Stewart, GA, just two weeks before their force, the CBRNE Consequence Management Response Force, or CCMRF, was assigned to U.S. Northern Command to begin its mission.

"Assigning them will allow Northern Command to directly influence the operational and training focus of the forces and ensure a trained and ready response force when needed," said Col. Lou Vogler, chief of future operations at U.S. Army North.

U.S. Army North conducted the exercise while its subordinate, Joint Task Force Civil Support, provided command and control for the CCMRF.

Joint Task Force Civil Support — based at Fort Monroe, VA — plans, trains, develops policy and determines the way ahead for DoD CBRNE response, said the force's commander, Maj. Gen. Daniel Long.

Commanders and staff in the three task forces — Operations, Medical and Aviation — say that the academics and command post exercise offered valuable new perspectives for the Soldiers, Sailors, Airmen and Marines assuming this important mission.

Task Force Operations

Responding to a catastrophic chemical, nuclear or biological attack is challenging because there is no notice and it requires a fast response, Long said.

Developing the capability to deploy rapidly was a priority for the infantry unit assigned to the force, according to Maj. Marc Cloutier, planner for the 1st Brigade Combat Team, 3rd Infantry Division. The unit forms the core of Task Force Operations, one of the three functional task forces within CCMRF.

It's the first infantry brigade to be assigned to NORTHCOM for a year in order to respond quickly to civil-support missions.

Soldiers at Great Lakes Naval Station, IL., practice skills they will use when their units assume a consequence management response mission. Photo by U.S. Army North

Cloutier said that one apparent challenge for the brigade will be turning an infantryman into a truck driver or a first responder. However, Cloutier said, the Soldiers and noncommissioned officers in the brigade are smart and adaptable and can easily learn to drive a truck or use a chain saw given a little instruction.

"When I got to the unit in July, I looked at the mission and realized the biggest challenge was going to be organizing to become rapidly deployable," he said. "I knew we would have to preposition containers and equipment to deploy ourselves on very short notice."

Once the exercise started, the brigade planners looked at how to reorganize their habitual formations from an infantry or armor battalion in order to accomplish the mission.

"Do we want to take our internal assets and develop functional task forces like engineering, decontamination, heavy movement, and search and rescue, or do we want to develop multifaceted task forces and assign them by region?" he asked.

Their conclusion? That configurations would likely change based on the type of catastrophe or the size of the geographical area.

"We're developing something of a playbook from everything we do here," Cloutier said. "We'll capture everything and keep it on the shelf so if we see a similar situation down the road, we're starting that much further along."

Continued pg.15

Technical Support

Air Force Lt. Col. Kevin Martilla was especially impressed with the brigade's planning efforts, which structured the forces and established processes to efficiently execute any mission that comes down.

As chief of the Air Force Radiation Assessment Team, Brooks City-Base, TX, Martilla leads a unit responsible for supporting health-protection efforts for the force, to help commanders understand and manage radiation risks so they can complete their missions.

The team has existed since 1968 to respond to Broken Arrow incidents or those involving military nuclear weapons damaged during transport.

"We've always been involved in planning to respond to Broken Arrow incidents, so it made sense that (the services) included us when developing CCMRF," Martilla said.

The team provides technical advice and the capability to measure radiation levels, collect and analyze samples, and measure and track radiological exposure to the force.

Also assigned to CCMRF within Task Force Operations is a Marine Corps technical support force called the Chemical, Biological Incident Response Force based at Indian Head, MD.

The force, known as CBIRF, was created in the mid 1990s as a domestic response force following the sarin attacks on the Tokyo subway.

"The biggest misconception," said the unit's operations officer, "is that the force is a nuclear, biological and chemical unit."

"We are a life-saving organization," said Marine Corps Maj. Stan Bacon. "Although we can identify hazards and decontaminate personnel, those actions are all geared toward allowing our force to conduct search and extraction."

Every one of the 500 Marines and Sailors in the battalion is trained to perform search and extraction, Bacon said. In addition, all members have received additional training to perform specialized technical rescues, including confined space, advanced rope, trench, collapsed structure and vehicle and heavy machinery extraction.

'The main effort'

Civil support missions also are logistics intensive, as Lt. Col. Johnney Matthews found out.

Matthews, a support battalion commander, knows what it takes to move the fuel, food and water for a brigade headquarters and four maneuver battalions for combat.

However, the support battalion soon found they had gone from being the "unsung heroes" of the brigade to being the main effort, he said.

As the exercise scenario unfolded, Matthews learned the importance of quickly building a supply base to keep their own forces sustained so he could focus on moving food and water to affected civilians.

The battalion designed "speed balls," bundles of daily rations that feed up to 1,500 people and can be rapidly rolled on and off a military flatbed truck.

'What if'

Long, the Joint Task Force Civil Support commander, agreed that having a dedicated response force assigned to Northern Command can only improve DoD's ability to help save lives, prevent injury and provide temporary critical life support.

"We've got to train like we've got to execute," he said. "There will be catastrophic deaths. Hospitals will be affected, first responders will be affected, and you've got to integrate all the response capabilities when citizens are trying to get away or trying to pull their lives together."

Since the joint task force was created in 1999, the nation has made tremendous progress on "what if," Long said.

"There are all sorts of deterrence capabilities, and this (force) is one of them," he said. "This exercise has been a great effort to prepare for a catastrophic CBRNE event. The nation needs to know we have this capability."

http://www.army.mil/-news/2008/09/29/12779-exercise-readies-first-units-for-northcom-assignment/

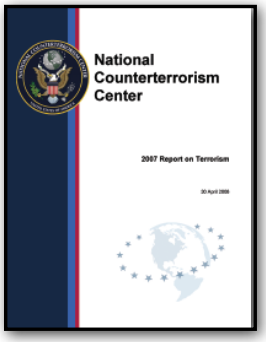
New CBRNIAC Information Resources

The Department of Homeland Security's Role in Food Defense and Critical Infrastructure Protection. Washington, DC: Department of Homeland Security, 2007.
http://www.ncfpd.umn.edu/docs/OIG_07-33_Feb07.pdf

"This report assesses actions taken by DHS in support of food defense and critical infrastructure protection. It is based on interviews with employees and officials of relevant agencies and institutions, direct observations, and a review of applicable documents." (*Preface*)

CB-066347
Office of the Inspector General
Department of Homeland Security
Washington, DC 20528
Phone: (202) 254-4100

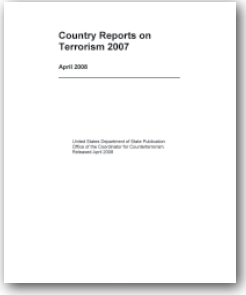
National Counterterrorism Center, 2007 Report on Terrorism. Washington, DC: National Counterterrorism Center, 2008.
http://wits.nctc.gov/reports/crot2007nctcannexfinal.pdf



"The statistical material compiled in this report, therefore, is drawn from the number of attacks of 'terrorism' that occurred in 2007, which is the closest figure that is practicable for NCTC to supply in satisfaction of the above-referenced statistical requirements. In deriving its figures for terror attacks, NCTC applies the definition of 'terrorism' that appears in the 22 U.S.C. §2656f(d)(2), i.e., 'premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents.'" (*Foreword*)

CB-069633
National Counterterrorism Center
Office of the Director of National Intelligence
Washington, DC 20511
(703) 733-8600

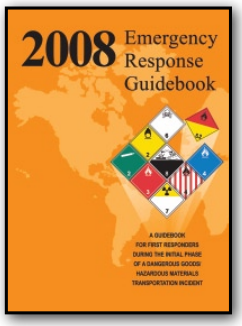
Country Reports on Terrorism 2007. Washington, DC: United States Department of State, 2008.
http://www.state.gov/documents/organization/105904.pdf



"**Country Reports on Terrorism 2007** is submitted in compliance with Title 22 of the United States Code, Section 2656f (the "Act"), which requires the Department of State to provide to Congress a full and complete annual report on terrorism for those countries and groups meeting the criteria of the Act."

CB-070064
Office of the Coordinator for Counterterrorism
Office of Public Affairs, Room 2509
U.S. Department of State
2201 C Street NW, Washington, DC 20520
(202) 647-4000

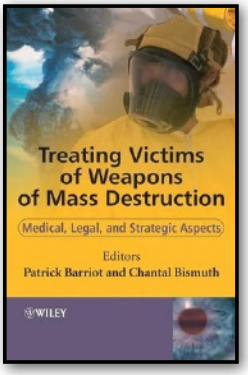
2008 Emergency Response Guidebook. Washington, DC: United States Department of Transportation, 2008.
http://hazmat.dot.gov/pubs/erg/erg2008_eng.pdf



"It [**The 2008 Emergency Response Guidebook**] is primarily a guide to aid first responders in quickly identifying the specific or generic hazards of the material(s) involved in the incident, and protecting themselves and the general public during the initial response phase of the incident." *(ERG 2008 User's Guide)*

CB-070463
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Hazardous Materials Safety
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590
(202) 366-4470

Barriott, Patrick and Bismuth, Chantal, eds. **Treating Victims of Weapons of Mass Destruction: Medical, Legal, and Strategic Aspects**. Chichester, UK: John Wiley and Sons, Ltd., 2008.



"This book reviews and considers: all weapons of mass destruction, both chemical and biological…; the pathogen agent, the human consequences, organizational aspects of care for the victims and best practice for treatment; the problem of emerging infectious diseases and accidents resulting from research involving genetic engineering; the effects of nuclear weapons and radiation on humans…; the organization of medical responses to chemical and biological attack." *(Back Cover)*

CB-070407
John Wiley and Sons, Ltd.
The Atrium
Southern Gate, Chichester
West Sussex PO19 8SQ
England
Phone: (+44) 1243 779777

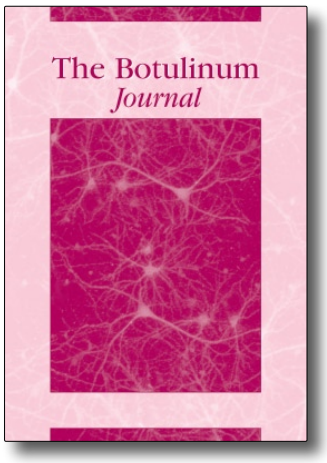
MRICD Scientist Appointed Associate Editor of New Journal

by Cindy Kronman, USAMRICD

Inderscience Publishers recently introduced a new scientific print and Web periodical, The Botulinum Journal (TBJ), and Dr. Michael Adler, a research pharmacologist at the U.S. Army Medical Research and Materiel Command (MRMC)'s U.S. Army Medical Research Institute of Chemical Defense (MRICD), has been appointed as one of the journal's two associate editors.

"The TBJ is devoted to reporting all aspects of botulinum toxin, a powerful bacterial neurotoxin, including state of the art laboratory research, tracking and investigation of outbreaks, and publication of editorials and policy papers to guide the development of small molecule therapeutics," said Adler, who has spent the last 16 years of his career at MRICD doing research to develop drugs to reverse the muscle paralysis that occurs in patients intoxicated with botulinum toxin.

State-of-the-art equipment such as this patch-clamp amplifier system, which is used to obtain recordings of synaptic currents from a single cell, allows MRICD's Dr. Michael Adler to evaluate the effectiveness of new drugs designed to reverse the toxicity of botulinum neurotoxin, an important focus of Adler's laboratory. (photo by James Apland, MRICD)



Adler and his team have made significant progress toward developing a treatment drug that is designed to inhibit the actions of botulinum neurotoxin inside the nerve endings that control voluntary muscles and restore normal muscle function. Unlike the antitoxin that is the currently approved medication for botulism, the treatment being developed by Adler and his team would not have a time restriction for effectiveness. As a result of his research efforts and collaborations, Adler has authored or coauthored 34 journal articles and book chapters on botulinum toxin. He is also active in the prestigious Interagency Botulism Research Coordinating Committee, where he chairs an annual symposia on small molecule therapeutic drugs.

Additionally, Adler is widely sought out for his expertise by patients stricken with botulism, and he worked with the World Health Organization to identify sources of antitoxin for the victims of a large botulism outbreak in Thailand in 2006.

"By this appointment, our Institute is clearly recognized as an important center for botulinum toxin research," said Col. Harry Slife, MRICD's commander.

Inderscience promotes the journal on its Web site as "an international forum and refereed authoritative source of information…to disseminate knowledge, provide a learned reference in the field, and establish channels of communication" among researchers and professionals in government, academia and industry, and policy makers in biodefense, homeland security, public safety, and regulatory compliance.

The journal will be published quarterly, and the first issue recently became available on line at http://www.inderscience.com/tbj. Serving on the editorial board are several other researchers within the Army Medical Command. They are Drs. Frank Lebeda and Leonard A. Smith, from the U.S. Army Medical Research Institute of Infectious Diseases, and Lt. Col. Charles Millard, of MRMC.

In the News

GSA Launches Program to Support State and Local First Responders

Michael Collins

GSA News Release

October 9, 2008

"State and local governments have a new way to buy supplies and services to prepare for and respond to all types of emergencies under a program established by the U.S. General Services Administration (GSA). The Cooperative Purchasing Program allows state and local agencies to buy law enforcement, security, and first responder goods and services off a GSA contract known as Schedule 84."

http://www.gsa.gov/Portal/gsa/ep/contentView.do?pageTypeId=8199&channelId=-13259&P=&contentId=25037&contentType=GSA_BASIC

Chemical Soldiers Take Stryker Final Exam

Carolyn Erickson

Guidon

October 2, 2008

"Six Soldiers ran a complete CBRN mission in the Chemical Corps's newest reconnaissance vehicle, the Stryker, Tuesday… The Stryker is the replacement of the Fox, the Chemical Corps' previous reconnaissance vehicle, according to Messina."

http://myguidon.com/index.php?option=com_content&task=view&id=9289

FDA Clears New CDC Test to Detect Human Influenza

FDA Press Office

September 30, 2008

U.S. Department of Health & Human Services News Release

"The U.S. Food and Drug Administration (FDA) today cleared a new test developed by the U.S. Centers for Disease Control and Prevention (CDC) to diagnose human influenza infections and the highly pathogenic influenza A (H5N1) viruses."

http://www.hhs.gov/news/press/2008pres/09/20080930a.html

Cooperative Agreement Guidance for Public Health Emergency Preparedness

Centers for Disease Control and Prevention Press Release

September 24, 2008

"The Centers for Disease Control and Prevention (CDC) has awarded $24 million to fund 55 projects in 29 state and local public health departments that could serve as innovative approaches for influenza pandemic preparedness."

http://emergency.cdc.gov/cotper/coopagreement/07/funding-schedule-pan-flu.asp

U.S. Department of Homeland Security Awards New York City $29 Million Under the Securing the Cities Initiative

Homeland Security Press Release

September 16, 2008

"The Department of Homeland Security (DHS) announced approximately $29 million in grants to prevent a radiological/nuclear attack in the New York City (NYC) metropolitan area by enhancing regional capabilities to detect and interdict illicit radioactive materials."

http://www.dhs.gov/xnews/releases/pr_1221602938361.shtm

DSHE Leads Cleanup of G-Street Salvage Yard

Yvonne Johnson

APG News

September 11, 2008

"The Directorate of Safety, Health and Environment, along with Weston Solutions is leading the excavation and clean up of the Burn Residue Disposal Area of the G-Street salvage yard in the Edgewood Area of Aberdeen Proving Ground."

http://apgnews.apg.army.mil/Archive/pdf2008/Sept1108/Sept1108.pdf

Anthrax Bacteria Tricks the Brain Into Thinking It's Safe, Thus Causing Anthrax Meningitis

Gina Speciale

San Diego State University News

September 5, 2008

"Researchers at San Diego State University have discovered a critical link in understanding the deadly bioterrorism agent anthrax. Researchers are the first to prove that anthrax bacteria has the ability to directly penetrate the blood-brain barrier…"

http://www.sdsuniverse.info/sdsuniverse/news.aspx?s=164

University of Delaware Poultry Researchers Win $5M USDA Grant

CapeGazette.com

September 3, 2008

"Researchers at the University of Delaware will continue avian influenza research through a $5 million dollar grant from the U.S.

Continued pg. 19

Vol. 5 No. 4 of the Chem-Bio Defense Quarterly Magazine is Now Available!

The Joint Project Manager Guardian (JPMG) has recently celebrated its fifth year of existence in providing integrated CBRN defense capabilities, force protection/physical security systems and support to civilian authorities from "fort to foxhole and across the fence." The articles in this issue highlight some of the recently fielded capabilities and some of the less well-known JPEO-CBD military/civilian capability initiatives.

To view the electronic version, visit: http://www.jpeocbd.osd.mil/packs/Default.aspx?pg=420

In the News *cont.*

Department of Agriculture's Cooperative State Research, Education and Extension Service. The grant, to be spent over three years, renews the Avian Influenza Coordinated Agricultural Project, a partnership between the University of Maryland at College Park and 17 other leading institutions that are researching avian influenza across the United States, including the University of Delaware."
http://www.capegazette.com/storiescurrent/200808/poultry082908.html

Rapid Test for Pathogens Developed by K-State Researchers Could be Used to Detect Diseases Used by Bioterrorists

eMediaWorld-USNewswire
August 21, 2008
"Dangerous disease often spreads faster than it takes to diagnose it in the lab. To remedy that, researchers at Kansas State University have developed a test to bring that time from days down to hours. Sanjeev Narayanan, assistant professor, and Greg Peterson, research microbiologist,…use a device called a DNA spotted microarray to seek out the specific genetic markers that set one pathogen apart from another and determine antibiotic resistance."
http://www.emediaworld.com/press_release/release_detail.php?id=141296

Radiation Device Tested in GA

The Augusta Chronicle
August 18, 2008
"Its code name is 'Crawdad,' and it involves boats, computers and lots of technology. Once it's perfected, the U.S. Department of Homeland Security will have a new tool against terrorists: boat-mounted radiation detectors that are being tested in Savannah River Site's four-mile-long L-Lake."
http://www.homeland1.com/homeland-security-products/weapons-of-mass-destruction--counter-measures-wmd/articles/425514-radiation-device-tested-in-ga/

Using Live Fish, New Tool a Sentinel for Environmental Contamination

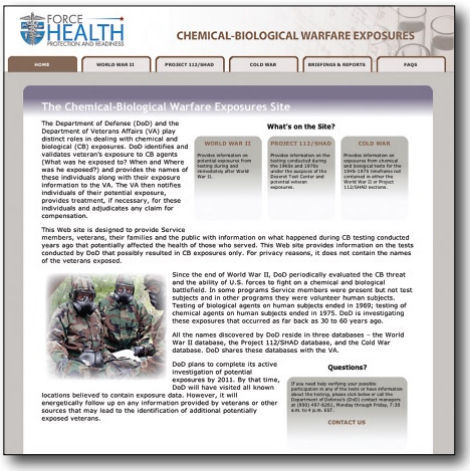
EUREKALERT
August 13, 2008
"Researchers have harnessed the sensitivity of days-old fish embryos to create a tool capable of detecting a range of harmful chemicals. By measuring rates of oxygen use in developing fish, which are sensitive to contaminants and stressful conditions, the technology could reveal the presence of minute levels of toxic substances before they cause more obvious and substantial harm."
http://www.genengnews.com/news/bnitem.aspx?name=40358774

Smiths Detection and Torion Technologies Partner to Develop Highly Portable, Advanced Military and Emergency Response Chemical Threat Assessment Technology

Centredaily.com
August 12, 2008
Smiths Detection…announced a partnership with Torion Technologies, an emerging leader in miniaturized Gas Chromotography Toroidal Ion Trap Mass Spectrometry (GC-TMS) technology. The alliance enables the joint development of a next-generation, hand-portable GC-TMS system for the security, defense, and civil emergency responder markets… This technology is designed to identify a variety of substances such as Chemical Warfare Agents (CWAs), Volatile and Semi Volatile Organic Compounds (VOCs & SVOCs) in air and liquid samples.
http://www.centredaily.com/business/technology/story/771525.html

Force Health Protection and Readiness Launches Chemical-Biological Warfare Exposures Web Site

The Department of Defense Force Health Protection and Readiness (FHP&R) Directorate has launched the Chemical-Biological Warfare Exposures Web site to provide service members, veterans, their families and the public with information on the testing of chemical and biological warfare agents from 1942 to 1975. The Web site presents sections on World War II, Project 112/SHAD (Shipboard Hazard and Defense), and the Cold War.



To evaluate the ability of U.S. forces to fight on a chemical and biological battlefield, DoD conducted testing programs. In some programs service members were present but not test subjects and in other programs they were volunteer human subjects. This testing ended in 1975. DoD has been actively engaged in an extensive search of official records to find the names of veterans who may have been exposed to the chemical or biological agents. DoD plans to complete the search in 2011, but will pursue any leads from veterans or others who may have information.

The service member names identified by DoD, along with specific exposure information, are provided to the Department of Veterans Affairs (VA). The VA then notifies the individuals of their potential exposure, provides treatment if necessary, and adjudicates any claim for compensation. For privacy reasons, the Web site does not contain the names of the veterans exposed.

Veterans who believe that they may have been exposed or who would like more information are advised to contact DoD via e-mail at: CBWebmaster@tma.osd.mil, or call DoD's contact managers at (800) 497-6261, Monday through Friday, 7:30 a.m. to 4:00 p.m., Eastern Time. Veterans can also write to DoD at: Force Health Protection and Readiness, ATTN: CB Exposure Manager, 5113 Leesburg Pike, Suite 901, Falls Church, VA 22041.

The Chemical-Biological Warfare Exposures Web Site: http://fhp.osd.mil/CBexposures

Force Health Protection and Readiness: http://fhp.osd.mil
Department of Veterans Affairs: http://www.va.gov

Click here to watch a health.mil video about the Chem-Bio Exposures Web site.
http://www.health.mil/mediaroom/default.aspx?id=315&currentPg=3

U.S. Northern Command Gains Dedicated Response Force

By Army Sgt. 1st Class Gail Braymen, Special to American Forces Press Service

For the first time in its existence, U.S. Northern Command is gaining a dedicated force to respond to potential chemical, biological, radiological, nuclear and high-yield explosive (CBRNE) incidents in the homeland.

"We are now building the first of three CBRNE Consequence Management Response Forces," said USNORTHCOM Commander Gen. Gene Renuart. "On the first of October, we'll have an organized force, a trained force, an equipped force, a force that has adequate command and control and is on quick response—48 hours—to head off to a large-scale nuclear, chemical, biological event that might require Department of Defense support."

The CBRNE Consequence Management Response Force, or CCMRF, is a team of about 4,700 joint personnel that would deploy as the Department of Defense's initial response force for a CBRNE incident. Its capabilities include search and rescue, decontamination, medical, aviation, communications and logistical support.

Each CCMRF will be composed of three functional task forces—Task Force Operations, Task Force Medical and Task Force Aviation—that have their own individual operational focus and set of mission skills. Depending on the different mission requirements and the incident commander's priorities, Task Force Operations, Task Force Medical and Task Force Aviation units would have varying roles and responsibilities based upon the type of catastrophe and the size of the geographical area. In USNORTHCOM's first CCMRF, the Army's 3rd Infantry Division's 1st Brigade Combat Team, assigned at Fort Stewart, GA, will form the core unit of Task Force Operations.

Although CCMRFs are a joint force comprised of Soldiers, Sailors, Airmen and Marines, the first CCMRF will fall under the operational control of USNORTHCOM's Joint Force Land Component Command, U.S. Army North, located in San Antonio. Joint Task Force Civil Support, USNORTHCOM's subordinate command in Fort Monroe, VA, would serve as the operational headquarters and work closely with state and local officials and first responders.

"U.S. Army North has done an outstanding job anticipating the needs of our federal, state and local partners, and training the CCMRF to be prepared to respond when called upon," said Army Col. Michael Boatner, USNORTHCOM future operations division chief.

"We're excited about obtaining a ready and capable team that we can quickly activate and deploy as part of a federal response package when responding in the aftermath of catastrophic events," Colonel Boatner said. "This response force will not be called upon to help with law enforcement, civil disturbance or crowd control, but will be used to support lead agencies involved in saving lives, relieving suffering and meeting the needs of communities affected by weapons of mass destruction attacks, accidents or even natural disasters."

USNORTHCOM is the joint combatant command formed in the wake of the Sept.11, 2001, terrorist attacks to provide homeland defense and defense support of civil authorities. Original press release, dated October 1, 2008 can be found at: http://www.af.mil/news/story_print.asp?id=123117765

Umatilla Completes VX Artillery Projectile Disposal Campaign

CMA Press Release

The Umatilla Chemical Agent Disposal Facility (UMCDF) safely completed its 8-inch diameter VX nerve agent artillery projectile disposal campaign. The last of 3,752 VX-filled 8-inch artillery projectiles was destroyed at 8:47 p.m. last night [August 6, 2008] in the disposal plant's Metal Parts Furnace (MPF).

These 8-inch projectiles or "shells" were the last 8-inch VX-filled artillery projectiles in both Oregon's chemical weapons stockpile and the national stockpile.

"This has been a tremendous effort by the entire team to safely complete destruction of all artillery projectiles in Oregon's stockpile," said Mike Strong, the Army's site project manager at Umatilla. "This milestone truly represents the dedication and expertise of the team in remaining focused and committed to safety."

The 8-inch VX projectiles campaign started with the first movement of munitions on July 15, and it was completed ahead of schedule. The UMCDF will now reconfigure or "change over" from projectiles processing to VX land mines processing. It should take about two months to reconfigure portions of the plant to begin processing land mines, which are a different type of munition. Land mines are also the last VX munition in Oregon's stockpile.

"We're pleased to complete another campaign while maintaining our safety and environmental compliance standards," said Doug Hamrick, project general manager for Washington Defense Group of URS Corporation's EG&G Division. Washington Defense Group built and operates the disposal plant for the Army. "Safety and compliance will remain a continued focus during the change over to mines."

The VX land mines disposal campaign is planned to be completed by early 2009 if there are no significant delays. The plant will then change over to process HD mustard blister agent stored in bulk containers, also known as "ton containers." HD mustard will be the third and final type of agent disposal campaign at Umatilla.

The first stockpiled chemical munitions disposal campaign in Oregon began on Sept. 7, 2004, when GB rockets were moved from depot storage to the disposal facility. The first GB rockets were destroyed the next day. Since that time... 11 individual munitions disposal campaigns have been successfully and safely completed *(See press release for list).*

When the entire Umatilla chemical munitions destruction mission is complete, the disposal plant will be thoroughly cleaned and disassembled according to environmental permits. The Umatilla Chemical Depot is slated for closure per the 2005 Base Realignment and Closure (BRAC) law. Chemical munitions have been stored at the Umatilla depot since the 1960s.

The August 7, 2008 Press Release can be found at http://www.cma.army.mil/fndocumentviewer.aspx?docid=003678480.

Up-to-date information about chemical weapons disposal is available at www.cma.army.mil.

History of Army Chemical and Biological Decontamination – Part II

By Jeffery K. Smart, U.S. Army Research, Development and Engineering Command Historian

This article is Part II of a series of articles extracted from the ***History of Army Chemical and Biological Decontamination***, by Mr. Jeffery K. Smart, U.S. Army Research, Development and Engineering Command (RDECOM) Historian, July 2007. This presentation is edited, with permission of the author, for the ***CBRNIAC Newsletter*** forum.

WORLD WAR I

Decontaminating Agents

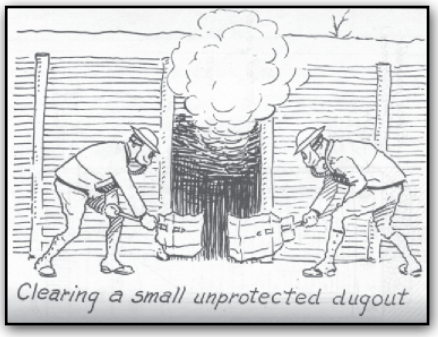
Bleaching Powder

During World War I, mustard agent, a persistent blister agent, was first used on the battlefield. Used in such large amounts that it collected in shell holes and puddles, the agent could remain dangerous for weeks and in some cases even years. Decontaminating ground contaminated by the agent was a significant problem.

The Germans began planning for the first use of mustard agent on the battlefield in early 1917. Before they could stockpile enough of the agent, there was an explosion at their mustard agent filling plant in Adlershof, near Berlin. To clean up the mess, the Germans used bleaching powder to neutralize the agent on the ground and on equipment. Obtained from their dye industry, bleaching powder neutralized the mustard agent by providing liberated chlorine. Mustard agent then decomposed into relatively harmless compounds after being chlorinated. The success of this initial decontamination operation led to the birth of the modern concept of battlefield decontamination.

By the time the American Expeditionary Forces (AEF) entered the war in 1917, bleaching powder was considered the primary decontaminant for mustard agent. The United States produced 2,590 tons of bleach during the war and shipped 1,867 tons to the AEF during the war. The bleaching powder was spread over shell holes and trenches using shovels and buckets. When bleaching powder was not available, fresh earth was recommended instead. For trench dugouts, a small box of bleaching powder was placed at the door for soldiers to use to decontaminate their shoes. Bleaching powder was also used at ammunition dumps for leaking munitions, although the preferred recommendation for a leaking shell was to fire it at the enemy or bury it. The major problem with bleaching powder was that it decayed rapidly in the open air and therefore had to be stored in airtight containers. It could also burst into flame upon contact with mustard agent.[7]

Air



Nonpersistent agents generally were blown away by the wind within a fairly short time and did not contaminate the ground and equipment for several days like persistent agents. Exposing contaminated material and equipment to the air was the easiest means of decontamination for any nonpersistent agent contamination. Following a chemical attack, the recommended procedure was to let contaminated clothing air out to prevent taking the agent into dugouts and other "clean" areas. Natural ventilation was also recommended for clearing dugouts and trenches. To further aid with ventilation, soldiers built fires in the trenches to create drafts to assist with the removal of gases or used trench fans to try to fan away the gas. For mustard-contaminated items, it took longer for air to decontaminate them. For clothing, the recommendation was to expose it to the open air for 48 hours or longer if cold weather.[8]

Water

Water was a useful decontaminate because it removed chemical agents. Many of the nonpersistent agents and smokes were extremely acidic and would damage equipment. Washing with soap and water was considered an effective way to help prevent rapid corrosion of metals. Water in the form of steam was also an effective decontaminant, particularly for clothing. Water was also an effective decontaminant for skin. The delayed action of mustard agent on skin required quick decontamination actions. One solution was to bathe the soldiers thoroughly with soap and water within a half-hour of mustard agent exposure. This was thought to prevent or greatly reduce the severity of the mustard burns. After the showers, the troops were given a drink of bicarbonate of soda water and then had their eyes, ears, mouths, and noses washed with the soda water.[9]

Salve Antigas (SAG) Paste

Research to find a way to destroy mustard agent after contact with the skin started during World War I with the development of protective ointments. The objective of the early protective ointment work was to protect the soldier from contamination rather than to

Continued pg. 22

decontaminate the skin after exposure. SAG Paste, consisting of zinc stearate and vegetable oil, provided some protection against large amounts of mustard agent. The drawback of the ointment, however, was that it did not neutralize the mustard agent and after a time, the agent penetrated the ointment and then caused worse burns than if the ointment had not been used. Still, the psychological benefit of a having a protective ointment was thought to outweigh the actual performance of the ointment. During the war, the Army produced 1,246 tons of SAG Paste and shipped over 900 tons to Europe. When the war ended, Army researchers expected future research on protective ointments to be the solution to individual protection against mustard agents.[10]

Decontaminating Equipment

Trench Fans

To expedite the exposure of chemical agents to air, trench fans (also called antigas fans) were provided the troops. These fans were made of a cane frame and a canvas sheet with a wood handle. The fan was intended to ventilate trenches and dugouts. Over 27,000 trench fans were shipped to the AEF during the war. The reality was that they helped spread the nonpersistent gases and caused more problems than they solved. They were soon discontinued as a decontamination device.[11]

Steam Disinfecting Chamber

A quicker method for decontaminating clothing than exposing it to air for two days was to use a steam-disinfecting chamber. This reduced the decontamination time to three hours. Unfortunately, very few of the units were available to frontline troops.[12]

Degassing Truck

To provide decontamination showers for soldiers contaminated with chemical agents, the Army established degassing units that used a 5-ton truck with a 1,200-gallon water tank, fitted with an instantaneous heaters and piping to connect it to portable showers. A second truck held extra uniforms. Two degassing units were assigned to each division. Due to the size and weight of the trucks, they were limited to main roads and were unable to reach most units in the field.[13]

Endnotes

7. Mankowich, 1:13, 20, 39; Headquarters, American Expeditionary Forces, *Defensive Measures Against Gas Attacks*, Pamphlet No. 253, November 1917, 10, 34; Curt Wachtel, *Chemical Warfare* (Brooklyn, N.Y.: Chemical Publishing Company, Inc., 1941), 221-222; Amos A. Fries and Clarence J. West, *Chemical Warfare* (New York: McGraw-Hill Book Company, Inc., 1921), 420-421; Augustin M. Prentiss, *Chemicals in War* (New York: McGraw-Hill Book Company, Inc., 1937), 574.
8. AEF Pamphlet No. 253, November 1917, 10, 32-33; Fries and West, 419-420; Prentiss, 571-572, 579-580.
9. Fries and West, 421-422; Prentiss, 580-581.
10. Chemical Warfare Technical Committee (CWTC) 166, 12 Jul 40; Fries and West, 275-277; Prentiss, 565; Benedict Crowell, *America's Munitions*, 1917-1918 (Washington, D.C.: Government Printing Office, 1919), 4:178.
11. AEF Pamphlet No. 253, November 1917, 11, 32, 40-41; Fries and West, 420; Leo P. Brophy, Wyndham D. Miles and Rexmond C. Cochrane, *The Chemical Warfare Service: From Laboratory to Field* (Washington, D.C.: Office of the Chief of Military History, U.S. Army, 1959), 23.
12. Mankowich, 1:16-17; *Gas Warfare Bulletin* No. 8, 15 Jun 18, 1.
13. Fries and West, 421-422; Prentiss, 579.

Disclaimer

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorizing documents. The use of trade or manufacturer's names in this report does not constitute an official endorsement of any commercial products. This report may not be cited for purposes of advertisement.

CBRNIAC Expo on the Potomac

A CBRNIAC Expo was held at the Naval Surface Warfare Center Dahlgren Division (NSWCDD) in Dahlgren, Virginia, on Monday, October 27, 2008.

Hosted by Michael Purello, head of the Chemical, Biological, and Radiological (CBR) Defense Division of NSWCDD, the Expo highlighted CBRNIAC information products and services. Janice Rhodes, Program Manager, Technical Area Tasks (TATs), began the event with an overview of the CBRNIAC Core and TAT programs. Following the overview, TAT Program Specialists were on hand to answer questions and CBRNIAC Inquiry Analysts were available to respond to individual inquiry requests from researchers, scientists and engineers in the CBR Defense Division.

The CBRNIAC is planning future on-site expos in the coming months. If you are interested in hosting a CBRNIAC Expo at your location, send an email to cbrniac-tat@battelle.org.

Would You Like To Highlight Your Organization, Research, Program Or Project In The CBRNIAC Newsletter?

The CBRNIAC welcomes articles on topics that fall within its mission scope, which includes all aspects of CBRN Defense and Homeland Security.

General Requirements

Articles should be written for a professional audience, with all acronyms spelled out at first mention. While CBRNIAC would prefer original submissions, articles that previously appeared in other publications will be considered as long as there are no copyright issues. Submissions from non-governmental organizations should be written from a government perspective. Be sure to include:

- Text in Word format
- Graphics (see below)
- Headline
- Byline
- Point of Contact or Web site for further information
- A completed CBRNIAC Newsletter Disclosure Form.

The CBRNIAC reserves the right to edit articles, reject submissions, or hold articles for a later issue if there is no time factor involved.

Format Preferences

Microsoft Word is the preferred text format. Please send graphic files separately from the Word file. Submissions should be approximately 500–1,500 words in length, or about 1-3 newsletter pages (graphics included).

Graphics, Photographs and Illustrations

All articles should have at least one visual or photographic item. A caption must accompany each photograph or illustration submitted, unless the graphic is a figure referenced in the text. The name of the originator or photographer should also be provided. Photos and illustrations should be maximum quality jpeg (.jpg) or other bitmap format (.tiff or .bmp) at 300 dots per inch (dpi) resolution. Vector graphics are also acceptable.

Classification and Distribution Statements

The CBRNIAC newsletter enters the U.S. Army RDECOM release review process to be "Approved for Public Release, Distribution Unlimited." All contributions must be cleared for public release by the submitting agency BEFORE submission to the CBRNIAC for consideration. A written or electronic statement that verifies approval for public release with unlimited distribution must be provided along with the article.

Article Submission

Articles can be e-mailed to NewsletterEditor@battelle.org . For large files, instructions for using our file exchange service will be provided upon request. See the CBRNIAC Web site at https://www.cbrniac.apgea.army.mil/Products/Newsletter/SubmissionGuidelines/Pages/default.aspx for the Newsletter Disclosure Form and additional details.

CBRNIAC
Chemical, Biological, Radiological & Nuclear Defense
Information Analysis Center

The focal point for DoD Chemical, Biological, Radiological and Nuclear (CBRN) Defense scientific and technical information

CBRNIAC
Aberdeen Proving Ground – Edgewood Area
P.O. Box 196
Gunpowder, MD 21010-0196

Non-Profit
U.S. Postage
Paid
Edgewood, MD
Permit No. 14