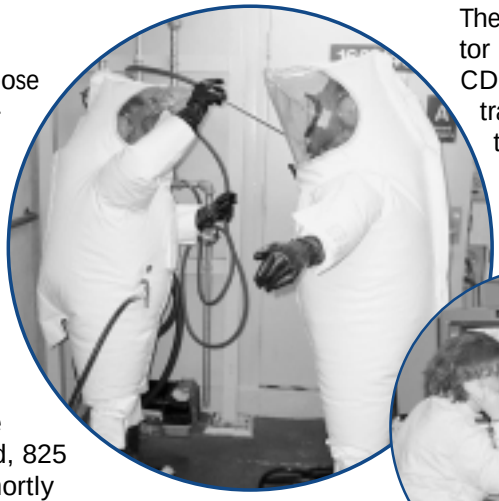
Chemical and Biological Defense
CBIAC Information Analysis Center
Newsletter
Fall 2001 Volume 2 Number 4
A U.S. Department of Defense Information Analysis Center sponsored by the Defense Information Systems Agency, **Defense Technical Information Center**

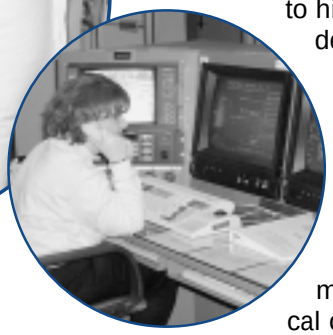
The Army's Chemical Demilitarization Training Facility: 10 Years of Safety and Technical Innovation

by Kenneth W. Findley, Chemical Demilitarization Training Facility Contracting Officer's Representative and Site Project Manager with the Project Manager for Chemical Stockpile Disposal's Operations Division, Aberdeen Proving Ground–Edgewood Area

Background

The Chemical Demilitarization Training Facility (CDTF) is a five-building complex located in the Edgewood Area of the Aberdeen Proving Ground, Maryland, which serves as a hands-on, agent-free training facility for personnel who operate and maintain U.S. chemical weapons stockpile disposal facilities. The CDTF, which utilizes actual chemical demilitarization equipment, is the only facility of its kind dedicated to training the disposal program workforce.





In 1985, Congress directed the Department of Defense to dispose of its chemical weapons stockpile safely. The Secretary of the Army announced that disposal facilities would be established under the administration of Program Manager for Chemical Demilitarization's (PMCD) newly formed Chemical Stockpile Disposal Project (CSDP) at eight sites across the country and on Johnston Island, 825 miles southwest of Hawaii. Shortly thereafter, PMCD identified the need to construct a dedicated training complex that would provide programmatic training support to personnel who would operate and maintain the disposal facilities. In 1989, Columbia, Maryland-based General Physics Corporation (GP) was awarded the initial contract to construct the CDTF. GP not only built the $17 million complex but also developed CSDP's training program to include the use of disposal facility equipment such as rocket shear and multi-purpose demilitarization machines.

The CDTF Training Program

To determine the type of training that would be needed for chemical demilitarization personnel, GP conducted a functional job and task analysis (JTA) on 66 job positions identified by the U. S. Army. The results of the JTA were then used to design 20 courses encompassing over 2,384 curriculum hours. The first courses covered general indoctrination subjects, plant equipment familiarization, operations and procedures and special technical training. As the staffing needs of the "typical" chemical demilitarization facility became more complex, the training program evolved to accommodate those changes in the workforce. The CDTF catalog currently contains 105 courses covering approximately 2,490 hours of curriculum ranging from basic introductory courses such as toxic area training to highly specialized workshops and emergency response training.

The training for a demilitarization facility control room operator is a joint effort between the operator's employer and the CDTF. He or she attends more than 230 hours of classroom training and completes more than 360 hours of hands-on training in a non-toxic environment. Once a person has successfully completed training, he or she is considered qualified to perform their assigned duties at their respective chemical disposal facilities. Upon returning to his or her facility, the former CDTF student receives additional classroom and on-the-job training. A person is considered certified by the chemical demilitarization facility systems contractor to perform his or her job assignment only after he or she successfully has completed all training and evaluations. The table shown on page 9 summarizes the training program for a typical control room operator.

Courses are offered on a regular basis at the CDTF and on-site at each of the chemical demilitarization facilities. Since its inception, the CDTF has conducted approximately 4,256 classes and trained nearly 25,000 employees from various chemical demilitarization program areas.

The Role of Technology in the Training Program

The CDTF utilizes technologies developed for the demilitarization program for agent and non-agent monitoring, as well as operations and maintenance. The training facility is also the first organization to systemize the multi-purpose demilitarization, projectile/mortar disassembly and mine disassembly machines as well as the bulk drain station. An integral component of the training program is the process control system

Continued pg. 9

Chemical and Biological Defense
CBIAC
Information Analysis Center

The **Chemical Warfare/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 administered by the Defense Information Systems Agency (DISA), Defense Technical Information Center (DTIC) under the DoD IAC Program Office (Contract No. SPO700-00-D-3180). The CBIAC is supported by Horne Engineering Services, Inc., Innovative Emergency Management, Inc., MTS Technologies, Inc., QuickSilver Analytics, Inc., and SciTech, Inc. To contact the CBIAC Contracting Officer's Technical Representative (COTR), write or email Mr. Joseph D. Williams at:

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Edgewood Chemical Biological Center
ATTN: AMSSB-RRT-OM (Joe Williams E3330)
5183 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5424
Joseph.Williams@sbccom.apgea.army.mil

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.

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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Gunpowder, MD 21010-0196
Tel: (410) 676-9030
Fax: (410) 676-9703
E-Mail: cbiac@battelle.org
URL: http://www.cbiac.apgea.army.mil/

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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) - November 1st; Spring (Second Quarter) - February 1st; Summer (Third Quarter) - May 1st; Fall (Fourth Quarter) - August 1st.

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.

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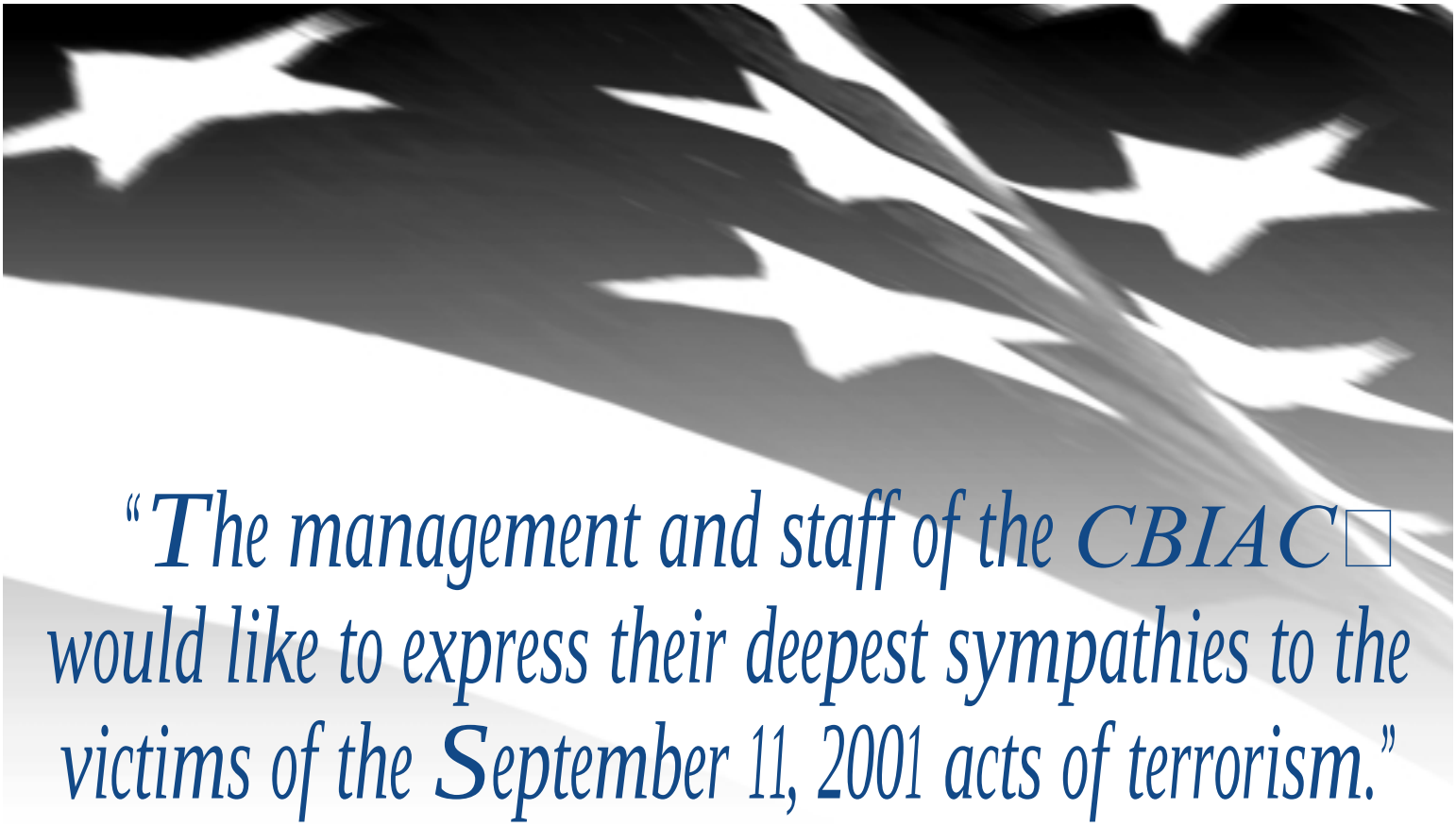


For archived and current news reports, press releases, photos and official websites supporting the families of victims and survivors of the September 11, 2001 terrorist attacks on the United States, visit

DefenseLINK
U.S. DEPARTMENT OF DEFENSE

http://www.defenselink.mil/.

"I have been in public life for a long time. And if there is one lesson I have learned from it, it is this: Believe in the American people. Believe in them especially when trouble starts, when the crisis comes. Believe in them to act worthy of their past — to act worthy of the future of peace and freedom they want for their children."

Secretary of Defense Donald Rumsfeld; Address to the Troops and All Department of Defense Personnel; PENTAGON, Sep 12, 2001;
http://www.defenselink.mil/specials/secdefaddress/

CONTRACT AWARDS • *By Mary Frances Tracy*

CBD Contracts:

Joint Service Light Nuclear, Biological, and Chemical Reconnaissance System (JSLNBCRS)
TRW Inc.
Data Technologies Division
Carson, CA
$5,439,441. July 3, 2001
By Marine Corps Systems Command, Quantico, VA

Program Manager for Chemical Demilitarization
Science Applications International Corp.
San Diego, CA
$8,871,061. July 5, 2001
By U.S. Army Robert Morris Acquisition Center, APG, MD

Joint Biological Point Detection System (JBPDS) Trailer-Mounted Configuration Study
Advanced Technical Products
Intellitec Division
2000 Brunswick Lane
DeLand FL 32724
September 4, 2001
By U.S. Army Robert Morris Acquisition Center, APG, MD

DARPA Awards:

Simulation and Modeling for Biological Agent Detection, Phase II
Science Applications International Corp.
San Diego, CA
$3,000,000 (Increment as part of $16,038,101).
June 26, 2001
By Defense Advanced Research Projects Agency, Arlington, VA

Unconventional Pathogen Countermeasures
Boston University
881 Commonwealth Avenue
Boston, MA 02215
$2,987,484. June 29, 2001
By Naval Surface Warfare Center, Dahlgren, VA

Unconventional Pathogen Countermeasures
Baylor Research Institute
3834 Live Oak Street, Suite 125
Dallas, TX 75204
$4,169,730. June 29, 2001
By Naval Surface Warfare Center, Dahlgren, VA

Rapid Acting Broad Spectrum Protection Against Biological Threat Agents II
Advanced Biosystems Inc.
5904 Richmond Highway
Alexandria, VA 22303
$3,591,720. July 2, 2001
By Defense Advanced Research Projects Agency, Arlington, VA

Unconventional Pathogen Countermeasures
University of New Mexico
Scholes Hall, Rm 102
Albuquerque, NM 87131-6003
$5,075,072. August 8, 2001
By Naval Surface Warfare Center, Dahlgren, VA

Research and Development of Complex Biosignatures of Infection
The Regents of the University of New Mexico
Albuquerque, NM
$5,075,072 August 9, 2001
By The Naval Surface Warfare Center, Dahlgren Division, Dahlgren, VA

DTRA Awards:

Support Services for the Cooperative Threat Reduction Program in the Former Soviet Union
Raytheon Technical Services Co.
Reston, VA
$30,273,260. July 6, 2001
By Military Traffic Management Command, Falls Church, VA

Other Contracts of Interest:

Support to the Office of Justice Programs in the Areas of Chemical, Biological, Radiological, Nuclear, and Explosives Weapons of Mass Destruction (WMD)
ICF Consulting
Fairfax, VA
$3,000,000. July 24, 2001
By Department of Justice, Washington, DC

Johnston Island Chemical Demilitarization and Closure
Washington Demilitarization Co.
Boise, ID
$9,483,232 August 15, 2001
By Headquarters Operations Support Command, Rock Island, IL

Construction of Evaluation Facility for Chemical Defensive Equipment
David Boland Inc.
Titusville, FL
$14,052,000. August 30, 2001
By U.S. Army Corps of Engineers, Little Rock, AR

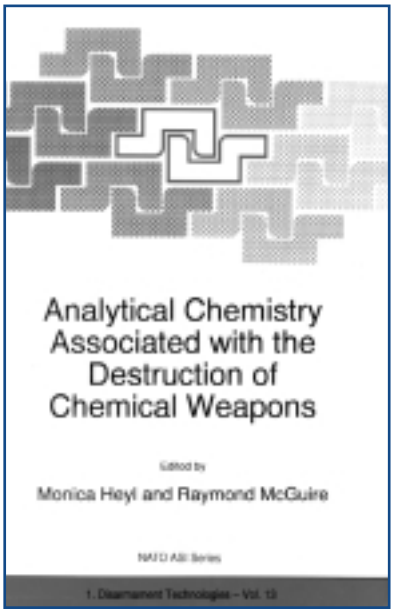
M40A1 Medium Protective Masks & Small, Medium and Large Facepiece Assemblies
ILC Manufactured Products Division
Frederica, DE
$10,681,874 (Part of $29,923,050 firm-fixed-price contract)
September 25, 2001
By U.S. Army Tank-Automotive & Armaments Command, Rock Island, IL

Army Space Heaters and Chemical Biological Protection Kits
Choctaw Manufacturing and Development Corporation
Hugo, OK
$55,000,000 September 26, 2001
By The U.S. Army Communications-Electronics Command, Fort Monmouth, NJ

NEW CBIAC INFORMATION RESOURCES • *By Richard M. Gilman*

Books

Heyl, Monica. and Raymond McGuire, eds. **Analytical Chemistry Associated with the Destruction of Chemical Weapons**. Dordrect: Kluwer Academic Publishers, 1997.



The papers in this work were first presented at a NATO workshop with same title that discussed a wide range of analytical chemistry methods and technologies germane to chemical weapons demilitarization.

Topics covered include the "European Experience with the Disposal of Old Chemical Weapons," the "Super Toxic Analytical Glove Box System," "...Procedures to Isolate Chemical Warfare Related Compounds using Solid Phase Extraction and Solid Phase Microextracton Technology," "Chemical Ionization and Electron Impact Mass Spectrometry of Some Methylphosphonothiolates," "GC/MS Investigation of Ethyl S-2-diisopropyl Aminoethyl Methylphosphonothiolate (VX) Age Decomposition Products," "Methods and Means for Air Monitoring Associated with the Destruction of Chemical Weapons," "Determination of Organo Fluoro Phosphonates by Liquid Chromatography," "A Data Analysis Routine to Protect Confidential Information during GC-MS Analysis.," and "Screening Techniques for use in the Chemical Weapon Field."

The two appendices provide overviews of the chemical demilitarization program.

A subject index is included.

CB-178074
ISBN 0-7923-4648-3
Kluwer Academic Publishers
Order Department
P.O. Box 358, Accord Station
Hingham, MA 02018-0358
Tel: (781) 871-6600
Fax (781) 871-6528

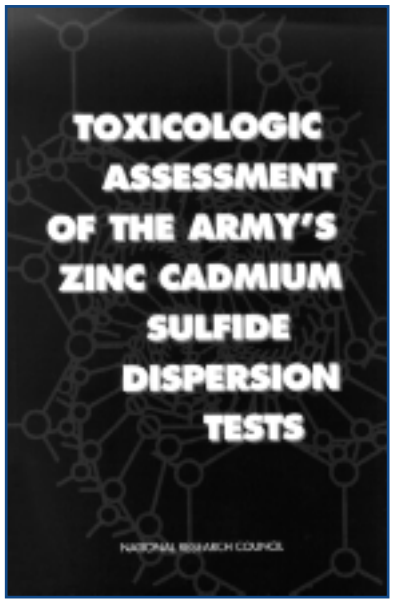
Holm, Francis W., ed. **Scientific Advances in Alternative Demilitarization Technologies**. Dordrecht: Kluwer Academic Publishers, 1996.

A broad spectrum of demilitarization technologies and topics are discussed. They include: "Fundamental Chemistry of Chemical Warfare Agents and Interrelationships," "Oxidation in Molten Salts and Catalysts," "On Using Hydrogenation Processes for Creating CW Destruction Technology," "Demilitarization of Chemical Agents by SCWO," "Wet Air Oxidation," "Applications of Biodegradation in Chemical Demilitarization: A Review of Recent Studies by the U.S. Army," and "The Silver II Process for the Destruction of CW Munitions."

A subject index is included.

CB-178154
ISBN 0-7923-4035-3
Kluwer Academic Publishers
Order Department
P.O. Box 358, Accord Station
Hingham, MA 02018-0358
Tel: (781) 871-6600
Fax (781) 871-6528

National Research Council, Subcommittee on Zinc Cadmium Sulfide. **Toxicological Assessment of the Army's Zinc Cadmium Sulfide Dispersion Tests**. Washington, D.C.: National Academy Press, 1997.



"During the 1950s and 1960s, the U.S. Army conducted dispersion tests using particles of zinc cadmium sulfide (ZnCdS) as a nonbiological simulant of biologic-warfare agents in a number of urban and rural locations in the United States and Canada. This report, by the Subcommittee on Zinc Cadmium Sulfide of the National Research Council's Committee on Toxicology, is intended to assist the Army and the U.S. Congress in their

Continued pg. 10

CALENDAR OF EVENTS

The CBIAC highlights conferences, symposia, meetings, exhibitions and workshops of interest to the CBD community both on our website and in every issue of our newsletter. If you would like to have a CBD-related 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/.**

December 10-12, 2001
France-U.S. Defense Business Forum II
(#2990)
Renaissance Harborplace Hotel
Baltimore, MD (Washington-Baltimore Area)
POC: Ben Stone or Col. Peter Herrly (Ret) (Liaison in France)
Phone: 703.2247.2561 or 01.41.12.91.56 (France)
Fax: 703.243.8439
bstone@ndia.org or Pherrly@compuserve.com
http://www.ndia.org/committees/international/dbif.htm
http://ndia.org/events/brochure/2990/dbif.htm

December 10-13, 2001
EPA HAZMAT 2001 Conference
Marriott Waterfront
Baltimore's Inner Harbor
Baltimore, Maryland
POC: Katrina Harris
Conference Hotline: 800.364.7974
Fax: 410.676.8545
kharris@genphysics.com
http://www.2001.conference.org

December 12, 2001 2:00 - 3:00 p.m. EST
Satellite Broadcast: Consequence Management News, Equipment, and Training (CoMNET)
POC: Charles Hall, National Terrorism Preparedness Training
Phone: 727.893.9800 x228
terrorism@email.spjc.edu
http://terrorism.spjc.edu

2002 MEETINGS

January 11-15, 2002
PREPAREDNESS through PARTNERSHIP: Integrating Medical Mass Care Management in a WMD Incident
St. Petersburg, Florida
http://www.va.gov/wmd/

January 28 - February 1, 2002
COURSE: In House Field Management of Chemical and Biological Casualties (FCBC)
Aberdeen Proving Ground, MD
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN 584.2230
Fax: 410.436.3086
DSN 584.3086
ccc@apg.amedd.army.mil
http://ccc.apgea.army.mil/

February 6-8, 2002
13th Annual SO/LIC Symposium & Exhibition: Implementing The National Military Strategy 2002
(#2880)
POC: A. Saliski
Phone: 703.522.1820
Fax: 703.522.1885
asaliski@ndia.org
http://www.ndia.org

March 9-15, 2002
COURSE: In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
USAMRICD, Aberdeen Proving Ground, Maryland and
USAMRIID, Fort Detrick, Maryland
(Advance registration required)
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN: 584.2230
Fax: 410.436.3086
Fax DSN: 584 .3086
roger.baxter@amedd.army.mil
http://ccc.apgea.army.mil

March 25-28, 2002
28th Environmental and Energy Symposium & Exhibition
(#244E-3140)
Charleston Area Convention Center
Charleston, South Carolina
http://www.ndia.org/events/brochure/244e/244.htm

April 3-4, 2002
TechTrends 2002
(#2950)
Baltimore, Maryland
POC: A. Saliski
Phone: 703.522.1820
Fax: 703.522.1885
asaliski@ndia.org
http://www.ndia.org

April 5-7, 2002
DoD APBI
(#2370)
Hunt Valley Marriott
Hunt Valley, Maryland
POC: C. Buck
Phone: 703.522.1820
Fax: 703.522.1885
cbuck@ndia.org
http://www.ndia.org

April 15-19, 2002
COURSE: In House Field Management of Chemical and Biological Casualties (FCBC)
Aberdeen Proving Ground, MD
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN 584.2230
Fax: 410.436.3086
DSN 584.3086
ccc@apg.amedd.army.mil

Continued pg. 7

Calendar of Events *cont.*

http://ccc.apgea.army.mil/

April 28-May 3, 2002
CBMTS IV
AC-Laboratory, Spiez
Spiez, Switzerland
POC: ASA
Phone: 207.829.6376
Fax: 207.829.3040
asa@maine.rr.com
http://www.asanltr.com

May 4-10, 2002
COURSE: In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
USAMRICD, Aberdeen Proving Ground, Maryland and
USAMRIID, Fort Detrick, Maryland
(Advance registration required)
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN: 584.2230
Fax: 410.436.3086
Fax DSN: 584 .3086
roger.baxter@amedd.army.mil
http://ccc.apgea.army.mil

May 20-23, 2002
The Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds
Doubletree and Marriott Hotels
Monterey Conference Center
Monterey, California
POC: The Conference Group
Phone: 800.783.6338 or 614.424.5461
Fax: 614.424.5747
conferencegroup@compuserve.com
http://www.battelle.org/environmnet/er/chlorcon/chlorcon.html

May 20-23, 2002
Global Demilitarization Symposium & Exhibition
(#2580)
Hyatt Regency & Radisson
Lexington, Kentucky
POC: R. Mohrmann
Phone: 703.522.1820
Fax: 703.522.1885
rmohrmann@ndia.org
http://www.ndia.org

June 3-7, 2002
COURSE: In House Field Management of Chemical and Biological Casualties (FCBC)
Aberdeen Proving Ground, MD
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN 584.2230
Fax: 410.436.3086
DSN 584.3086
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http://ccc.apgea.army.mil/

June 17-21, 2002
Eurosatory
Paris, France
http://www.salon-eurosatory.fr/affiche2.htm

September 6-11, 2002
Worldwide Chemical Conference & Exhibition
(#2300)
Fort Leonard Wood, Missouri
POC: C. Buck
Phone: 703.522.1820
Fax: 703.522.1885
cbuck@ndia.org
http://www.ndia.org

September 7-13, 2002
COURSE: In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
USAMRICD, Aberdeen Proving Ground, Maryland and
USAMRIID, Fort Detrick, Maryland
(Advance registration required)
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN: 584.2230
Fax: 410.436.3086
Fax DSN: 584.3086
roger.baxter@amedd.army.mil
http://ccc.apgea.army.mil

September 23-27, 2002
COURSE: In House Field Management of Chemical and Biological Casualties (FCBC)
Aberdeen Proving Ground, MD
POC: Chemical Casualty Care Division, USAMRICD
Phone: 410.436.2230
DSN 584.2230
Fax: 410.436.3086
DSN 584.3086
ccc@apg.amedd.army.mil
http://ccc.apgea.army.mil/

November 30-December 6, 2002
COURSE: In House Medical Management of Chemical and Biological Casualties (MCBC)
USAMRICD, APG, MD and
USAMRIID, Ft. Detrick, MD
POC: Chemical Casualty Caree Division, USAMRICD
Phone: 410.436.2230
DSN 584.2230
Fax: 410.436.3086
DSN 584.3086
ccc@apg.amedd.army.mil
http://ccc.apgea.army.mil/

IN THE NEWS • *By Mary Frances Tracy*

Pyrolysis-Gas Chromatography-Ion Mobility Spectrometer: A shoebox size biological and chemical agent detector
Snyder, A. Peter
CB Quarterly
June 2001
The Edgewood Chemical Biological Center (ECBC) is currently developing a biological and chemical warfare agent detector. The easy-to-use device is comprised of a quartz tube pyrolysis-gas chromatography-Chemical Agent Monitor ion mobility spectrometer or Py-GC-IMS. The system is designed as an outdoor, autonomous, stand-alone system. It is designed to perform trigger, detector and classification functions for biological aerosols and identification for chemical aerosols and vapors in pure compound mixture. The system is scheduled to transition to the Joint Biological Point Detection System in FY02.

Neutralizing Enzymes: Army patents technology designed to neutralize chemical agents
DeFrank, Joseph J.
CB Quarterly
June 2001
The ECBC patented a technology consisting of neutralizing enzymes that can be added to water or any water-based application system, such as, aqueous degreasers, laundry detergent, fire-fighting foams and sprays, or aircraft de-icing solutions. In the event where chemical agents may have been released, the enzymes can quickly be used by first responders to neutralize the agents before a large area becomes contaminated.

Decon Shower at Vanderbilt University
Jones, Jerry
The Beacon
August 2001
Biological and chemical terrorism is a growing concern for emergency departments who might be faced with large numbers of contaminated individuals. To address this concern, Vanderbilt University Medical Center(VUMC) is using a method of decon developed during the Gulf War to decontaminate individuals. The method chosen by VUMC consists of ten showerheads, permanently fixed in the ceiling of a sidewalk area outside the Emergency Department. Large curtains drop to form separate lines for women and men. To transform the sidewalk into a decon shower takes less than five minutes and can be activated by personnel from the emergency department.

U.S. Army completes demonstrator to detect chem-bio agents
Buckingham, Kelly and Cynthia Swim
APG News
August 8, 2001
The ECBC recently teamed with Raytheon Electronic Systems to develop the demonstrator Warning and Identification Lidar Detector for Countering Agent Threats (WILDCAT). The demonstrator is a sensor designed to provide standoff chemical detection and identification at increased ranges. WILDCAT technology provides instantaneous, on-the-move, 360 degree coverage from a variety of platforms, including ships, aircraft and vehicles, at distances up to 20 kilometers or more. The system is being transported to Dugway Proving Ground, Utah, for field testing.

Enormous Threats in Tiny Packages Define Terrorist Power and Spurs Demand for Chemical Biological Agent Detectors
http://biz.yahoo.com/prenews/010822/daw011_2.html
August 2001
The Department of Defense (DoD) considers biological weapons a threat to both military and civilian personnel. Therefore, interest in the biological detection field has increased in recent years. The creation of the new Office of National Preparedness to deal with terrorist attacks on American soil will increase awareness for the need for chemical and biological detection equipment. The World Chemical and Biological Agent Detector Markets has shown that this industry generated revenues of $265.2 million in 2000 and is projected to reach $494.2 million by 2007.

Texas A&M Vets Working to Combat Bioterrorism
http://www.tamu.edu/univrel/aggiedaily/news/stories/00/080200-4.html
August 8, 2001
The Department of Defense's National Security Education Program has provided a Texas A&M University researcher with a $389,000 grant to develop a new curriculum on emerging diseases, food safety and bioterrorism. Dr. Gale Wagner of the College of Veterinary Medicine, along with the University of Georgia, is coordinating the effort to assist veterinarians to develop ways to ensure food safety and to prevent possible acts of bioterrorism.

Additional CBD News On The Web and in Print

Tularemia as a Biological Weapon
http://jama.ama assn.org/issues/v285n21/rfull/jst10001.html

A Combination of Pyridostigmine with Anticholinergic Drugs: Effective Pharmacological Pretreatment of Soman-Poisoned Mice
The ASA Newsletter
Issue Number 84
June 12, 2001

Abrin and Ricin - Two Dangerous Poisonous Proteins
The ASA Newsletter
Issue Number 85
August 31, 2001

"The Army's Chemical" *cont.*

simulator (PCSS).

Control Room Operator Training				
Training	Format	Length (hours)	Location	Conducted by
Orientation/ Safety	Classroom	11	Site	Employer
System & Equipment Operation	Classroom	98	Site	CDTF
Demilitarization Equipment Operation	Hands-on installation equipment	168	CDTF	CDTF
Incinerator Operation	Hands-on simulators	200	CDTF or on-site	CDTF
Site Specific Topics	Classroom	127	Site	Employer
Certification	On-the-job	Up to 948	Site	Employer

Used to train control room operators on the proper procedures for running the deactivation furnace system, liquid incinerator and metal parts furnace, the PCSS allows students to work at their own simulator. It consists of six operator control stations and one instructor station. Each station operates on an Ethernet LAN with a Windows NT™ server. The instructor station provides the instructor the capability to insert faults, and to monitor and control each of the six operator control station simulations concurrently. The PCSS:

- provides initial skill and knowledge training to hazardous waste incinerator operators;
- provides control room team skill training;
- provides self-paced practice in relevant job skills; and evaluates hazardous waste incinerator operators.

Recent upgrades to the PCSS have allowed more students to operate an independent copy of the equipment or system concurrently and have increased the amount of time students can spend performing and practicing the required skills and techniques.

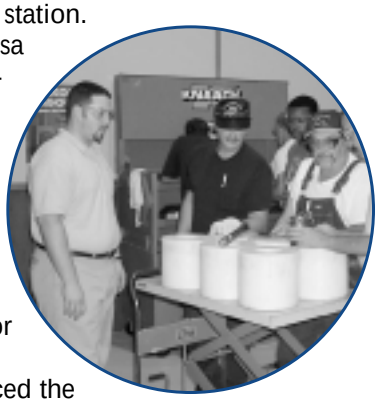
GP's PCSS hardware and software upgrade is a cost-effective expansion of the Chemical Stockpile Disposal Project's training simulator capabilities. The PCSS is in full operation at the CDTF and at the Tooele Chemical Agent Disposal Facility in Utah. The system is currently being installed at the Umatilla Chemical Agent Disposal Facility in Oregon and the Anniston Chemical Agent Disposal Facility in Alabama, and is scheduled to be installed at the Pine Bluff Chemical Agent Disposal Facility in Arkansas.

Innovative Contributions to the Chemical Demilitarization Program

The CDTF plays a strategic role within the chemical demilitarization program. For example, its test plans and control codes were utilized to support the disposal start-up efforts at the Tooele Chemical Agent Disposal Facility in Tooele, Utah, and the Johnston Atoll Chemical Agent Disposal System in the Pacific. Also, to ensure that its students are trained to use the latest in demilitarization technology, the CDTF continues to modify its equipment to optimize performance and reliability. This includes reducing the processing time of the multi-purpose demilitarization machine (MDM), improving the performance of the MDM bore station, modifying the design of the end effector and upgrading the projectile/mortar disassembly.

The CDTF also has contributed significantly to the design and modification of the following demilitarization equipment and processes:

- **Gimbal Cam Socket (GCS)**–The CDTF Test and Evaluation Group helped to develop the GCS, which reduced the number of projectiles rejected by the original nose closure (fuse adapter) removal station. This modification will sa PMCD millions of dollars by avoiding the schedule growth that would have been incurred processing rejected munitions.



- **Land mine processing**–The CDTF developed a new method for processing land mines that significantly reduced the probability of the mine's explosive material inadvertently detonating. As a result, the Johnston Atoll Chemical Agent Disposal System processed more than 13,000 VX nerve agent land mines without incident.
- **Penetration of the Weteye bomb**–The CDTF developed a remote-controlled drill to penetrate the aluminum Weteye bomb and its steel shipping container. The penetrations will ensure that all liquid GB nerve agent is drained from the aluminum shell. This is required to eliminate the chance of a molten aluminum explosion when the bombshell is thermally decontaminated in a furnace chamber.

The CDTF staff is diligent in its commitment to provide the best training to its students by utilizing technical advancements in the field of chemical demilitarization. This is also apparent in the safety standards that the CDTF imparts to its students and employees.

Safety as a Priority

In August 2001, the CDTF celebrated 10 years without a lost-time accident. The CDTF successfully reached the 10-year mark without a lost workday thanks to the development of an Occupational Safety, Health and Administration Voluntary Protection Program (VPP). By assigning responsibilities for all aspects of this program, managers, supervisors and employees know what is expected of them. The Project Manager for Chemical Stockpile Disposal (PMCSD) and GP have created an atmosphere where workers are accountable for upholding safety requirements and ensuring that their teammates adhere to them as well.

Managing for Success

GP, the systems contractor for training, operates the CDTF, and is responsible for providing programmatic skills and knowledge

Continued pg. 11

INFO. RESOURCES *cont.*

efforts to determine whether exposure to ZnCdS particles adversely affected the health of persons living in the areas where the dispersion tests were conducted. The report independently reviews the available toxicity data on ZnCdS and its components cadmium and zinc, assesses human exposures to ZnCdS, and characterizes the risk to people exposed to it through the Army's dispersion tests." (Preface)

Full text can be reviewed online at the website of the National Academy Press —reading room **http://www.nap.edu**.

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http://www.nap.edu

Documents from the Web

Chemical and Biological Arms Control Institute. **Bioterrorism in the United States: Threat, Preparedness and Response**. Arlington, VA: CBACI, 2001.
http://www.cbaci.org/

"Biological terrorism differs from other types of CBRN terrorism in that it would impose particularly heavy demands on the nation's public health and health care systems. Although a chemical attack would also tax these systems, bioterrorism would impose especially stressful burdens. Yet, that same public health system is the crucial factor in an effective response. A highly effective public health system should make an important contribution to deterring the threat by demonstrably diminishing the gains of a potential attack. It also constitutes the "first line of defense" in the event deterrence or prevention fails. Ultimately, it will be the public health system that will be called on to mitigate and ameliorate the consequences of a terrorist attack using biological weapons."
(Executive Summary)

CB-111427
Chemical and Biological Arms Control Institute (CBACI)
1747 Pennsylvania Avenue, NW
7th Floor
Washington, D.C. 20006
Tel: (202) 296-3550
Fax: (202) 296-3574

Davis, Jim, Col. (Dr.) and Dr. Anna Johnson-Winegar
The Anthrax Terror: DOD's Number-One Biological Threat. Maxwell Air Force Base, AL: U.S. Counter-Proliferation Center, Air University, 2001.
http://www.airpower.maxwell.af.mil/airchronicles/apj/apj00/win00/davis.pdf

"The chance that our armed forces will encounter biological weapons has increased dramatically since the dissolution of the USSR. Drs. Johnson-Winegear and Davis give us an in-depth tutorial on anthrax, the predominant bioweapon threat, and they provide clear rationale for our needing a viable vaccine defense." (Editorial Abstract)

CB-180268
U.S. Air Force Counter-Proliferation Center
325 Chennault Circle
Air War College
Air University
Maxwell Air Force Base, Alabama 36112-6427
Phone: (334) 953-7538
Fax: (334) 953-7538

Headquarters, Department of the Army, Commandant, U.S. Marine Corps. **FM 3-5. MCWP 3-37.3. NBC Decontamination**. Washington, D.C.: Department of the Army, U.S. Marine Corps, 2000.
http://www.adtdl.army.mil/cgi-bin/atdl.dll/fm/3-5/fm3-5.htm

"The extent and timing of decon depends on the tactical situation, the mission, the area of contamination, and the decon resources available. Survivability and reducing the effect of any chemical threat are the ultimate goals of decon. This manual provides detailed guidance on conducting decon operations performed by chemical and nonchemical personnel. Individual soldiers and leaders must be familiar with the basic procedures of this manual." (Preface)

CB-174962
Proponent
Commandant
U.S. Army Chemical School
Ft. Leonard Wood, MO 65473

Tucker, Jonathan B., ed. **The Chemical Weapons Convention: Implementation Challenges and Solutions**. Washington, D.C.: Center for Non-Proliferation Studies, Monterey Institute of International Studies, Washington Office, 2001.

"In a 72-page report the Monterey Institute of International Studies' Center for Nonproliferation Studies (CNS) examines the strengths and weaknesses of the chemical disarmament regime and warns that unless current implementation trends are soon reversed, the international community could lose a critically important tool in eliminating these heinous weapons."
(Publisher's Synopsis)
http://cns.miis.edu/pubs/reports/tuckcwc.htm

CB-182881
Center for Non-Proliferation Studies
Monterey Institute of International Studies
Washington Office
11 Dupont Circle, N.W. 9th Floor
Washington, D.C. 20036
Phone: (202) 478-3416
Fax: (202) 238-9603

Note: The CBIAC has expanded its website civil support features to include "Advisories on Anthrax, Mail and Related Topics."

"The Army's Chemical" *cont.*

training on common and demilitarization-unique equipment and systems. The company oversees a team of professionals whose areas of responsibility cover safety, quality assurance and control, project support, instructional systems, training operations and engineering. This team strives to provide the best quality and safest training to disposal facility personnel by:

- analyzing the work to be performed at the various disposal sites and determining what training is necessary;
- recommending training materials to be developed;
- keeping the training up-to-date and maintaining the integrity of the training;
- achieving the highest level of cost-effective availability of the CDTF; and
- providing public affairs support.

These activities are a part of the CDTF's commitment to safety, health and performance enhancement. In April 2001, the CDTF, GP and PMCSD received the 2001 Award of Excellence for Outstanding Instructional Product or Intervention for their work on the design and implementation of the PCSS. The award recognizes outstanding results derived from "instructional products or interventions developed through systematic approaches to human performance enhancement." The PCSS upgrade is an example of the business partnering relationship between GP and PMCSD.

Conclusion

The CDTF's commitment to comprehensive training, technical innovation, safety and accountability is the cornerstone of the Chemical Stockpile Disposal Project's success. The CDTF has effectively communicated that there is no room for error when maintaining and operating a chemical disposal facility.

"I am proud of and impressed by the CDTF's accomplishments over the past 10 years. It has provided PMCD with a dedicated, well-trained workforce that is aware of its importance to the success of our disposal program," said James Bacon, Program Manager for Chemical Demilitarization.

For further information, contact:
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Kenneth.Findley@pmcd.apgea.army.mil

In Memory of Gloria Downing Akins

August 23, 1945 - August 20, 2001

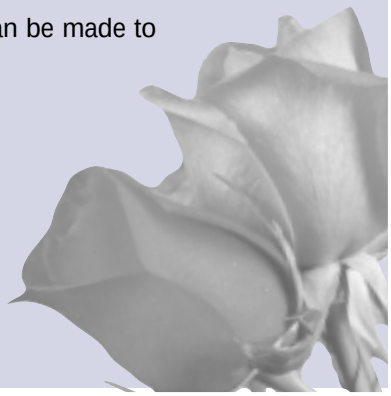
It is with deep regret that the CBIAC shares the news that one of our staff members, Mrs. Gloria Downing Akins, passed away at her home in Edgewood, Maryland on August 20, 2001. Instead of celebrating her fifty-sixth birthday, grief-stricken family and friends gathered to celebrate her life at a funeral service held August 24, 2001 at John Wesley A.M.E. Church in Joppatowne, Maryland.

Mrs. Akins joined Battelle in 1990. Gloria's employment prior to joining Battelle included clerical assignments at the States Attorneys' Office in Bel Air, Maryland; at various tenant organizations at Aberdeen Proving Ground, Maryland; and in private industry. Her duties at the CBIAC included searching and retrieving documents from several databases as well as ordering and cataloging documents for the CBIAC Bibliographic Database. From 1992 to 1995 Gloria left Battelle to take a position at the Program Manager Chemical Demilitarization's Technical Information Center. In 1996 Gloria returned to Battelle, accepting the position as a Document Control Specialist for the CBIAC.

If you contacted the CBIAC for inquiry service that required searching databases and locating documents, Gloria assisted you. If you called the CBIAC, Gloria may have been the person that answered the phone and processed your request. Here on post at the Edgewood Area of Aberdeen Proving Ground, most people that entered Building E3330 walked to Gloria's desk to seek assistance because she was the first person you saw as you crossed the lobby. She greeted every visitor to the CBIAC with professional courtesy and a positive attitude. Gloria was security conscious, courteous and professional at all times.

Everyone has an effect on the lives of others, just by their presence. Gloria touched many lives on a daily basis and helped people whenever she could. Gloria is survived by her husband, Charles N. Akins, and her daughters, Summer and Brittany.

Donations in Gloria's name can be made to the American Cancer Society.



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