



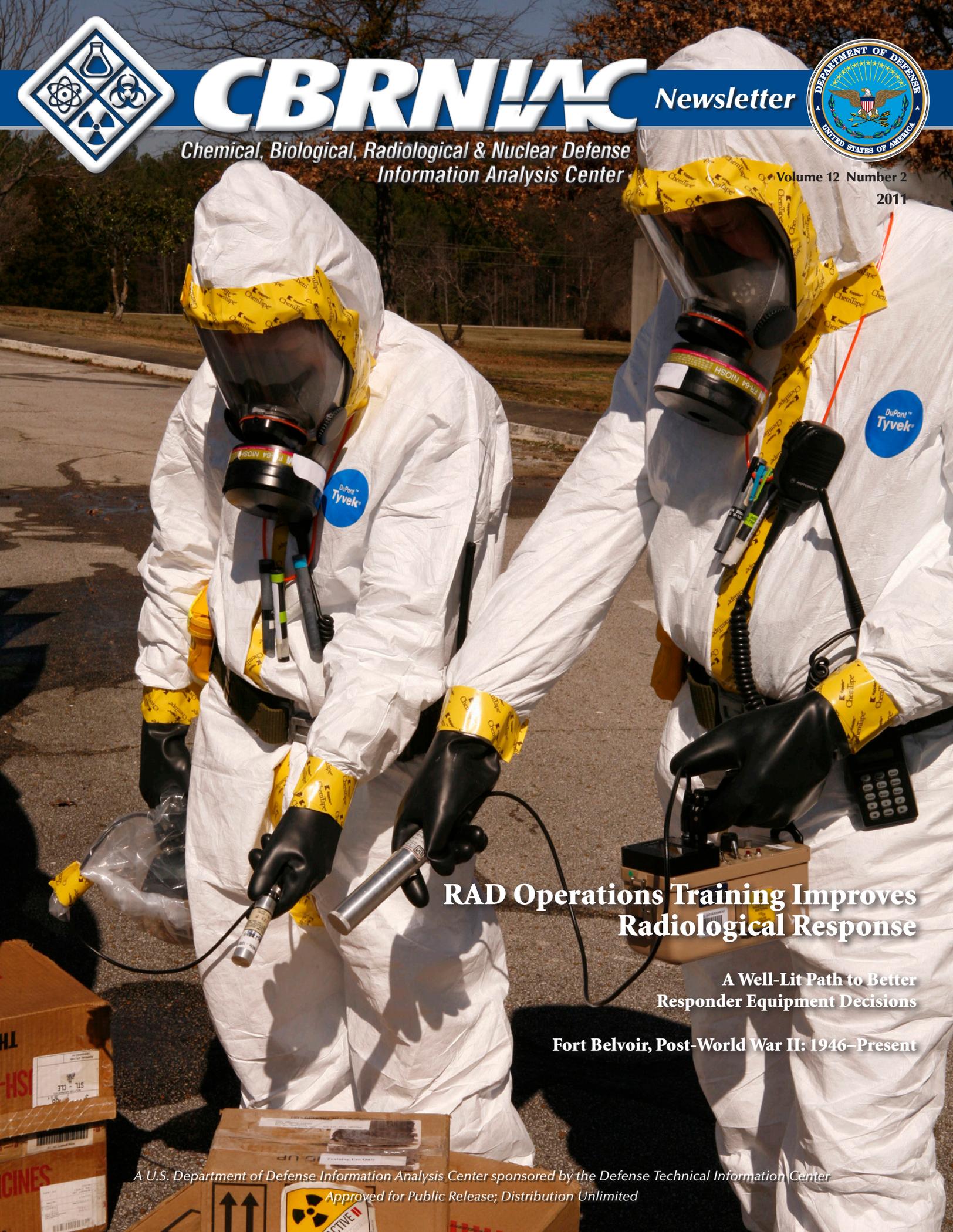
CBRN IAC

Newsletter



Chemical, Biological, Radiological & Nuclear Defense
Information Analysis Center

Volume 12 Number 2
2011

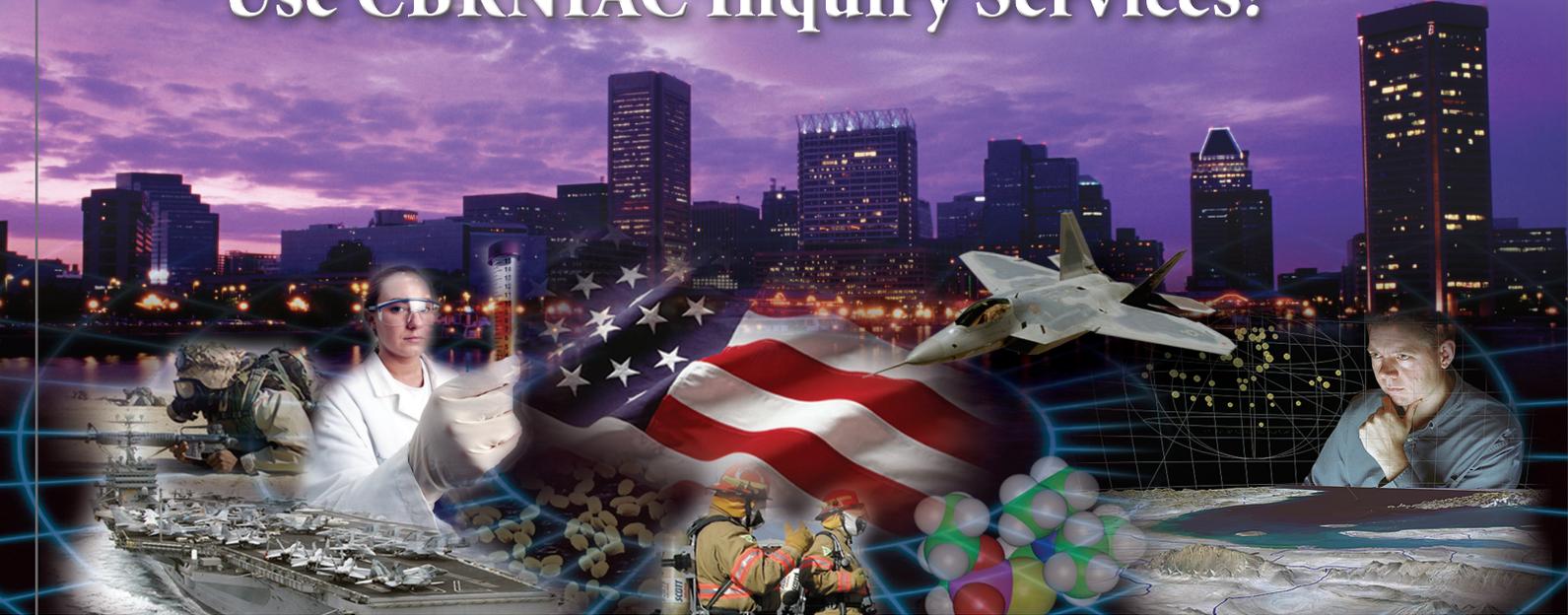


RAD Operations Training Improves Radiological Response

A Well-Lit Path to Better
Responder Equipment Decisions

Fort Belvoir, Post-World War II: 1946–Present

Expand Your Research Staff— Use CBRNIAC Inquiry Services!



One phone call or online Inquiry request connects you to our Inquiry Team of scientists and engineers who can provide up to four (4) hours of free research for your program or project per query.

Our Inquiry Analysts have access to **over 3,500,000 documents** related to CBRN Defense and Homeland Security scientific and technical research and development from the early 1900's to the present, along with Subject Matter Experts (SMEs) in all relevant areas of CBRN Defense and Homeland Security.

Sample Inquiries

Chemical Defense

Are there any test reports or studies on the effect of chemical warfare agents on construction materials?

Is there a published “no observable adverse effect level (NOAEL)” for sulfur mustard?

Biological Defense

What exercises have been conducted that simulate a biological attack on a city?

Can you provide documents that contain technical guidance for emergency response to a biological agent incident?

Radiological/Nuclear Defense

What is the policy guidance for emergency response planning with regard to the collection and disposal of waste from emergency response operations?

Are there any reports that discuss the psychological impact of radiological or nuclear weapons on civilians or military personnel?

Requestor Feedback:

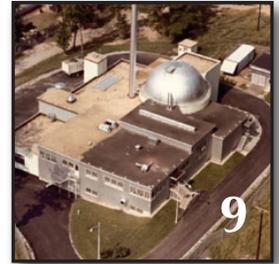
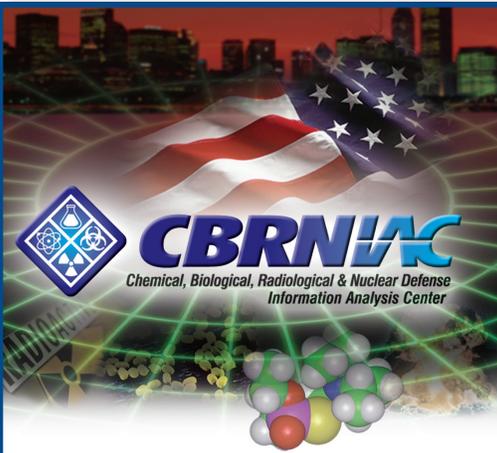
“The information I’ve received so far has been quite valuable! I really appreciate your assistance.”

“These are very productive searches, generating a lot of useful literature. Thanks for the great help!”

“Thank you for your swift and thorough response.”

“Thanks so much—you’ve been very accommodating as we’ve adjusted strategy to obtain the desired information.”

For more about our Inquiry Services, visit
<https://www.cbrniac.apgea.army.mil/Products/Inquiry/Pages/default.aspx>.



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.

For further information or assistance, visit or contact the CBRNIAC.

CBRNIAC
1204 Technology Drive
Aberdeen, MD 21001-1228
410.676.9030 (phone) 614.458.0300 (fax)

General Information & Core Program:
cbmriac@battelle.org

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

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

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

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On the Cover: Students at the Center for Domestic Preparedness (CDP), in Anniston, Alabama, survey a simulated accident scene that poses a radiological threat.

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) – November 15th
- Second Quarter (Number 2) – February 15th
- Third Quarter (Number 3) – May 15th
- Fourth Quarter (Number 4) – August 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.



RAD Operations Training Improves Radiological Response

By Shannon Arledge, CDP Public Affairs

The recent earthquakes and subsequent radiological impacts in Japan have increased the awareness and interest in how communities respond to radioactive incidents. Despite the recent increased attention on radiological hazards, training for such a potential incident has been happening at the Center for Domestic Preparedness (CDP) for the past four years.

The CDP, located in Anniston, Alabama, in coordination with the Radiological Emergency Preparedness Program (REPP) office of the Federal Emergency Management Agency (FEMA), offers five courses focusing on radiological preparedness in communities across the United States.

The radiological courses prepare first responders to deal with all types of radiological incidents, according to Bernice Zaidel, CDP assistant director for curriculum development and evaluation. Depending on the course, students learn basic fundamentals to advanced techniques. Each course ties in the response to a potential mass casualty event involving radiological material. "CDP radiological training provides a safe environment where first responders learn how to protect themselves, their equipment, and the general public if a radiological event were to occur in their community," Zaidel said. "Our training is designed to advance what they already know, and provide solid guidance to improve current plans, processes, and practices."

Denise White, senior health and safety specialist for the Bureau of Radiation Control, located in Orlando, Florida, recently completed the Radiological Emergency Response Operations (RERO) course at the CDP. "There are so many reasons to take this training," White said. "The training was as real as it gets. I feel better prepared, and confident in my ability to respond. A person in this field does not completely understand all the threats until they attend this training—a fantastic experience."

Many first responders live in the vicinity, between 10 and 50 miles, of a nuclear power plant. Responders in these areas are required to remain current, rehearse emergency plans, and attend training and exercises mandated by FEMA and the REPP program, Zaidel said.

"This training prepares emergency responders to know the radiological hazards that face their communities" Zaidel said. "With training, responders know how best to protect themselves from the exposure and contamination risk of a radiological event."



A student at the Center for Domestic Preparedness (CDP), in Anniston, Alabama, surveys a simulated accident scene that poses a radiological threat.

The radiological courses provided by the CDP are performance-based and students focus on the response and management of a radiological event. More advanced-level training is designed to improve skills and center on response plans and procedures for complex incidents such as a terrorist or mass casualty event.

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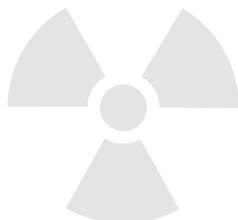
Left: Students at the Center for Domestic Preparedness (CDP), in Anniston, Alabama, tasked as an entry team, conduct a radiological survey to determine the Hot Zone boundary of a potential radiological threat during a simulated exercise.

Below: Students attending the Radiological Emergency Response Operations Course (RERO), at the Center for Domestic Preparedness (CDP) measure the radiation exposure rate they have encountered during a simulated accident at the CDP, located in Anniston, Alabama.



“We try to make the scenarios and equipment available as realistic as possible for the students,” said Candice Gilliland, CDP radiological training course manager. “We utilize live radiation sources as well as electronic equipment to simulate radiation contamination and exposure. The CDP provides different types of equipment from the most basic to cutting edge. It is important to vary the instruments students use, because not all jurisdictions are the same. Regardless of how small or large their jurisdiction is, they will find the instruments we provide suitable for their area of response.”

Indirect training courses are also offered through the Indirect Authorized Training Program (IATP). The IATP prepares CDP graduates to train first responders using authorized Train-the-Trainer programs in their home jurisdiction. To link the CDP radiological curriculum tracks locate Programs T, WW, and XX on the CDP web site <http://cdp.dhs.gov>. ◆



Center for Domestic Preparedness



In June 1998, the Center for Domestic Preparedness (CDP) opened its doors as a training center for the nation’s emergency responders. The CDP’s mission is to operate a federal training center for delivery of high-quality, comprehensive preparedness training programs for the nation’s emergency responders.

The CDP’s interdisciplinary resident and nonresident training courses promote greater understanding among the following diverse responder disciplines: Emergency Management, Emergency Medical Services, Fire Service, Governmental Administrative, Hazardous Materials, Healthcare, Law Enforcement, Public Health, Public Safety Communications, and Public Works.

At the **C**hemical, **O**rdnance, **B**iological and **R**adiological Training Facility (COBRATF), the CDP offers the only program in the nation featuring civilian training exercises in a true toxic environment, using chemical agents. The advanced, hands-on training enables responders to effectively respond to real-world incidents involving chemical, biological, explosive, radiological, or other hazardous materials. Responders serve as the nation’s first line of defense and deserve the highest-quality training available.



On March 31, 2007, the **Noble Training Facility (NTF)** was integrated into the CDP training center. In 1999, the former Noble Army Hospital was converted into a training site for health and medical

education in disasters, to include both acts of terrorism and manmade disasters. The NTF is the only hospital facility in the United States dedicated to training hospital and healthcare professionals in disaster preparedness and response.

To get the “FAQ” about training, go to: <http://cdp.dhs.gov/faq/index.html>

Learn more about the Center for Domestic Preparedness

1.866.213.9553 or <http://cdp.dhs.gov>

A Well-Lit Path to Better Responder Equipment Decisions

By Leslie Bank, RKB Content Analyst

On a snowy night in a rural town near Somerset, Kentucky, emergency response teams simultaneously work four separate but related crime scenes. At the first, response teams, using the aid of portable lights, locate and evacuate survivors of a bomb attack at a local hospital.

Less than a mile away, the suspected bomber crashed into another vehicle during his escape from the scene. Portable lighting aids the police while they search for clues left behind after he flees the scene.

Nearby, a local deputy witnesses the suspect fleeing the scene, and attempts to stop him. The deputy and the suspect exchange gunfire in a dimly lit field and the suspect escapes. Police officers use portable lighting units to begin evidence location and recovery.

Finally, in a wooded area next to the hospital, search and rescue personnel use portable lighting units to locate a subject last seen in front of the hospital.

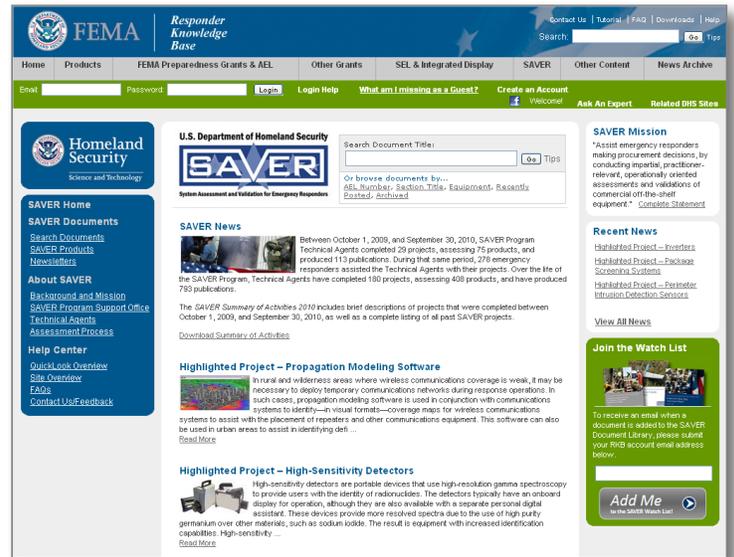
What may sound like a nightmare to the incident command in this small town was actually a simulation conducted by the System Assessment and Validation for Emergency Responders (SAVER) Program, part of the Science and Technology Directorate (S&T), U.S. Department of Homeland Security (DHS), to assess four different portable lighting units.

Emergency responders from law enforcement, fire, and search and rescue disciplines participated in the assessment, as each discipline uses the equipment in different applications. Police officers typically use portable lighting units to perform detailed searches for evidence, such as spent ammunition cartridges. Firefighters use portable lighting units to illuminate an accident scene and facilitate rescue efforts. Search and rescue personnel have a much broader field of focus or they may need to track clues, such as a cigarette butt or a footprint. The four real-world assessment scenarios described above were created with these differences in mind.

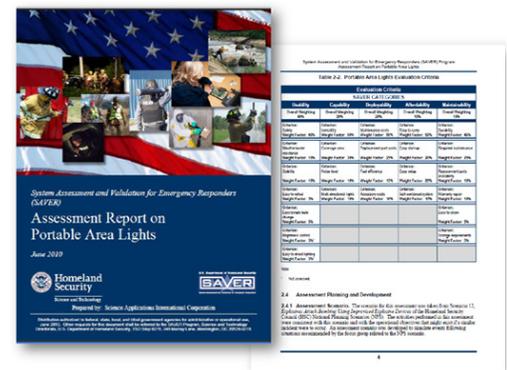
The SAVER Program was created by DHS to assist emergency responders making procurement decisions. The program is supported by a network of technical agents who coordinate emergency responder participation in impartial, practitioner-relevant, and operationally-oriented assessments of equipment that falls within the categories listed in the DHS Authorized Equipment List (AEL). The AEL, published by the Federal Emergency Management Agency (FEMA), provides equipment purchase grant guidance for several major grant programs.

SAVER technical agents and emergency responders have teamed up to complete 179 projects, of which 81 are comparative assessments, for different equipment types, and provided results to the responder community. Without these impartial assessments, equipment purchasers have only the manufacturers' claims to rely on when making

procurement decisions (or manufacturer adherence to a standard, if a standard exists). SAVER assessments serve to bridge that gap between manufacturer assertions about the equipment and actual performance.

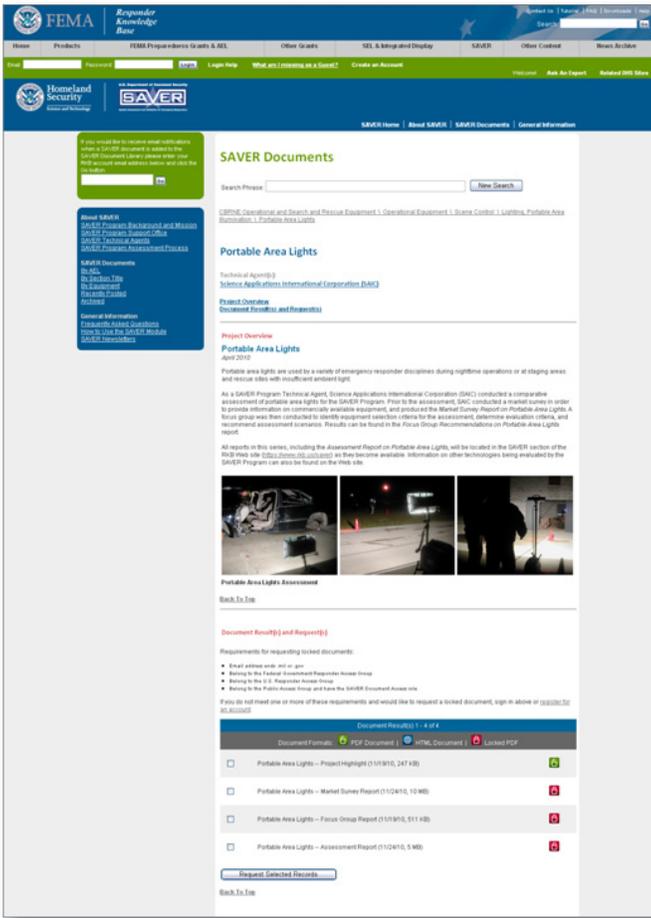


The SAVER Program assesses equipment based on five categories—affordability, capability, deployability, maintainability and usability—through a formula-driven approach that rates equipment in these specific areas that speak to the unit's overall effectiveness based on the needs of emergency responders. This approach is uniformly applied during assessments to provide meaningful results for purchasers.



Following the assessments, the SAVER Program provides the results and other relevant equipment information to the emergency response community in the form of assessment reports. These reports include the experiences of responders while using equipment during the assessment that may not be easily drawn from the manufacturer's Web site or literature. Assessment reports are published to provide the accurate information for consideration when making procurement decisions. SAVER reports can be found in the SAVER section of the Responder Knowledge Base (RKB) Web site, <https://www.rkb.us/saver>.

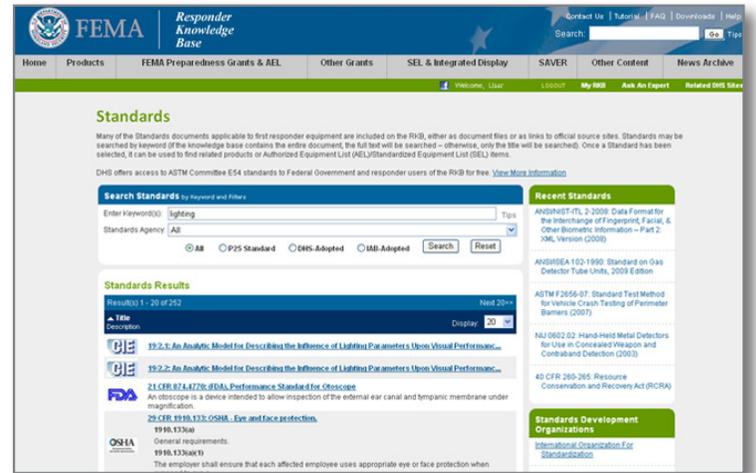
Continued pg. 7



Results from the SAVER program comprise only one section of the RKB—an objective decision support tool that evolves in response to the needs of the response community. The RKB is designed to assist responders and the homeland security community with equipment purchasing decisions while maintaining a reputation for objectivity. Funded through FEMA’s National Preparedness Directorate, the RKB includes information on the DHS AEL and the InterAgency Board’s

(IAB) Standardized Equipment List (SEL), a list of recommended generic equipment to help local, state, and federal jurisdictions prepare and respond to multijurisdictional CBRNE events.

The RKB vets and integrates input from a variety of sources, including manufacturers, standards developments organizations, testers, and other Web sites. As a result, the RKB Web site provides emergency responders, purchasers, and planners with a trusted and integrated online source of equipment specifications for over 6,500 products including related standards and certifications. Using the portable lights as an example, a search and rescue team lead interested in existing standards for employment of the lights can search the RKB and review the results.



The RKB Web site contains over 1,700 publications related to emergency response and preparedness training opportunities for emergency responders, as well as information on available grants. These publications, linked with relevant content throughout the Web site, allow users to quickly find information needed on a particular subject without spending valuable time and resources researching disparate sources.

By the nature of their work, emergency responders do not have the time or resources to spend on internet research. The SAVER and RKB Web sites provide a portal for response personnel to view relevant information in one location to make better informed equipment purchase decisions. And what a bargain they are at no cost to the user.

For more information, visit <https://www.rkb.us/saver>, or contact the RKB by telephone via the help desk, Monday–Friday 8am–5pm EST, at 1-877-FEMA-RKB (1-877-336-2752). A second option is to contact the RKB by e-mail at RKBMailbox@us.saic.com.

Leslie Bank is a subject matter expert for the RKB and provides perspectives on issues pertaining to law enforcement. She served with the Baltimore Police Department for nearly 25 years and retired at the rank of Lieutenant. She presently works as a content analyst on the RKB team. She holds a B.S. degree in Criminal Justice from the University of Baltimore and an M.S. degree in Management from Johns Hopkins University.





Contract Awards

Develop Antibiotics to Treat Anthrax, Tularemia and Plague

University of Illinois at Chicago's Center for Pharmaceutical
Biotechnology
Chicago, IL
\$14,000,000 April 28, 2011
By Defense Threat Reduction Agency, Fort Belvoir, VA

Integration Services Supporting the Defense Threat Reduction Agency's Cooperative Threat Reduction Program

Bechtel National, Inc.
Frederick, MD
Parsons Global Services, Inc.
Pasadena, CA
Raytheon Technical Services Co., LLC
Dulles, VA
URS Federal Services International, Inc.
Cleveland, OH
\$950,000,000 April 27, 2011
By Defense Threat Reduction Agency, Fort Belvoir, VA

Joint Service General Lightweight Standoff Chemical Agent Detectors; Scanner Transit Cases; and Operator Display Unit Transit Cases

General Dynamics Armament and Technical Products, Inc.
Charlotte, NC
\$7,647,765 April 21, 2011
By U.S. Army Contracting Command, Edgewood Contracting Division,
Aberdeen Proving Ground, MD

Support New Nuclear Engineering Research Program and Laboratory

Rensselaer Polytechnic Institute
Troy, NY
\$1,500,000 April 20, 2011
By U.S. Department of Energy Nuclear Criticality Safety Program
Livermore, CA

Advisory and Assistance Services for the Defense Threat Reduction Agency in Support of the Research and Development Enterprise

TASC, Inc.
Andover, MA
\$600,000,000 April 19, 2011
By Defense Threat Reduction Agency, Ft Belvoir, VA

Non Incineration Thermal Process

U.S. Demil, LLC
Buffalo, NY
April 23, 2011
By US Army, Army Contracting Command, Joint Munitions and
Lethality (JM&L) Contracting Center, Picatinny Arsenal, NJ

Research Toward the Development of a Coordinated Response to Potential Chemical, Biological, Radiological, Nuclear or High-Yield Explosive (CBRNE) Threats

Battelle Memorial Institute

Columbus, OH
\$7,808,962 March 23, 2011
By Contracting Squadron, Offutt Air Force Base, NE

Technical Support Group Support Services

A-T Solutions, Inc.
Fredericksburg, VA
\$68,000,000 March 22, 2011
By Defense Threat Reduction Agency, Fort Belvoir, VA

Identification of Rat Personalities for Detecting Bombs

Oklahoma State University
Stillwater, OK
\$740,000 March 21, 2011
By U.S. Army Research Office, Adelphi, MD

Advisory and Assistance Services: Development and Integration Architecture Framework to Support the Defense Threat Reduction Agency Technology Transfer, Gateway and Portal Use

TASC, Inc.
Andover, MA
\$97,000,000 March 17, 2011
By Defense Threat Reduction Agency, Fort Belvoir, VA

Phase Three of the Integrated WMD Toolset (IWMDT)

Science Applications International Corp.
San Diego, CA
\$23,107,037 March 17, 2011
By Defense Threat Reduction Agency, Fort Belvoir, VA

Technical and Engineering Support, Logistics, Material Fielding of Systems, and Business Management Support for Joint Project Manager, Guardian, Under the Cognizance of Joint Program Executive Office, Chemical and Biological Defense

Camber Corp.
Huntsville, AL
\$52,762,304 February 28, 2011
By U.S. Army Research, Development and Engineering Command,
Aberdeen Proving Ground, MD

Develop Medical Countermeasures to Chemical Warfare Threats

Battelle Memorial Institute
Columbus, OH
\$36,700,000 February 24, 2011
By Department of Defense, Washington, DC

Advanced Development of Drugs to Treat Skin and Lung Injuries Associated With Acute Radiation Syndrome (ARS)

Aeolus Pharmaceuticals Inc.
Mission Viejo, CA
\$10,400,000 February 15, 2011
U.S. Biotest Inc.
San Luis Obispo, CA

New Feature! "A Site to See in the History of CBRN Defense"

The CBRNIAC will be spotlighting points of interest in the history of CBRN Defense.

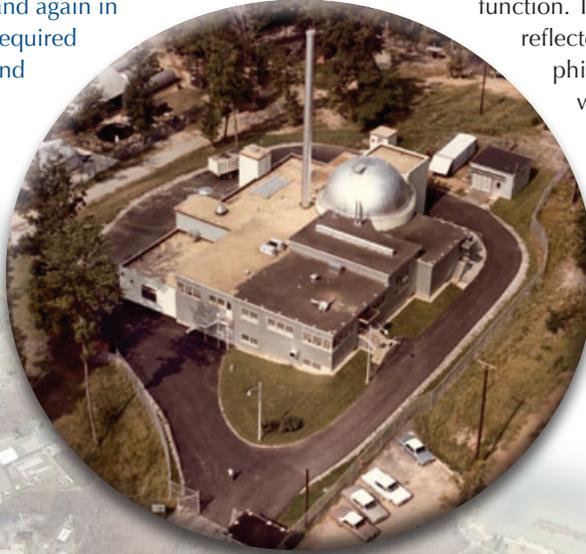
If you would like your organization to be considered for this feature, please send text and graphics to newslettereditor@battelle.org

Fort Belvoir, Post-World War II: 1946–Present

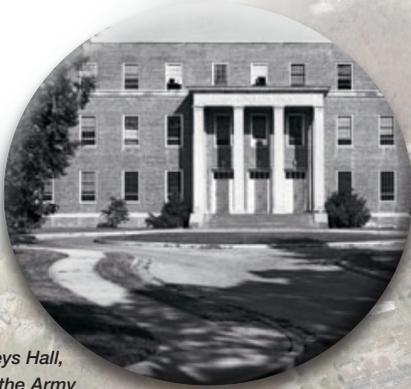
Following World War II, the engineer training role at Fort Belvoir waxed and waned according to wartime needs. In 1945, both the Engineer Replacement Training Center and the Engineer Officer Candidate School were phased out; however, both programs were reactivated in the 1950s during the Korean Conflict, and again in the 1960s with the Vietnam build-up. Both conflicts required a reassessment of the installation's training function and methods, and a revamping of its physical plant.

For example, by 1950, many World War II temporary barracks had been adapted for other uses. When new enlistees and draftees arrived on the post, they had to be housed in six-man tents while the barracks buildings were reconverted back to their original function. The types of training offered also reflected shifts in warfare technology and philosophy; a Close Combat Range was installed on the peninsula south of the village of Accotink, and on North Post, a Chemical/Biological/Radiological School was instituted.

Continued pg. 10



The SM-1 Nuclear Plant was the first nuclear power plant to be designed as a training facility for military personnel. It was in operation from 1957 to 1973.



Humphreys Hall, home of the Army Management Staff College.



DeWitt Army Hospital, May, 1957.



McRee Barracks, a housing complex for single enlisted soldiers, was constructed at Fort Belvoir in 1975.



The U.S. Army Engineer School was officially transferred to Fort Leonard Wood, Missouri on June 1, 1988. At the same ceremony, the Military District of Washington (MDW) assumed operational control of Fort Belvoir.

reported on ERDL's development of pre-fabricated buildings for use in Arctic environments, and the subsequent testing of these structures in Greenland and Canada. During the 1960s, the primary focus of research at Fort Belvoir shifted to the development of Army vehicles.



Tanks and infantry small arms fire support the assault troops in a river crossing exercise, 1955.

Perhaps no structure on the post illustrated more graphically Fort Belvoir's research and development phase than the SM-1 (Stationary, Medium Power, First Prototype) Nuclear Plant. This facility was developed to generate electricity for commercial use, and to cut back the Department of Defense's dependency on fossil fuels. The SM-1 Plant, which represented the first national nuclear training facility for military personnel, became operational in 1957 and remained in operation until its de-commissioning in 1973.

In general, emphasis at Fort Belvoir in the 1950s began shifting from training to research and development. Throughout the decade, the Engineer Research and Development Laboratories (ERDL) were involved in experimentation with a wide range of technical military applications. The laboratories developed and tested new techniques for electrical power generation; camouflage and deception; methods of handling materials and fuel; bridging, and mine detection. They experimented with portable map copying machines, fungicides for use in tropical environments, and heavy earth-moving equipment. The Castle



Engineer students building a wooden bridge across a stream at Fort Belvoir, 1963.

The innovative initiatives pursued at Fort Belvoir during the post-war period were also illustrated in its residential architecture. In 1948, the well-known architectural firm of Albert Kahn & Associates designed the Thermo-Con House. This house form was intended to provide a prototype for low-cost, mass-produced housing. The construction of the house employed an innovative technique that used chemically-treated concrete that rose from its foundation like bread rising in a pan. Another major residential project during the 1970s was the McRee Barracks, a complex of mid-rise buildings constructed in 1975 to house 1,200 single enlisted Soldiers.

Fort Belvoir's mission expanded in other directions between 1950 and 1980. The post began playing host to a variety of organizations, including the DeWitt Army Hospital, the Defense Systems Management College (DSMC), and the Defense Mapping School (DMS). The DeWitt Hospital, constructed in 1957, provided regional healthcare services. DSMC, founded in 1971, was a graduate-level institution that offered advanced courses of study in weapon systems acquisition management for both military personnel and civilians. DMS, a component of the Defense Mapping Agency (now the National Geospatial-Intelligence School), was established in 1972 to provide instruction in tactical mapping, land geodetic surveys, and cartographic drafting.

Fort Belvoir's educational role also expanded in new directions. Every summer from the 1950s through the 1970s, the post hosted a group of United States Military Academy (USMA) cadets for a week-long training visit. The course was designed to emphasize military engineering as a field of specialization for career development. Fort Belvoir's USMA Preparatory School also provided a yearlong course of academic study to prepare selected enlisted personnel for entry into West Point; until it moved to Fort Monmouth, New Jersey.

Fort Belvoir personnel also became intimately involved with two of the most poignant events of the post-war years. In 1963, engineers from Belvoir surveyed the first temporary John F. Kennedy gravesite, and designed a prototype eternal flame—all in less than a week. Lt. Gen. Walter K. Wilson recalled the events of that weekend. "...they decided suddenly...[that] they were going to bury him in Arlington. That really put us in the middle of things. We had to get over there and locate the grave, work with the cemetery staff, survey the plot, and recommend its location." After the President's widow

Ft. Belvoir *cont.*

requested the installation of an eternal flame, recalled Wilson: "We all got together on the floor of an Engineer School building...where we laid out different things that might work. We designed it right on the floor there, the concept of what would be the eternal flame."

In 1982, divers from the installation's 86th Diving Detachment assisted local disaster management agencies in recovering victims and debris from the frozen Potomac River following the disastrous crash of an Air Florida Boeing 737 jet in the midst of a heavy January snowstorm. The post's 11th Engineer Battalion installed float bridging out to the wreck site. Map personnel from the 30th Engineer Battalion also surveyed the wreck site and produced a series of maps that identified each fragment of baggage or equipment on the river bottom.

Fort Belvoir remained the home of the Engineer School and Center until 1988. Due to a shortage of land for training at Belvoir, the Engineer School relocated to Fort Leonard Wood in Missouri, thus ending the 70-year association between the Engineer School and Belvoir.

Although its role as an engineer training center diminished after the move in 1989, Fort Belvoir continued to fulfill an important and valuable role. The 8,600-acre post was one of the larger installations in the Military District of Washington (MDW), which also included Fort McNair, Fort Myer, Fort Meade, and Fort Hamilton. The post's mission was to provide essential administrative and basic operations support to its tenant organizations. Fort Belvoir housed tenants from all armed forces, as well as such Department of Defense agencies as the Army Management Staff College and the Defense Acquisition University. To carry out this mission effectively, Fort Belvoir evolved from a traditional military installation to a more broadly based community. It functioned in many ways like a small city, with its own ordinances, land use plan, building codes, utilities, public parks, and academic institutions. ♦

This section of the History of Fort Belvoir can be found at:
<http://www.belvoir.army.mil/history/Post-WWII.asp>

Fort Belvoir is now home to two Army major command headquarters, as well as 10 different Army major commands, 19 different agencies of the Department of the Army, eight elements of the U.S. Army Reserve and the Army National Guard, and 26 DoD agencies. Also located here are a U.S. Navy construction battalion, a Marine Corps detachment, a U.S. Air Force activity, and an agency from the Department of the Treasury. To learn more about Fort Belvoir, go to <http://www.belvoir.army.mil/>.



Calendar of Events

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

Aug 9–12	REAC/TS COURSE: Radiation Emergency Medicine (REM) Oak Ridge, TN http://orise.orau.gov/reacts/capabilities/continuing-medical-education/radiation-emergency-medicine.aspx	Sep 7–9	2011 JPEO-CBD APBI Baltimore, MD http://www.ndia.org/meetings/1370/Pages/default.aspx
Aug 12–16	2011 Annual NEMA Conference TBD http://www.nemaweb.org/	Sep 11–16	COURSE: Medical Management of Chemical and Biological Casualties APG, MD and Ft. Detrick, MD https://ccc.apgea.army.mil/courses/in_house/MCBC.htm
Aug 15–19	Radiological Emergency Planning: Terrorism, Security, and Communication Boston, MA https://cpe.sph.harvard.edu/programs.cfm?CSID=REP0811&pg=cluster&CLID=1	Sep 12	UK-Canada-U.S.-Australia Quadrilateral Conference London, UK http://www.ndia.org/meetings/147D/Pages/default.aspx
Aug 23–25	Next Generation Dx Summit Washington, DC http://www.nextgenerationdx.com/	Sep 12–14	European Intelligence and Security Informatics Conference (EISIC) 2011 Athens, Greece http://www.eisic.eu/default.aspx
Aug 23–25	Defense Industrial Base Critical Infrastructure Protection (DIB CIP) Conference Philadelphia, PA http://www.ndia.org/meetings/1030/Pages/default.aspx	Sep 12–15	Fifth Annual Emergency Management Summit Brooklyn, NY http://www.emergencymanagementsummit.com/
Aug 23–27	FRI (Fire-Rescue International) 2011 Conference Atlanta, GA http://s36.a2zinc.net/clients/IAFC/fri11/public/MainHall.aspx?ID=1609&sortMenu=101000	Sep 14–17	13th International Paul-Ehrlich-Seminar—Allergen Products for Diagnosis and Therapy: Regulation and Science Washington, DC http://www.fda.gov/BiologicsBloodVaccines/NewsEvents/WorkshopsMeetingsConferences/ucm245976.htm
Aug 28–31	AHMP 2011 National Conference Austin, TX http://www.ahmpnet.org/sites/conf/austin2011/home.php	Sep 19–22	SPIE Security+Defence 2011 Prague, Czech Republic http://spie.org/security-defence-europe.xml?WT.mc_id=RCal-ESDW
Aug 28–Sep 1	14th International Congress of Radiation Research Warsaw, Poland http://www.icrr2011.org/	Sep 19–23	55th Annual Meeting of the Human Factors and Ergonomics Society Las Vegas, NV http://www.hfes.org/web/HFESMeetings/2011annualmeeting.html
Aug 29–Sep 3	2011: Second annual Summer Programme on WMD Disarmament & Non-Proliferation The Hague, the Netherlands http://www.asser.nl/Default.aspx?site_id=1&level1=13692&level2=13728&level3=14591	Sep 20–21	Use of High Throughput Testing for Public Health Decisions about Chemical Alternatives Washington, DC http://dels-old.nas.edu/envirohealth/
Sep 6–9	Sixth International Scientific Conference on Bioaerosols, Fungi, Bacteria, Mycotoxins in Indoor and Outdoor Environments and Human Health Saratoga Springs, NY http://www.domesticpreparedness.com/Calendar_of_Events/	Sep 22	Joint Base Lewis-McChord (JBLM) Technology Expo Tacoma, WA http://www.fbcinc.com/event.aspx?eventid=Q6UJ9A0OPPXX

Continued pg. 13

- Sep 26–27 **2011 Homeland Security Symposium**
Arlington, VA
<http://www.ndia.org/meetings/1490/Pages/default.aspx>
- Sep 26–30 **COURSE: Field Management of Chemical and Biological Casualties**
APG, MD
https://ccc.apgea.army.mil/courses/in_house/FCBC.htm
- Oct 2–5 **7th Triennial Basic and Therapeutic Aspects of Botulinum and Tetanus Toxins - Toxins 2011**
Santa Fe, NM
<http://www.cvent.com/events/toxins-2011/invitation-1f9662b7a6eb43fca8b6c8b5347ba68d.aspx?i=9ecb17e7-9e6a-4ba3-963d-33b44b92af28>
- Oct 3–5 **1st Global Forum on Bacterial Infections: Balancing Treatment Access and Antibiotic Resistance**
New Delhi, India
<http://www.globalbacteria.org/home>
- Oct 4–7 **NEMA 2011 Emergency Management Policy & Leadership Forum**
Austin, TX
http://www.nemaweb.org/index.php?option=com_content&view=article&id=98&Itemid=303
- Oct 5–7 **Meeting: 48th Annual Interagency Botulism Research Coordinating Committee (IBRCC)**
Santa Fe, NM
<http://www.cvent.com/events/48th-annual-ibrcc-meeting/event-summary-0a0f96e7d0bb41d19374181d5ad49e5a.aspx>
- Oct 10–12 **AUSA 2011 Annual Meeting & Exposition**
Washington, D.C.
<http://www.ausa.org/meetings/2011/annual/Pages/annual1010-12.aspx>
- Oct 21–23 **International Toxicology of Mixtures Conference**
Arlington, VA
<http://www.toxicologyofmixtures.com/conference-venue.html>
- Oct 23–28 **COURSE: Medical Management of Chemical and Biological Casualties**
APG, MD and Ft. Detrick, MD
https://ccc.apgea.army.mil/courses/in_house/MCBC.htm
- Oct 24–26 **International Commission on Radiological Protection (ICRP) Symposium on the International System of Radiological Protection**
North Bethesda, MD
<http://www.icrp.org/>
- Oct 29–Nov 2 **APHA 139th Annual Meeting and Exposition**
Washington, DC
<http://www.apha.org/meetings.htm>
- Oct 31–Nov 2 **NHDF 2011 National Symposium**
Colorado Springs, CO
<http://www.nhdf.org/7-national-symposium/2011-program>
- Nov 1–3 **Aircraft Survivability Symposium 2011**
Monterey, CA
<http://www.ndia.org/meetings/2940/Pages/default.aspx>
- Nov 1–4 **4th Annual CBRNe Convergence Conference**
Istanbul, Turkey
<http://www.icbrnevents.com/>
- Nov 8–9 **8th Annual Disruptive Technologies Conference**
Washington, DC
<http://www.ndia.org/meetings/2920/Pages/default.aspx>
- Nov 12–17 **IAEM 59th Annual Conference & EMEX 2011**
Las Vegas, NV
<http://www.iaem.com/>
- Nov 14–18 **COURSE: Field Management of Chemical and Biological Casualties**
APG, MD
https://ccc.apgea.army.mil/courses/in_house/FCBC.htm
- Nov 14–18 **2011 Chemical and Biological Defense Science and Technology (CBD S&T) Conference**
Las Vegas, NV
http://cbdstconf2011.sainc.com/general_information/default.aspx
- Nov 15–17 **2011 IEEE International Conference on Technologies for Homeland Security (IEEE HST 11)**
Boston, MA
<http://www.ieee-hst.org/>
- Dec 8–9 **Emerging Technologies for Measuring Individual Exposomes**
Washington, DC
<http://dels-old.nas.edu/envirohealth/>
- Dec 12–16 **2011 International Congress on Modelling and Simulation (MODSIM 2011)**
Perth, Western Australia
<http://www.mssanz.org.au/modsim2011/>



New CBRNIAC Information Resources

Bjelopera, Jerome P. and Mark A. Randol. **American Jihadist Terrorism: Combating a Complex Threat**. Washington, DC: Congressional Research Service, 2010.
<http://www.fas.org/sgp/crs/terror/R41416.pdf>

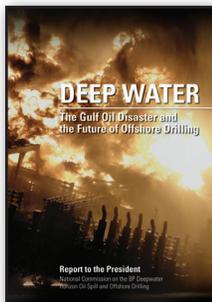


"This report describes homegrown violent jihadists and the plots and attacks that have occurred since 9/11. It discusses the radicalization process and the forces driving violent extremist activity. It analyzes post-9/11 domestic jihadist terrorist activity, describes law enforcement and intelligence efforts to combat terrorism and the challenges associated with those efforts... Finally, the report offers policy considerations for Congress." (Executive Summary)

CB-159320
Congressional Research Service
The Library of Congress
101 Independence Avenue, SE
Washington, DC 20540-7000
Phone: (202) 707-5000

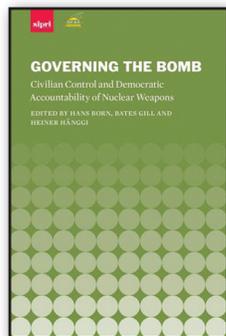
Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling. Washington, DC: National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011.
<http://www.gpoaccess.gov/deepwater/deepwater.pdf>

"The explosion that tore through the Deepwater Horizon drilling rig...April 20 [2010], ...began a human, economic, and environmental disaster. This report is the result of an intense six-month effort [to] .. determine what happened, why it happened, and explain it to Americans everywhere." *Foreword*



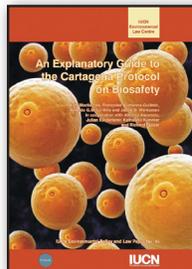
CB-166855
U.S. Government Printing Office
732 N. Capitol Street, NW
Washington, DC 20401
Phone: (202) 512-1800
ISBN: 978-0-16-087371-3

Born, Han, Gill, Bates and Heiner Hänggi, eds. **Governing the Bomb: Civilian Control and Democratic Accountability of Nuclear Weapons**. New York: Oxford University Press, 2010.



"With a special emphasis on civilian control and democratic accountability, **Governing the Bomb** seeks to illuminate the structures and processes of nuclear weapon governance of eight nuclear-armed states: the USA, Russia, the UK, France and China as well as Israel, India and Pakistan." *Inside Cover*

CB-194110
Stockholm International Peace Research Institute
Signalistgatan 9
SE-169 70 Solna, Sweden
Phone: +46 8 655 97 33
ISBN: 978-0-19-958990-6



Mackenzie, Ruth, Burhenne-Guilmin, Françoise, La Viña, Antonio G.M. and Werksman, Jacob D. in cooperation with Ascencio, Alfonso, Kinderlerer, Julian, Kummer, Katharina and Richard Tapper. **An Explanatory Guide to the Cartagena Protocol on Biosafety**. Cambridge, UK: IUCN, 2003.
<http://www.cbd.int/doc/books/2003/B-01669.pdf>

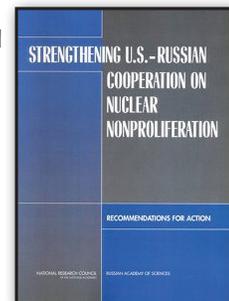
"The Cartagena Protocol on Biosafety is one of the most important international treaties recently adopted. It marks the commitment of the international community to ensure the safe transfer, handling and use of living modified organisms. It is an historic commitment as it is the first binding international agreement dealing with biosafety, thereby addressing novel and controversial issues." *Foreword*

CB-159758
IUCN Publications Services Unit
219c Huntingdon Road
Cambridge CB3 0DL
United Kingdom
Phone: +44 1223 277894
ISBN: 2-8317-0671-8

U.S. Committee on Strengthening U.S. and Russian Cooperative Nuclear Nonproliferation and Russian Committee on Strengthening U.S. and Russian Cooperative Nuclear Nonproliferation. **Strengthening U.S.-Russian Cooperation on Nuclear Nonproliferation**. Washington, DC: National Academy Press, 2005.
http://www.nap.edu/catalog.php?record_id=11302#toc

"In September 2003, the U.S. National Academies and Russian Academy of Sciences jointly organized a workshop on impediments to cooperation between the U.S. and Russia on nuclear nonproliferation. The product of that effort was a report entitled *Overcoming Impediments to U.S.-Russian Cooperation on Nuclear Nonproliferation: Report of a Joint Workshop*. The present fast-track study builds upon that earlier collaboration by providing the consensus recommendations and conclusions of a joint U.S.-Russian committee about the most attractive path forward for cooperation between the two countries on nuclear nonproliferation." *Summary*

CB-196732
National Academies Press
500 Fifth Street N.W.
Lockbox 285
Washington, DC 20055
Phone: (800) 624-6242
ISBN: 0-309-09669-3



Combatting Antibiotic Resistant Bacteria: It's All in the Genes

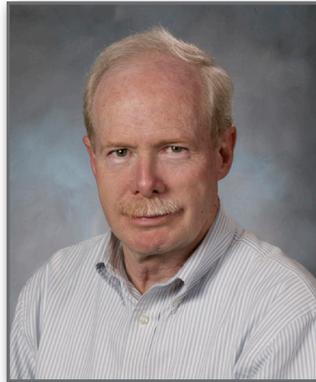
By James A. Bono, LLNL

Researchers at Lawrence Livermore National Laboratory (LLNL) have discovered a new way to combat antibiotic resistant bacteria by using the bacteria's own genes.

For more than 50 years, antibiotics have been used to treat a variety of deadly infections and saved countless lives. Its broad introduction and application has changed the face of medicine worldwide.

Yet, despite the advances made to antibiotics over the years, the list of antibiotic resistant bacteria, such as MRSA (Methicillin-resistant Staphylococcus aureus), *E.coli*, Salmonella and Campylobacter, is growing and becoming one of the world's most serious health concerns. Infections once routinely treatable have now become more difficult to combat and potentially more lethal.

That's where Paul Jackson and his LLNL team come in. The group has taken a new approach to combating antibiotic resistant bacteria by developing a new generation of antibiotics, based upon a much deeper understanding of the bacteria's own genes. The method consists of turning the pathogens' own genes and processes against it.



Paul Jackson, LLNL

"Rather than looking for a more traditional solution to the problem and perhaps finding a chemical or antimicrobial solution, we decided to harness genetic sequencing and take a closer look at the make-up of the pathogen's DNA," Jackson said. "In doing so, we've identified the genes within bacteria that encode for lytic proteins—a very important component for cell survival and one that we could leverage against it."

Lytic proteins are used by bacteria to make small nicks at strategic points within the cell wall so the cell can synthesize new cell wall and divide.

With the lytic protein-producing genes identified, Jackson's team used the genes to drive synthesis of the encoded proteins in the laboratory and purified them. They then introduced the purified protein to the exterior of the bacterial cells. The results were quick and very clear—complete and total destruction of the pathogen's cell wall. Because these lytic proteins are unique to each bacterial species, the purified protein will only target that specific bacteria cell species, leaving other cells unharmed.

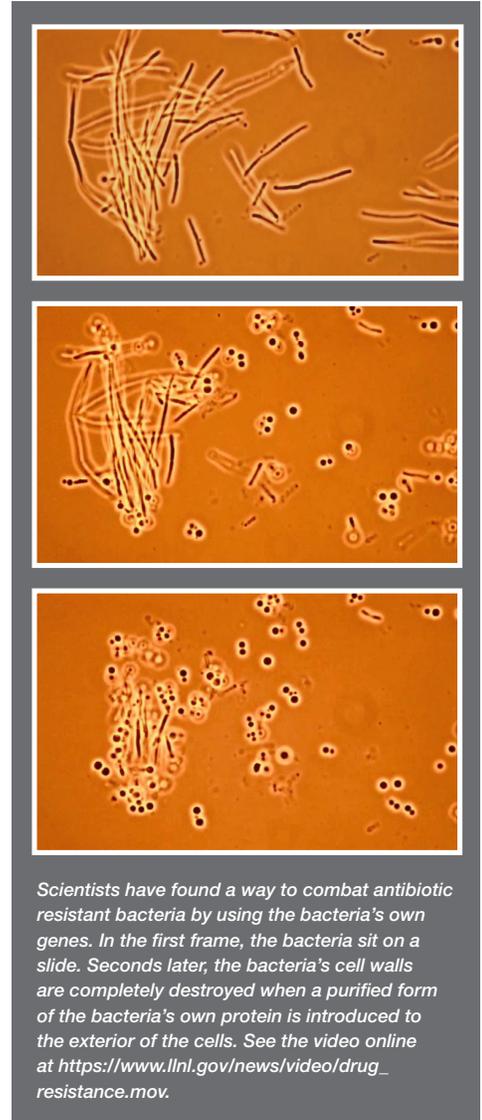
"The purified protein has a very narrow spectrum but can be mixed with other lytic proteins from other bacterial species to produce a broader spectrum of antibiotics," Jackson said. "The research also has

shown that the purified lytic protein is very stable, with a long shelf life and only extremely small amounts are required to very quickly destroy bacterial cells."

Because these proteins are essential to the life cycle of the cell, it is unlikely that the bacteria could adequately defend against it. If it tried, it would likely deprive the cell of the ability to divide—a process absolutely required for production of more pathogen cells.

Jackson said his team can sequence genomes and produce purified lytic proteins within a few weeks for unknown bacteria species or species that have not been sequenced.

The team continues to test its pioneering technique on additional pathogens. ♦



Scientists have found a way to combat antibiotic resistant bacteria by using the bacteria's own genes. In the first frame, the bacteria sit on a slide. Seconds later, the bacteria's cell walls are completely destroyed when a purified form of the bacteria's own protein is introduced to the exterior of the cells. See the video online at https://www.llnl.gov/news/video/drug_resistance.mov.

This article can be found online at <https://www.llnl.gov/news/newsreleases/2011/Jan/NR-11-01-05.html>

LAWRENCE LIVERMORE NATIONAL LABORATORY
Science and Technology in the National Interest

NNSA
National Nuclear Security Administration

U.S. DEPARTMENT OF ENERGY

LAWRENCE LIVERMORE NATIONAL SECURITY, LLC

Founded in 1952, Lawrence Livermore National Laboratory is a national security laboratory, with a mission to ensure national security and apply science and technology to the important issues of our time. Lawrence Livermore National Laboratory is managed by Lawrence Livermore National Security, LLC for the U.S. Department of Energy's National Nuclear Security Administration.

DTIC Online Access Controlled (DOAC)'s New Look

DTIC Online Access Controlled (DOAC), the gateway to DTIC's products and services, has a new look. We improved the organization of the content to make it easier for you to locate your favorite resources. Notice the Budget section at the top left of the Web site with links to the budget tools you need this time of year.

The DOAC search navigation has been enhanced with the addition of "Next" and "Previous" buttons on citation pages to facilitate your review of search results. The search functionality remains the same when you search several resources from the banner search or target specific databases from the "More Search Options" page. You will still find your favorite functions, such as Saved Searches, Scheduled Searches, and Bibliographies, and their readily accessible Search Tips.

The major change to DOAC is the replacement of the Shopping Cart with a new link to the Digitization Request. Since DTIC is no longer printing Technical Reports, the documents will be digitized upon request at no cost for registered users. The DTIC staff is processing an increasing number of requests and will notify you via email as soon as the requested AD# is available for download from DOAC or DTIC Online Classified. This popular change is providing registered users access to more free, full-text documents in the DTIC collection. We appreciate your patience until we have an automated process in place for this new service.

Visit DOAC online at <https://www.dtic.mil/>.

If you need help finding one of your favorite resources on the updated site or developing a search strategy on DOAC, contact DTIC at dtic-online@dtic.mil or 1-800-225-3842, 703-767-8274, or DSN 427-8274.

Let your voice be heard! Visit DTIC CARES and provide feedback on your DTIC experiences (<https://ca.dtic.mil/pubs/survey/caessuiteofservices.htm>).

"Gadget" to be Displayed in Trinity Exhibit

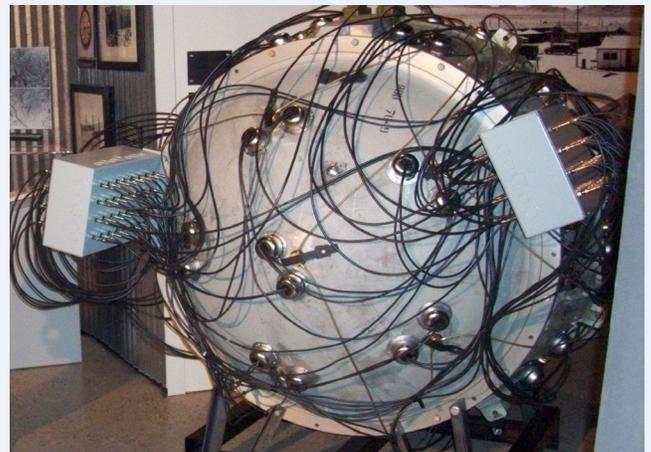
By Jeanette Miller, National Museum of Nuclear Science and History

It hung from a 100-foot tower and when it was detonated, the world changed forever. New Mexico was thrust into the international spotlight in 1945 as the location of the Trinity Site, where the world's first atomic bomb, code named "the Gadget" was tested. A full-sized replica of that first device is now on display at the National Museum of Nuclear Science & History in Albuquerque, New Mexico.

The metal sphere that the Museum obtained to create the piece that is now on display may have been cast at the same time as the actual Trinity and Fat Man devices. The Museum added the wiring to replicate the Gadget tested at Trinity Site. The Museum curator, David Hoover, provided the following description of "the Gadget":

"A subcritical sphere of plutonium was placed in the center of a hollow sphere of high explosive. Numerous detonators located on the surface of the high explosive were fired simultaneously. This produced a powerful inward pressure in the core, squeezing it and increasing its density, resulting in a supercritical condition and a nuclear explosion."

The object has been placed in the Trinity Exhibit, the Museum's area that represents the culmination of the Manhattan Project, which developed the weapon in secret for test in 1945. Two other large artifacts are included in the exhibit area, a 1941 Packard limousine and a 1942 Plymouth. The Packard is a "Clipper Six," and the actual vehicle that ferried Manhattan Project senior scientists and military personnel to the Trinity Site. It was retro-fitted into a 15-passenger limousine. The Plymouth is not the actual auto that carried the plutonium core to the Trinity Site, but is the same model.



"This display of 'the Gadget' enhances our exhibit by representing the first bomb," said Jim Walther, Director of the Museum. "Visitors can imagine how the work of Robert J. Oppenheimer and others came to fruition on that fateful July day."

For more information about the Museum, visit <http://www.nuclearmuseum.org> or call (505) 245-2137.

An article about the Gadget also appeared in the Kirtland Air Force Base NUCLEUS, April 29, 2011 issue.





In the News

Vaccine Research Center Celebrates First Decade

Rich McManus

NIH Record

April 29, 2011

"When NIH director Dr. Francis Collins called the Vaccine Research Center 'not only a light for NIH and the United States, but also a light for the world' on the occasion of its 10th anniversary celebration Mar. 31 at Natcher Bldg., he could have been anticipating the breadth of the succeeding scientific symposium."

http://nihrecord.od.nih.gov/newsletters/2011/04_29_2011/story1.htm

Multistate Outbreak of Human *Salmonella* Typhimurium Infections Associated with Exposure to Clinical and Teaching Microbiology Laboratories

Centers for Disease Control and Prevention

April 28, 2011

CDC is collaborating with public health officials in many states to investigate a multistate outbreak of *Salmonella* Typhimurium infections associated with exposure to clinical and teaching microbiology laboratories.

<http://www.cdc.gov/salmonella/typhimurium-laboratory/042711/index.html>

Dynasil Corporation Wins Homeland Security Award for Radiation Detection

BUSINESS WIRE

April 28, 2011

"The research division, Radiation Monitoring Devices, Inc. (RMD), of Dynasil Corporation has been named a 2011 Department of Homeland Security (DHS)'s small business winner for radiation and nuclear detection."

<http://www.businesswire.com/news/home/20110428006109/en/Dynasil-Corporation-Wins-Homeland-Security-Award-Radiation>

Continuing to Strengthen Nuclear Operations: Munitions Squadrons to Realign

Vicki Stein

U.S. Air Force News Release

April 27, 2011

"Air Force officials announced April 27 here plans to transfer munitions squadrons responsible for nuclear mission support from Air Force Materiel Command to Air Force Global Strike Command in the next 12 months. This is another step in continuing to strengthen the nuclear enterprise..."

<http://www.af.mil/news/story.asp?storyID=123253447>

Update: Iran Says It Was Targeted With Second Worm, 'Stars'

Robert McMillan

COMPUTERWORLD

April 25, 2011

"The general responsible for investigating the Stuxnet attack on Iran's nuclear program says the country was also hit by a second targeted attack, called Stars."

http://www.computerworld.com/s/article/print/9216140/Update_Iran_says_it_was_targeted_with_second_worm_Stars_

Aberdeen Proving Ground Among First To Use Army's New E-Mail Service, Domain

Mary Paramore

The Aegis

April 20, 2011

"Aberdeen Proving Ground is one of the first military installations to move to a new e-mail service. The migration to Enterprise began in early April and should be complete by June 2..."

<http://www.exploreharford.com/news/8684/aberdeen-proving-ground-among-first-use-armys-new-e-mail-service-domain>

Secretary Napolitano Announces Implementation of National Terrorism Advisory System

Department of Homeland Security Press Release

April 20, 2011

"Secretary of Homeland Security Janet Napolitano today will announce the implementation of the Department of Homeland Security's (DHS) National Terrorism Advisory System (NTAS)—a robust terrorism advisory system that provides timely information to the public about credible terrorist threats and replaces the former color-coded alert system."

http://www.dhs.gov/ynews/releases/pr_1303296515462.shtm

How Anthrax Sleuths Cracked the Case By Decoding Genetic 'Fingerprints'

Daniel de Vise

The Washington Post

April 16, 2011

"Inside a Rockville laboratory, a team of scientists labored in round-the-clock shifts to do something many colleagues thought impossible: decode the genetic "fingerprint" of a deadly anthrax sample to help the FBI solve a case."

http://www.washingtonpost.com/local/education/how-anthrax-sleuths-cracked-the-case-by-decoding-genetic-fingerprints/2011/04/08/AF6iTtqD_story.html?wpisrc=emailtoafriend

University of Missouri Researcher Works With Carbon Fiber to Reinforce Buildings; Protect From Explosion

Steven Adams

MU News Bureau

April 14, 2011

"Most buildings are not constructed to withstand an unexpected explosion or impact. Now, a researcher at the University of Missouri is working with the U.S. Army to test a method of retrofitting buildings to protect them in the case of a terrorist attack."

<http://munews.missouri.edu/news-releases/2011/0414-university-of-missouri-researcher-works-with-carbon-fiber-to-reinforce-buildings-protect-from-explosion>

Army Starts Clinical Testing of Ricin Vaccine

Global Security Newswire

April 13, 2011

"The U.S. Army Medical Research Institute of Infectious Diseases on Wednesday announced the beginning of a clinical evaluation of a potential vaccine against the biological agent ricin."

http://gsn.nti.org/gsn/nw_20110413_7282.php

Continued pg. 18

DiaMedica Announces an Evaluation Agreement with the U.S. National Institute of Allergy and Infectious Disease against a Bioweapon Pathogen

DiaMedica Press Release

April 11, 2011

"DiaMedica is pleased to announce the company's entry into an evaluation agreement with the National Institute of Allergy and Infectious Diseases (NIAID), a component of the U.S. National Institutes of Health (NIH), to further evaluate its monoclonal antibody (mAb), in a pre-clinical model, for the treatment of tularemia..."

<http://www.diamedica.com/news/diamedica-announces-evaluation-agreement-us-national-institute-allergy-and-infectious-disease--0>

U.S. Funds Tularemia, Botulism Treatment Research
Global Security Newswire

April 3, 2011

"The Canadian biopharmaceutical firm DiaMedica on Monday said it had entered a deal with the U.S. National Institute of Allergy and Infectious Diseases for continued study of a potential tularemia countermeasure."

http://gsn.nti.org/gsn/nw_20110413_7929.php

Presidential Policy Directive/PPD-B - National Preparedness
The White House Policy Release

March 30, 2011

"This directive is aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters."

<http://www.fas.org/irp/offdocs/ppd/ppd-8.pdf>

Bioenvironmental Techs Test For Toxins Near Tokyo

Airman 1st Class Maeson L. Elleman

U.S. Air Force News Release

March 22, 2011

"Among the typical crews for disaster relief in mainland Japan is an atypical crew... the 18th AMDS have deployed to Honshu island, sometimes known as mainland Japan, to aid Yokota AB in the testing for radiation and other contaminants in the surrounding environment."

<http://www.af.mil/news/story.asp?storyID=123247969>

U.S.-funded 100 mln Bio Lab Opens in Tbilisi

Civil.ge Daily News Online

March 19, 2011

"Georgian and the U.S. senior officials opened on March 18 in outskirts of Tbilisi USD 100 million biological research facility designed to, as the officials say, promote public and animal health through infectious disease detection and epidemiological surveillance."

http://www.civil.ge/eng/_print.php?id=23257

U.S. Moves to Shield Forces From Japan Radiation Risk

Phil Stewart

U.S. National Library of Medicine Release

March 15, 2011

"The U.S. military took new steps to shield personnel from radiation spread by Japan's crippled nuclear plant on Tuesday, redirecting arriving warships to safer waters and telling some forces to limit time outdoors. But the U.S. Navy said it would not stop flying relief missions to help..."

http://www.nlm.nih.gov/medlineplus/news/fullstory_109891.html

New Robot System to Test 10,000 Chemicals for Toxicity

NIH News

March 10, 2011

"Several federal agencies, including the National Institutes of Health, today unveiled a new high-speed robot screening system that will test 10,000 different chemicals for potential toxicity."

<http://www.nih.gov/news/health/mar2011/niehs-10.htm>

Plan Bridges Gaps in Homeland Responses

Lisa Daniel

American Forces Press Service

March 8, 2011

"Defense Secretary Robert M. Gates has agreed to a plan that will allow for one commander to be in charge of both National Guard and reserve forces when they are called up to respond to domestic emergencies."

<http://www.defense.gov/news/newsarticle.aspx?id=63077>

Radiation Monitors Continue to Confirm That No Radiation Levels of Concern Have Reached the United States

EPA Press Office Release

March 22, 2011

"During a detailed analysis of four west coast RadNet air monitor filters, the U.S. Environmental Protection Agency (EPA) identified trace amounts of radioactive iodine, cesium, and tellurium consistent with the Japanese nuclear incident. These levels are consistent with the levels found by a Department of Energy monitor last week and are to be expected in the coming days."

<http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/3724de8571e1b03f8525785c00041a7a!OpenDocument>

To Test Their Nuke Detectors, Researchers Are Coming to Y-12 For The Real Stuff

Frank Munger

KnoxNews

March 12, 2011

"As Y-12 reinvents itself in the 21st century, among the growing missions at the nuclear weapons plant is work on nuclear nonproliferation and counter-terrorism. One notable effort is the newly established Nuclear Detection and Sensor Testing Center—where researchers can use Y-12's stocks of highly enriched uranium to test next-generation detectors that are needed to keep terrorists and nuclear smugglers from crossing borders with bomb-making materials."

<http://blogs.knoxnews.com/munger/2011/03/when-testing-nuke-detectors-re.html>

NNSA Partners with Canada, Russia to Build Counterterrorism Training Center for the Russian Federation Ministry of Defense

NNSA Press Release

January 14, 2011

"The National Nuclear Security Administration (NNSA) announced today the signing of a Memorandum of Understanding (MOU) between NNSA and Canada's Department of Foreign Affairs and International Trade to support the establishment of a new counterterrorism center."

<http://www.nnsa.energy.gov/mediaroom/pressreleases/cannustrainingctr11411>



CBRNIAC Hosts Technical Forum on Food Protection from Rad Threats

On February 15, 2011, the CBRNIAC hosted a technical forum on Food Protection from Rad Threats at the Battelle Eastern Science and Technology Center in Aberdeen, Maryland. Intended to bring together members of the technical and response communities from government, academia, and industry in order to identify needs and develop recommendations for addressing food safety issues as they apply to radiological contamination and its repercussions, representatives from key U.S. Government agencies offered timely presentations that led to dynamic dialog among speakers and attendees and plans for future interagency efforts. Presentations and discussions revolved around key issues regarding food protection and defense, specific problems that emerge as a result of radiological contamination, and how the technical and response communities can achieve mission interoperability and interagency cooperation.

Mr. Don McGonigle, a CBRNIAC Subject Matter Expert (SME) in the area of CBRN Defense introduced the Forum agenda and highlighted CBRNIAC services relevant to the issues of Food Protection and Radiological threats. Issues discussed included:

- Requirements
- Capabilities
- Where Do We Go from Here?

Panel discussions engaged participants in generating a set of principles to serve as a framework for addressing these issues. The final session was a discussion of future issues and action items. Dr. James M. King, Deputy Director, CBRNIAC, closed the forum with summary remarks and dismissed attendees by 2:00 pm.

AGENDA

REQUIREMENTS

830–850	Welcome / What the CBRNIAC can do for you Don McGonigle, <i>CBRNIAC</i>
850–910	USDA Perspective Ron Graham, <i>USDA/FSIS</i>
910–930	FDA Perspective Dr. William Cunningham, <i>FDA</i>
930–950	Food and Emergency Response CAPT Michael Noska, <i>USPHS/FDA</i>
950–1035	Panel Discussion / Q&A CAPT Michael Noska/ Ron Graham/ Bill Cunningham

CAPABILITIES

1050–1120	Advisory Team for Environment, Food, and Health/FRMAC Monitoring and Sampling Ed Tupin/ Alan Remick, <i>EPA/USDA/CDC/FDA/NNSA</i>
1120–1140	Food Emergency Response Network Rad Capabilities Dr. Cong Wei, <i>FERN (FDA/USDA)</i>
1140–1200	CBP Capabilities John (Pat) Donnachie, <i>DHS/CPB</i>
1245–1305	Program 26 Overview LTC Rosser, <i>US Army</i>
1305–1350	Panel Discussion / Q&A COL Bob Walters/Ed Tupin/Alan Remick/Dr. Cong Wei/Pat Donnachie/LTC Rosser

WHERE DO WE GO FROM HERE?

1405–1425	Food and Agriculture Needs Gordon Cleveland, <i>USDA</i>
1425–1445	Livestock Surveillance Dr. Craig Marianno, <i>TAMU</i>
1445–1505	Livestock Decontamination Dr. Tom Johnson, <i>CSU</i>
1505–1550	Panel Discussion / Q&A Panel Leaders/ Gordon Cleveland/ Craig Marianno/Tom Johnson
1550–1600	Summary Dr. Jim King, <i>CBRNIAC</i>

ABOUT THE SMES

Don McGonigle

CBRNIAAC SME

Mr. McGonigle is a CBRNIAAC SME and Principal Research Scientist for Battelle with over 28 years experience in all aspects of systems engineering, program and content management with specialized expertise in chemical and biological defense solutions. He is the manager for CBRNIAAC Content Management & Information Operations. Mr. McGonigle holds a B.S. in biomedical engineering from Duke University.

Ron Graham

Senior Food Defense Analyst

Food Defense Assessment Staff

Office of Data Integration and Food Protection

Food Safety and Inspection Service (FSIS)

US Department of Agriculture (USDA)

Since October 1992, Ron Graham, a retired U.S. Army Corps of Engineers Lieutenant Colonel, has worked for the USDA's FSIS in a number of positions, including a Senior Emergency Radiological Response Analyst, Senior Food Defense Analyst, FSIS Exercise Planner, and the FSIS Federal Radiological Advisory Team for Environment, Food, and Health representative.

Since his time with the FSIS, Mr. Graham has been involved in over 200 radiological (nuclear power plant, weapons, and radiological dispersal device (RDD)) exercises as a planner, player, and evaluator. Beginning in 2005, Ron became the senior FSIS exercise planner, and has since developed and coordinated an FSIS exercise program that has completed over 50 FSIS senior official exercises.

From 1980 to 1992, Mr. Graham was an Engineer officer with the U.S. Army Corps of Engineers, and held several command, construction management, and emergency response positions throughout Germany, Turkey, and the U.S. From 1992 to 2003, Mr. Graham was a Reserve officer with the Corps' Transatlantic Program Center (TAC) located in Winchester, Virginia. During this time, Ron was assigned to manage several construction projects throughout Germany, Bosnia, and Ghana, including an extended tour as a Disaster Survey Officer with FEMA Region III during the 1996 Pennsylvania floods. In February 2003, he culminated his 25+ year career as TAC's Senior Construction Officer in Doha, Qatar, focusing on the construction of the U.S. Army Central Command's Forward Operations Center prior to the buildup of the Iraq war.

William Cunningham, Ph.D

Regulatory Review Scientist/Research Chemist

Office of Regulatory Science (ORS)

Center for Food Safety and Applied Nutrition (CFSAN)

U.S. Food and Drug Administration (FDA)

Department of Health and Human Services (DHHS)

Dr. Cunningham is a regulatory review scientist and research chemist in the Food and Drug Administration's Center for Food Safety and Applied Nutrition. He has a strong radiological background and experience in several laboratory analysis techniques. He serves on Federal

multiagency committees and workgroups that address issues involving radioactive contamination of food.

Dr. Cunningham received a Ph.D. degree in Nuclear and Environmental Chemistry from the University of Maryland in 1979. His experience and work interests include emergency response, research, teaching, and risk analysis.

CAPT Michael Noska

US Public Health Service (USPHS)

Department of Health and Human Services (DHHS)

Food and Drug Administration (FDA)

CAPT Noska is the Senior Advisor for Health Physics and the Lead Coordinator for Radiological Emergency Response in the Office of the Commissioner at the FDA. CAPT Noska has served in the USPHS for 18 years. His health physics career began at the National Institutes of Health where he served for six years in a variety of medical health physics positions, mainly related to internal dosimetry and radioanalysis. His next assignment was with the FDA Center for Biologics where he served as the project manager for the review of radiopharmaceuticals. In 2002, CAPT Noska joined the Center for Devices and Radiological Health where he began his work in emergency preparedness. He transferred to the Office of the Commissioner in 2009, where his current assignment is to develop a consolidated radiation safety program at FDA's White Oak campus. Prior to joining the PHS, CAPT Noska spent eight years as a research assistant in radiopharmaceutical laboratories at Harvard Medical School and Duke University Medical Center developing radiolabeled monoclonal antibodies for the treatment of cancer. CAPT Noska received his B.A. from the University of Massachusetts and his M.S. from the University of North Carolina School of Public Health. CAPT Noska is a Past President of the Baltimore-Washington Chapter of the Health Physics Society. He is a member of the Advisory Team for the Environment, Food and Health and the Federal Radiological Preparedness Coordinating Committee. He also serves on several interagency committees and workgroups related to radiological emergency response.

Edward A. Tupin

Certified Health Physicist

U.S. Environmental Protection Agency (EPA)

Edward A. Tupin is a Health Physicist at the Center for Radiological Emergency Management, Radiation Protection Division, Office of Radiation and Indoor Air, Office of Air and Radiation, U.S. Environmental Protection Agency in Washington, DC. He has over 30 years experience in Health Physics. Ed is a member of the EPA Radiological Emergency Response Team and an EPA representative to the Advisory Team for Environment, Food and Health. During radiological emergencies, he provides advice and guidance on environmental radiation exposures and long term cleanup issues.

Mr. Tupin served 17 years as a Commissioned Officer in the U.S. Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR), Division of Health Assessment and Consultation, Federal Facilities Assessment Branch. He conducted the radiological health assessment of former Manhattan Project sites and evaluated long term

effects and potential spread of radionuclides left in the environment by operations. Ed participated in the anthrax sampling at the AMI building in Boca Raton, Florida, and the Brentwood Post Office in Washington, DC. As part of the Office of Health Physics in the Center for Devices and Radiological Health (CDRH) in the Food and Drug Administration (FDA), Ed was one of the CDRH staff who provided radiological expertise during the Chernobyl reactor accident. Following that, he participated in the revision of the FDA Guidance on contaminated food into its present form.

Ed's seven years of service in the U.S. Army included tours of duty as the Radiation Safety Officer (RSO) for the Joint Task Group Enewetak Atoll Cleanup Project (remediation of the atoll which was used for testing of nuclear weapons), and Womack Army Community Hospital, Fort Bragg, North Carolina. He was a Health Physicist and Assistant RSO at Walter Reed Army Medical Center, and the Officer in Charge for the Radiological Advisory Medical Team (RAMT). He participated in NUWAX 83 as RAMT leader, providing health physics advice on a variety of topics, including human health and potential cleanup levels during the exercise. From 1977-1979, he was a Health Physics survey officer for the U.S. Army Environmental Hygiene Agency (renamed Center for Health Promotion and Preventive Medicine and now the U.S. Army Public Health Command) reviewing army facilities for compliance with NRC license conditions and surveying diagnostic x-ray systems for compliance with FDA and Army requirements.

Mr. Tupin is a Certified Health Physicist, and holds a B.S. in biology from Wake Forest University and an M.S. in pathology from Duke University.

Alan Remick

National Nuclear Security Administration (NNSA)

Alan Remick has worked for almost 30 years as an emergency planner and responder for the Federal Government, including Department of Defense (Navy) and Department of Energy/National Nuclear Security Administration (DOE/NNSA).

He is the former Regional Response Coordinator for the DOE's Radiological Assistance Program (RAP) in Region 7 and also served as the DOE/NNSA Program Manager for the RAP.

Currently, he is the DOE/NNSA Program Manager for the Aerial Measuring System (AMS) and the Radiological Emergency Assistance Center/Training Site (REAC/TS).

He is qualified as a "Senior Energy Official" for responses involving the DOE/NNSA Emergency Response Assets, and has served in this capacity for exercises including TOPOFF IV, Empire 09, and Liberty RADEX.

Cong Wei, Ph.D.

*Department of Health and Human Services (DHHS)
Food and Drug Administration (FDA)
Office of Regulatory Affairs (ORA)
Winchester Engineering and Analytical Center (WEAC)*

Cong Wei earned his Ph.D. degree in chemistry at Yale University where his research focus was in the area of Dynamics of Surface Reactions. One of the research projects at Yale, featured in "The Study

of Translational Excitation of CO₂ Produced from CO Oxidation on Pd Using High Resolution Infrared Chemiluminescence Spectroscopy." *J. Chem. Phys.*, 103, 15, (1995) with Dr. Gary Haller, led the first understanding of the total energy participation of CO₂ produced from CO oxidation on certain catalyst surfaces. After graduation from Yale, Dr. Wei joined private industry working on developing analytical technologies for real time diagnostics and control of industrial processes. As one of the key inventors, he developed enabling analytical technologies and methodologies for real time in-situ process control of certain semiconductor manufacturing process. He started with the FDA, Winchester Engineering and Analytical Center (WEAC) in 2004 as the supervisor of WEAC's Radionuclides/Chemistry Section. He is a co-author of approximately 30 patents/scientific articles. He also studied physics for a B.S. degree and received an M.S. degree in electrical engineering where he conducted research in Gas Discharges and Its Applications.

John (Pat) Donnachie

*Department of Homeland Security (DHS)
US Customs and Border Protection (CBP)*

John Patrick Donnachie is a Certified Health Physicist (CHP) and a Director with the DHS CBP. He directs and manages the operations of CBP's Teleforensic Center (TC), a facility within the CBP Laboratories and Scientific Services division. The mission and function of the TC is to provide DHS interagency field personnel with reach back access to scientific and technological resources and provide threat assessment for the detection of weapons of mass destruction (WMD).

LTC Constance Sims Rosser

*US Army
Radiation Safety Officer
Defense Threat Reduction Agency (DTRA)*

LTC Rosser is the Radiation Safety Officer for Defense Threat Reduction Agency (DTRA), Fort Belvoir, Virginia. She previously served as FDA, Center for Food Safety and Applied Nutrition (CFSAN) Radiation Safety Officer from 2000 to 2009.

During her assignment at FDA/CFSAN she was engaged in research and development; emergency response and planning; decommissioning; designated as one of DHHS/FDA SMEs to the Alternative Technologies Working Group to address Class 1 and Class 2 radioactive sources as Congressionally mandated in the Energy Policy Act of 2005; and as an SME to a DHHS/FDA Working Group to re-evaluate and develop, as deemed necessary, the DHHS primary mission essential task regarding food defense and protection.

LTC Rosser has served as a Commissioned Army Officer for the past 20 years and is currently mobilized as a Senior Nuclear Medical Science Officer at the US Public Health Command/Army Institute of Public Health, Aberdeen Proving Ground, Maryland. When not mobilized, she serves in the United States Army Reserves as Chief, Preventive Medicine Section, 338th Medical Brigade, Chester, Pennsylvania. Her responsibilities include management and execution of Preventive Medicine assets, to include food defense, outbreak investigations, and veterinary services.

She is a 1994 Graduate of the Army's Command and General Staff College; holds a master's degree in Public Health from Tulane University and a B.S. in Radiological Technology from Tuskegee University.

She is a certified Lean Six Sigma Green Belt.

COL Bob Walters, D.V.M.

*Colonel, US Army
Director, Department of Defense
Veterinary Service Activity*

COL Bob Walters holds a B.S. in agriculture and a D.V.M. from the University of Missouri, Columbia. He completed a M.P.H. from Johns Hopkins University and is a Diplomate of the American College of Veterinary Preventive Medicine. He is a graduate of the Command and General Staff College and a member of the Order of Military Medical Merit. COL Walters is a recipient of The Surgeon General's "A" Proficiency Designator for Veterinary Public Health.

COL Walters previous assignments include serving as the Chief, Department of Veterinary Science, Army Medical Department Center and School; Deputy Director of Department of Defense Veterinary Service Activity (DODVSA); Commander of the 106th Med Det (VS) and Theater Veterinary Command, Yongsan, Korea; Commander of the Japan District Veterinary Command, Camp Zama, Japan; Deputy Chief of Staff Operations (G3), 30th Medical Brigade, Heidelberg, Germany. His deployments include Bosnia-Herzegovina, Macedonia, Indonesia, Mongolia, Nepal, Bangladesh, Malaysia, and East Timor.

COL Walters currently serves as the Director, DODVSA, Office of The Surgeon General, Falls Church, Virginia.

Gordon S. Cleveland

*Radiological Program Analyst
United States Department of Agriculture (USDA)
Animal and Plant Health Inspection Service Veterinary Services (APHIS VS) and the National Center for Animal Health Emergency Management (NCAHEM)*

Gordon Cleveland is the Radiological Program Analyst for the USDA/ APHIS VS NCAHEM. He has held this position for 3 years. Mr. Cleveland received his B.A. degree in anthropology at the University of Colorado, and was Research Associate at the University of Hawaii's Animal Science Department before coming to USDA. Currently he is researching radiological carcass disposal, radiological surveillance and decontamination of pets, service animals, livestock, and poultry.

Craig Marianno, Ph.D.

*Certified Health Physicist (CHP)
Texas A&M University (TAMU)*

Dr. Marianno is a Texas Engineering Experiment Station (TEES) Research Engineer working in the Nuclear Security Science and Policy Institute and a Visiting Assistant Professor in the Department of Nuclear Engineering at TAMU. His areas of interest include nuclear counter terrorism, nuclear instrumentation development, exercise development, radiological consequence management and environmental health

physics. From 2000–2009, Dr. Marianno worked for the Remote Sensing Laboratory (RSL) and served in many of the National Nuclear Security Administration's emergency response teams. He has been a member and team lead of several nuclear emergency response groups including Nuclear/Radiological Advisory Team (NRAT), Capital Region Search Team (CRST), Aerial Measurements System (AMS), Consequence Management Response Team (CMRT), Federal Radiological Monitoring and Assessment Center (FRMAC), the Search Response Team (SRT) and a Captain on the Radiological Assistance Program (RAP). He was responsible for generating the dose assessment and geographic data sets for every nuclear power plant exercise in which the Department of Energy (DOE) participated from 2004 to 2007. He has a bachelor's in physics from the University of California at Davis, a Master's in Radiological Health Sciences from Colorado State, and a Ph.D. in Radiation Health Physics from Oregon State. He is a CHP, a member of the Health Physics Society, and a member of the Society's Homeland Security Committee.

Thomas E. Johnson, Ph.D.

*Assistant Professor
Department of Environmental and Radiological Health Sciences
Colorado State University (CSU)*

Dr. Thomas Johnson is an Assistant Professor in the Department of Environmental and Radiological Health Sciences at Colorado State University (CSU). He holds a B.S. from Southern Illinois University, an M.B.A. from the University of Illinois, an M.S. in environmental engineering from Northwestern University, and Ph.D. in health physics from Purdue University. His research efforts are on decontamination, health effects of uranium mining, the effect of lasers on the skin and cornea and laser safety standards. Current research projects include determination of best methods to decontaminate livestock, and fate of in-situ recovery uranium mines. He is a member of the Governor's Radiation Advisory Committee for the State of Colorado, serves on the CSU Radiation Safety Committee, and is a member of the American National Standards Institute Z136 editorial working group.

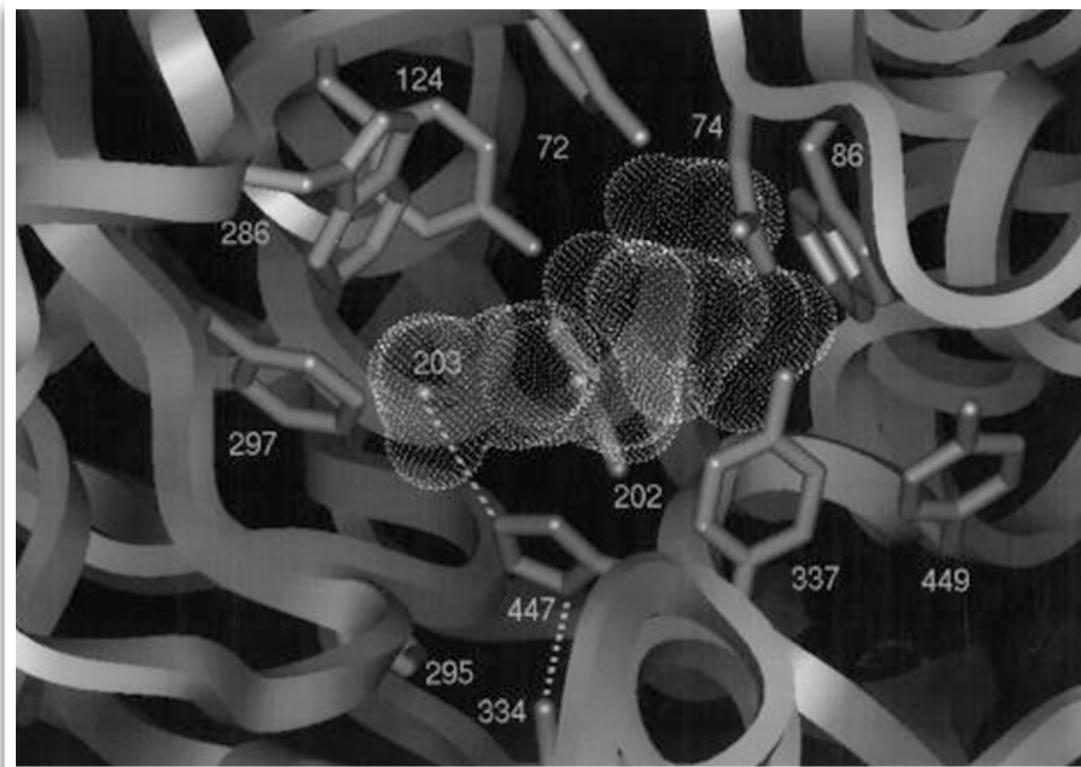
James M. King, Ph.D.

Deputy Director, CBRNIAC

Dr. King spent over 22 years in the Department of Defense serving in a variety of senior level management and research and development positions prior to assuming the position of Deputy Director, CBRNIAC. He was appointed Chief of the Pharmacology and the Research Operations Divisions at the U.S. Army Medical Research Institute of Chemical Defense. As Senior Staff Officer in the Army's Medical Chemical Defense Program, he was responsible for overseeing planning, budgeting, and execution of the Joint Medical Chemical Defense Program. While at the U.S. Army Aeromedical Research Laboratory and the U.S. Army Human Engineering Laboratory, Dr. King served as a Division Chief and Commander and Deputy Director. He has also been a research officer at the U.S. Army Health Care Studies and Clinical Investigation Activity and the U.S. Army Medical Research Institute of Chemical Defense. Dr. King holds a B.A. in history from New York University and an M.A. and Ph.D. in psychology from the University of Texas at Arlington.

CBRNIAC Success Story

Advanced Drug Development Support to CBMS-MITS/USAMMDA/Office of the Surgeon General



View of the active center gorge of mammalian acetylcholinesterase looking into the gorge cavity.

Customer

Chemical Biological Medical Systems (CBMS)-Medical Identification and Treatment Systems (MITS).

Challenge

Under its Technical Area Task (TAT) program, the Chemical, Biological, Radiological and Nuclear Defense Information Analysis Center (CBRNIAC) was a component of the CBMS-MITS working integrated product team (WIPT) supporting the advanced drug development program to field an improved nerve agent treatment system (INATS) providing a more robust, broad-spectrum medical countermeasure to the Warfighter following exposure to organophosphorous nerve agents. From this TAT program, CBRNIAC managed and performed the Chemical, Manufacturing, and Controls (CMC), non-clinical safety and efficacy studies, and developed the first-in-human Phase I clinical trial protocol. The resultant data and protocol were required to support submission of an Investigational New Drug (IND) application to the FDA, which would allow initiation of safety and pharmacokinetic testing of a new chemical entity (NCE) in humans.

Approach

Led by a designated CBMS-MITS pharmaceutical program manager, a team of CBRNIAC subject matter experts (SMEs) and support staff were assembled to develop an advanced drug development plan based on the information about the NCE from the literature and expertise of the SMEs and the United States Army Medical Research Institute of Chemical Defense (USAMRICD). Over the course of approximately two years, the team executed the CMC laboratory and non-clinical safety and efficacy studies, as well as submitted the electronic Common Technical Document IND as specified in the advanced drug development plan.

Value

The CBRNIAC program manager and team were able to deliver the full range of services required to achieve the goals and objectives of this phase of CBMS-MITS' advanced drug development program for testing the improved nerve agent treatment system in humans. The CBRNIAC funding mechanism allowed CBMS to efficiently fund and execute all required administrative, laboratory, and study activities in a manner that allowed for successful completion of the advanced drug development plan.

For more information, visit our web site at <https://www.cbrniac.apgea.army.mil/TAT/Pages/default.aspx> or send an email to cbrniac-tat@battelle.org

@JPMTMT

Request for Proposal for Medical Countermeasures against Emerging Infectious Diseases - <http://eepurl.com/dMI-w>

www.jpmtmt.mil



Joint Project Manager Transformational Medical Technologies (JPM-TMT) is a U.S. Department of Defense (DOD) program created to protect the Warfighter from emerging, genetically altered and unknown biological threats. JPM-TMT forms strategic partnerships with innovative performers from biotech firms, pharmaceutical corporations, other government agencies and academic institutions to fund and facilitate the advanced development and acquisition of broad-spectrum medical countermeasures and systems to enhance our nation's response capability to biothreats and emerging infectious diseases.

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