



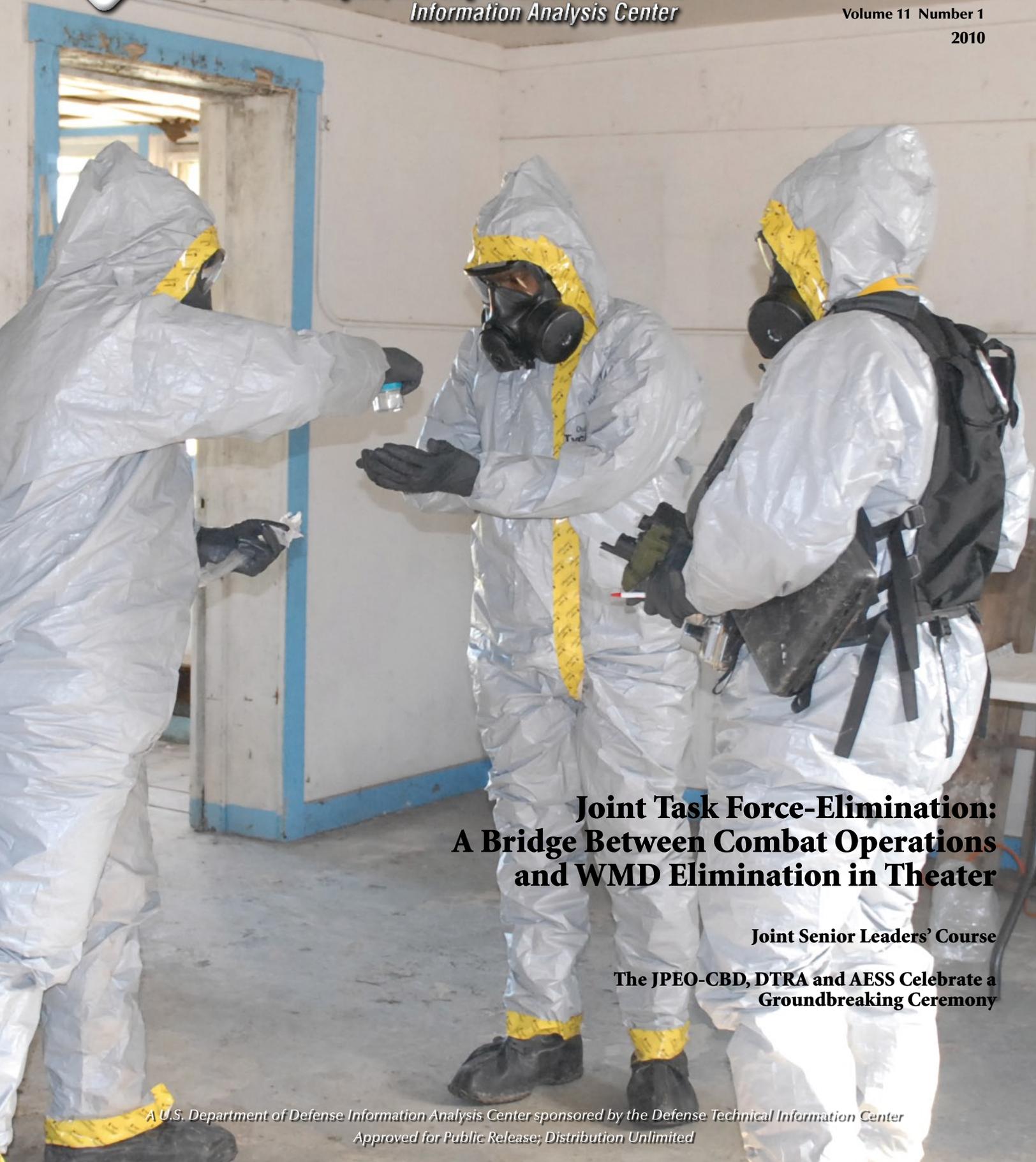
# CBRN IAC

Chemical, Biological, Radiological & Nuclear Defense  
Information Analysis Center

Newsletter



Volume 11 Number 1  
2010



## Joint Task Force-Elimination: A Bridge Between Combat Operations and WMD Elimination in Theater

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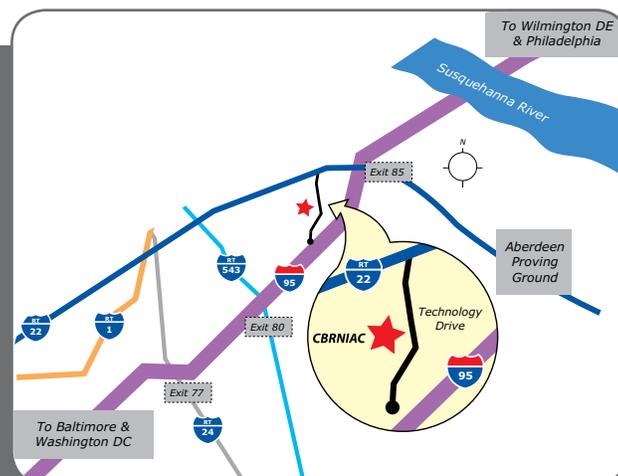
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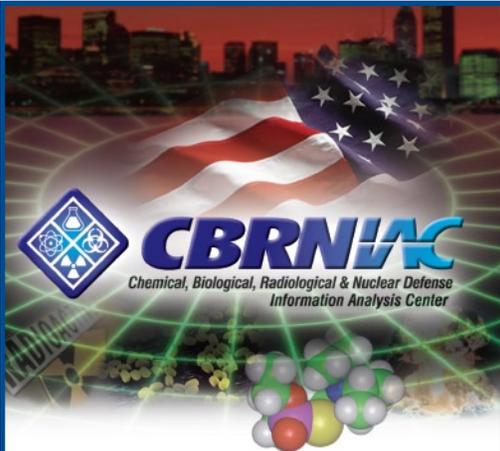
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**On the Cover:** CBRN Soldiers prepare to assess and mitigate a contaminated area. Photo courtesy of U.S. Army 20th Support Command Public Affairs.

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.

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- Second Quarter (Number 2) – January 15th
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# Joint Task Force-Elimination: A Bridge Between Combat Operations and WMD Elimination in Theater

by Christopher Wright and Mark Skattum, CBRNIAC Subject Matter Experts (SMEs)

**T**errorists are determined to attack us again—with Weapons of Mass Destruction (WMD) if they can. Osama bin Laden has said that obtaining these weapons is a “religious duty” and is reported to have sought to perpetrate another “Hiroshima.”<sup>1</sup> The mission of the United States military is to dissuade, deter, defend, and defeat those who attempt to harm the United States and its allies. The National Military Strategy to Combat Weapons of Mass Destruction (CWMD) calls on the U.S. Armed Forces to carry out eight missions: offensive operations, elimination, interdiction, active defense, passive defense, WMD consequence management, security cooperation and partner activities, and threat reduction cooperation.<sup>2</sup> The United States military will soon have a trained and ready WMD elimination (WMD-E) capability.



*CBRN Soldiers prepare to assess and mitigate a contaminated area.*

The purpose of this article is to educate the joint community on planning considerations associated with the employment of Joint Task Force-Elimination (JTF-E). By integrating historical vignettes, an understanding of the Joint Elimination Coordination Element (JECE), and the Joint Operations Planning Process, the article will emphasize that eliminating an adversary's WMD program requires a JTF-E with specialized Chemical, Biological, Radiological, Nuclear and High-Yield Explosive (CBRNE) and Weapons of Mass Destruction—Explosive (WMD-E) expertise that resides within one headquarters to guarantee unity of effort through unified command. Planning to fully eliminate an adversary's WMD starts long before hostilities commence and extend well beyond traditional post-conflict operations. Only a military force designated as JTF-E will be able to maintain contact with a suspected WMD site from site identification, to isolation and exploitation, and then be positioned to hand over the responsibility for final elimination of WMD to the organization chosen by coalition forces, allies or the United Nations. The final elimination of WMD, although beyond the capabilities of JTF-E, will be enabled by the efforts of JTF-E at the beginning of the WMD-E process.

Eliminating WMD is an important counterproliferation task for all Geographic Combatant Commanders (GCC). Waiting until a few weeks prior to a ground campaign to task-organize a military unit to conduct the elimination mission will cause undue improvisation, as encountered in recent conflicts by the U.S. Failure to understand the interagency nature of any elimination mission and failure to integrate

the specialized planning tasks required to understand the scope of the elimination mission within the area of responsibility (AOR) will, likewise, place the GCC planning staff at a severe disadvantage. A mission-first, can-do attitude will not overcome poor initial planning to eliminate WMD in theater.

Concern about an adversary's WMD capability is not new, and neither is creating a military unit for WMD-E right before an invasion. During the first third of the 20th Century, Germany was preeminent in physics and was so recognized universally. The aura of that dominance carried over through World War II. Nuclear poisoning or the use of an atomic weapon by the Germans during the 6 June, 1944 invasion of Normandy was one of the Allied planners' greatest fears. In the autumn of 1943, the Allies formed an intelligence unit, code-named *Alsos*. The mission of *Alsos* was to determine the maturity of Germany's atomic programs. Documents discovered during the course of the offensive would be translated and appraised on the spot by Dr. Samuel A. Goudsmit of Holland.<sup>3</sup> Dr. Goudsmit's exploitation of German scientific documents led him to conclude that the Germans were two years behind the progress being made at Los Alamos (Manhattan Project). Although exploitation continued, the initial information was a relief to Allied planners.

Determining the WMD capability of today's adversary is exponentially more difficult than in 1944. Revelations in Afghanistan, Iran,

*Continued pg. 5*

Iraq, Libya, North Korea, Pakistan, and elsewhere demonstrate the interconnectedness of the proliferation challenge. The networks crafted by Saddam Hussein, A.Q. Khan, Moammar Qaddafi, and Kim Jong-Il—not to mention others not yet known—will not be readily recognized or easily severed.<sup>4</sup> The overall elimination mission begins with good Joint Intelligence Preparation of the Operational Environment (JIPOE). The aura of *German Physics* led most Western atomic scientists to assume they were behind the Germans in atomic research. It seemed obvious that the Nazis had the advantage in intellectual talent and in a highly organized and determined dictatorship that could create devastating new weapons.<sup>5</sup> Saddam Hussein's determined dictatorship clearly sought a WMD capability, but who was he trying to deter? What did Saddam think about his own program? What would the triggers be for him to use his WMD? Understanding how an enemy thinks is a principle as old as Sun Tzu, but collecting and evaluating the information that will provide the answer is extremely difficult. Any gaps in our ability to evaluate the adversary, which is a significant portion of JIPOE, should receive the necessary resources to close that gap.

One of the 2006 Quadrennial Defense Review (QDR) Report decisions was to expand the Army's 20th Support Command (SUPCOM), CBRNE capabilities to enable it to serve as a JTF capable of rapid deployment to command and control WMD-E and site exploitation missions, or a JTF-E.<sup>6</sup> Working closely with the 20th SUPCOM during its transition is the Joint Elimination Coordination Element (JECE). The JECE is a standing element of WMD elimination planning and command and control (C2) SMEs assigned to the United States Strategic Command (USSTRATCOM). The JECE was primarily created to provide a joint capability to enable or augment a joint force commander (JFC) headquarters or subordinate Service/functional component staff to command and control elimination missions.

Employment options for the JECE vary, but the Secretary of Defense could order USSTRATCOM to provide the JECE directly to a Combatant Commander (CCDR) or through an execution order to the United States Joint Forces Command (USJFCOM) to augment a JTF-E and support in the C2 elimination mission. Although JTF-E built around the 20th SUPCOM with JECE augmentation is a more well-known JTF-E construct due to QDR visibility, a Marine Expeditionary Force (MEF) augmented with the JECE could also serve as JTF-E. The adversary WMD program will determine the size and scope of the elimination effort and how further task organization will occur. A large-scale WMD elimination operation may require the formation of JTF-E as a functional JTF subordinate to a parent JFC. A smaller scale WMD-E operation may only require JECE augmentation into a pre-existing command structure.<sup>7</sup>

While WMD Intelligence analysts are studying the operational environment in order to better define an adversary's WMD capability, the joint planners charged with eliminating that capability are attempting to allocate forces and capabilities to accomplish the WMD-E mission in the AOR. It is at this point that an understanding of the doctrinal language associated with WMD-E becomes very important. Currently Joint Publication (JP) 1-02, DoD Dictionary of Military and Associated Terms has not caught up with the fast-moving evolution in doctrinal language that has grown out the elimination mission area. However, there are some good sources that can be referred to, such as: JP 3-40, Joint Doctrine for CWMD; Field Manual (FM) 3-90, Tactics; and FM (Interim) 3-90.10, Chemical Biological, Radiological, Nuclear, and High Yield Explosive Operational Headquarters. To provide a

common frame of reference, the definition of WMD-E from the National Military Strategy for CWMD and the definition of Exploitation from Joint Publication 3-40 CWMD are listed below:

***WMD Elimination Operations*** are operations to systematically locate, characterize, secure, disable, and/or destroy a state or non-state actor's WMD programs and related capabilities in hostile or uncertain environments.<sup>8</sup>

***Exploitation*** is conducted as part of the combatant commander's sensitive site exploitation operations. Its purpose is to locate, characterize, secure, and render safe the adversary's WMD material, weapons, equipment, personnel, and infrastructure. Specialized teams conduct technical assessment of a site to determine if it contains evidence of WMD. A more explicit and detailed exploitation (documents, personnel, sampling, etc.) of the site is then conducted if it contains any WMD activity. Exploitation may include separate operations to dismantle WMD material, weapons, or missiles that provide an immediate threat to friendly forces.<sup>9</sup>

Observations from recent JTF-E training events highlight the difficulty in trying to understand a language that is still evolving. Questions regarding the meaning of *exploitation* and *elimination* were frequently heard. What does it mean to *clear* a sensitive site and what does *consolidate* really mean? Additional tasks embedded within doctrinal terms need to be understood as well so that planners can allocate enough time and resources to accomplish the tasks. If WMD-E terminology is not well understood by joint planners and those executing the WMD-E mission, there will be increased difficulty in communicating when adding interagency members, host nation assets, international organizations, and the scientific and technology community that all must work together to truly eliminate the WMD threat. Fortunately, JTF-E training exercises include interagency and science and technology participation so the language gap is closing.

Since 2003, the Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear Defense (JRO-CBRND) has provided CBRN SME support to Combatant Command (COCOM) and Joint Task Force exercise and training programs. As part of this program, the JRO CBRND provided 20th SUPCOM/JTF-E and the JECE with technical assistance and analysis in developing exercises to support the JTF-E battle staff at selected command and control locations. Exercise development included collaborating with 20th SUPCOM and JECE Exercise Planners to develop exercise scenarios and observation of the battle staff in such diverse locations as Fort Hood, TX (Liberty Focus 08), Aberdeen Proving Ground, MD (selected academic and command post exercises), Hawaii (Talisman Saber-09) and Yongsan, South Korea (Key Resolve 09). It was recognized during the planning process and exercise execution that further discussion of the role of JTF-E would benefit the CBRN response community. The remainder of this article discusses those observations and lessons learned.

Successful WMD-E in a geographic theater is largely dependent on good COCOM planning and a grasp of the capabilities of JTF-E. A firm understanding of the doctrinal terminology as it pertains to WMD-E is a critical component of JOP 5-0 (Joint Operation Planning), Joint Operation Planning Process (JOPP). In order for JTF-E to bridge the gap between WMD Exploitation and WMD-E, the COCOM staff has to set the conditions through contingency planning that can facilitate the



*A team from the JTF-E, in JLIST, assesses and exploits a suspected WMD laboratory*

transition to crisis action planning. Although JTF-E can be deployed to any COCOM, using a traditional state model with the notional name of BLUELAND as a sample operational environment, the 20th SUPCOM serving as JTF-E, and the steps of the JOPP as the doctrinal planning standard as a frame of reference to drive discussion, certain critical planning actions bear discussion. Integration of JTF-E at critical points of the planning process will also help ensure that WMD-E is nested within the overall theater campaign plan.

As in all planning, mission analysis will be critical. Whether U.S. and Allied forces are responding to BLUELAND aggression against a neighbor or internal unrest, the WMD-E tasks will be significant. Integrating the intelligence requirements of JTF-E early in the planning process will help prioritize the theater intelligence collection assets. Intelligence analysis will attempt to determine how BLUELAND leaders think about their WMD capability and what specific criteria they would consider for employing WMD. Additionally, factors such as specificity in WMD sites, types and specificity of forces securing those sites, various enemy courses of action for both conventional, stay-behind, and special operations forces missions in and around the sensitive sites must be analyzed. A significant amount of analysis will need to be conducted so that areas that require detailed on the ground inspection can be balanced with time sensitive point targets, such as delivery systems, that may present targets of opportunity requiring a kinetic solution.

Using the initial sensitive site locations as a guide, analysis should focus on where JTF-E can physically consolidate material under their control. Does consolidation of chemical munitions in one location potentially hinder the ground tactical plan? If there is an accident related to the consolidation of the chemical weapons, how does this affect the rear area (assuming a somewhat linear battlefield) and the attempt to move supplies through the rear to combat units in direct contact? Additional requests for information from the JTF-E Intelligence section must receive priority. The Commander JTF-E (CJTF-E) decision points in the initial isolation phase will be an important driver of intelligence collection.

This fusion of intelligence and then dissemination to those executing the WMD-E mission is an important step within the mission analysis portion of the planning process.

The JIPOE that was a major component of the mission analysis phase of the JOPP will pay dividends during course of action (COA) development. The inclusion of JTF-E and JECE planners throughout the process will only make the end product that much better. Two mission analysis products that contribute to COA development stand out. First, the planners who are going to start arraying friendly capabilities have a better understanding of the WMD-E problem facing them. For instance, JTF-E brings no exploitation forces with it. It must be task organized with forces to achieve the CDR's end state as it pertains to WMD-E. Planning for friendly forces will be better understood once the WMD-E tasks are identified. Second, and most important, the CDR now has a better understanding of the WMD-E problem and can give more focused commander's guidance related to what he wants his WMD-E end state to be. This guidance will enable the planning staff to focus their efforts as they attempt to synchronize the host-nation, supporting combatant commanders, diplomatic and legal efforts, and scientific and technical reach-back capabilities that must be addressed. CDR planning guidance will also include how he envisions the command relationship. Due to the large number of WMD-E tasks identified during mission analysis, the CDR will most likely have JTF-E work for him. The dispersion of sensitive sites and operational tempo the CDR wants to maintain in order to achieve his end state will provide further definition to planners about what the commander will choose as an acceptable, feasible, and suitable course of action.

Successful course of action analysis (wargaming) will require thorough staff estimates by the COCOM staff, and ideally augmented or supported by JTF-E staff estimates. The adversary WMD staff analysis done up to this point will lead to the identification of critical events that must be more thoroughly analyzed in the wargame. Just some of the WMD-E critical events that will require wargaming are:

- **Task organization issues:** Do the exploitation forces task organize within the initial maneuver forces, or does JTF-E receive tactical control over maneuver forces to conduct the initial isolation and exploitation tasks?
- **Timing and tempo issues:** How long will it take to conduct the sensitive site exploitation? What are the criteria for bypassing a site? How long does a thorough sensitive site exploitation take and how does it affect the tempo of the ground scheme of maneuver?
- **Commander decision issues:** What WMD-E command level decisions do we anticipate? What decision points and associated commander's critical information requirements (CCIR) per critical event do we recommend?
- **Integration with Special Operations Forces (SOF):** How does JTF-E integrate with SOF?

- How will the integration of host nation or allied elimination forces occur?
- At what point will treaty observers, nongovernmental organizations and other interagency organizations be expected to integrate into the elimination operation?
- At what point will additional bandwidth be required to enable reachback capabilities to assist in the exploitation of documents and scientific samples?
- When and where can consolidation of WMD materials begin? At what point will contract support be required to destroy the discovered WMD materials?
- What will nations that border on the AOR do? Do we allocate combat power to seal borders to prevent WMD from transiting border areas?
- When does JTF-E transition the overall WMD-E mission and to whom?

The issues listed above are just some of the obvious issues to be analyzed. Each issue has dozens of variations that must also be considered. With a solid mission analysis, course of action development and course of action analysis complete, the comparison and decision phases of the JOPP will benefit from the firm foundation laid during the previous steps. The value gained from integration of JTF-E planning capabilities during this analysis cannot be overstated.

The intent of this article was to educate the joint planning community on what JTF-E is capable of doing and how the COCOM staff can make them successful when they arrive in theater. A JTF focused on the elimination mission can bridge the initial isolation, exploitation, and destruction tasks and transition them properly into the long term elimination tasks to be completed by the final WMD-E authority. Each WMD-specific piece of information is put into the large puzzle required to complete the WMD-E mission. These small-unit tactical actions will have significant strategic implications. Consider the scenario where a site is being exploited and WMD materials from an unfriendly third-nation are found at the site. This information will most likely go directly to the highest levels of the government. JTF-E will be able to coordinate the tactical, operational, and strategic tasks while maintaining the unity of effort required to accomplish the overall elimination mission in theater. 

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## About the Authors

*Both authors worked in support of the JRO-CBRND while researching and writing this article.*

*Mr. Christopher Wright is a CBRNIAC SME employed as a Protection Operations Specialist with Battelle Memorial Institute. A retired Army Lieutenant Colonel, Mr. Wright has a bachelor's degree in political science from Ball State University, and a master's in public administration from Western Kentucky University.*

*Mr. Mark Skattum is also a CBRNIAC SME employed as a Protection Operations Specialist with Battelle Memorial Institute. He is a retired U.S. Air Force Colonel, with a B.S. from the United States Air Force Academy and a master's in national security and strategic studies from the U.S. Army School of Advanced Military Studies.*

*Photographs courtesy of U.S. Army 20th Support Command Public Affairs.*



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## Contract Awards

### **Administrative and Functional Support, Medical and Biomedical Research Assistance, Clinical and Clinical Hyperbaric Medicine Services, Environmental Bio-Terrorism Support, Technology Evaluation and Research Studies Support Services to Brooks City-Base and Wright-Patterson Air Force Base Units**

Peerless Technologies Corp.  
Fairborn, OH  
Decypher Technologies, Ltd  
San Antonio, TX  
P3S Corp.  
San Antonio, TX  
Prairie Quest, Inc.  
Ft. Wayne, IN  
\$93,000,000 each December 18, 2009  
By AFRL/PKH, Wright-Patterson Air Force Base, OH

### **Vaccines Against Tuberculosis, Malaria and Dengue Virus**

La Jolla Institute for Allergy & Immunology  
San Diego, CA  
\$18,800,000 December 17, 2009  
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

### **Proprietary CBRNE (Chemical, Biological, Radiological, Nuclear, Explosive) Management, Monitoring and Messaging Software Platform**

Defentect  
Norwalk, CT  
\$80,000 December 15, 2009  
By US Northeastern Hospital Chain

### **Hazardous, Toxic and Radioactive Waste Remediation Services**

Bristol Environmental Remediation Services  
Anchorage, AK  
\$7,208,494 November 30, 2009  
By U.S. Army Engineer District, Alaska, Elmendorf Air Force Base, AK

### **Development of Freeze-Dried IMVAMUNE® Smallpox Vaccine**

Bavarian Nordic A/S  
Denmark  
\$680,000,000 November 17, 2000  
By Biomedical Advanced Research and Development Authority,  
Washington, DC

### **Study the Effects of Atomic Bomb Radiation and Aging on The Human Immune System**

Radiation Effects Research Foundation  
Japan  
\$9,700,000 November 12, 2009  
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

### **Support Research to Better Understand the Human Immune Response to Emerging and Re-Emerging Infectious Diseases**

Cooperative Centers for Translational Research on Human Immunology and Biodefense  
Menlo Park, CA  
Immune Mechanisms of Virus Control

Austin, TX  
\$21,000,000 November 4, 2009  
By National Institute of Allergy and Infectious Diseases, Bethesda, MD

### **Evaluate Performance of Homeland Security Technologies Related to Water Protection and Wide-Area Decontamination**

Battelle Memorial Institute  
Columbus, OH  
\$13,000,000 November 3, 2009  
By U.S. Environmental Protection Agency, Washington, DC

### **Studies and Analysis to Protect Military Personnel Against CBRN Hazards**

Battelle Memorial Institute  
Columbus, OH  
\$9,200,000 October 16, 2009  
By U.S. Air Force School of Aerospace Medicine, Brooks City-Base, TX

### **Research of Sensitive and Selective Nanosensors in Order to Determine How Single Sensing Molecules Combined with Nanoparticles Respond to Airborne Nerve Agents and Toxic Industrial Chemicals**

Altair Nanotechnologies, Inc.  
Reno, NV  
\$1,750,000 October 13, 2009  
By U.S. Army RDECOM Acquisition Center, Aberdeen Proving Ground, MD



**CBRNIAC**  
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## Serving the CBRN Defense and Homeland Security communities



# Joint Senior Leaders' Course

By Terry Johnson, J8, Joint Requirements Office, Capabilities Integration Branch Doctrine, Training, Education

Under the sponsorship of the Joint Staff J8, Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear Defense (JRO-CBRND), the U.S. Army CBRN School hosts the **Joint Senior Leaders' Course—A Focus on Combating WMD and Chemical, Biological, Radiological and Nuclear Defense** at Fort Leonard Wood (FLW), Missouri.

The Joint Senior Leaders' Course (JSLC) is a two-and-a-half day course designed to provide Senior Joint Service and Inter-Agency Leaders with a solid understanding of Department of Defense efforts to combat WMD. Attendees receive in-depth information on the domestic threat of WMD, DoD Combating WMD policies, programs, and organizations, as well as an orientation on how DoD forces are incorporated into Homeland Defense and Defense Support of Civil Authorities operations. Presentations covering the global threat of WMD, Combatant Command efforts to address regional WMD developments, WMD elimination, and Department of State efforts to combat WMD provide attendees with an outlook on OCONUS and operational efforts to combat WMD. Distinguished speakers have included former U.S. Attorney General, John Ashcroft, the Vice Chairman of the World at Risk Commission, former Senator Jim Talent, former Assistant Secretary of Defense for Homeland Defense and America's Security Affairs, Paul McHale, and U.S. Ambassador (ret.) Donald A. Mahley.

In addition to the material presented, this forum offers a unique opportunity to exchange ideas between senior military leaders, civilian government agency leaders, and leaders representing our allies and coalition partners. As part of the JSLC, attendees will also participate in toxic agent training at the Chemical Defense Training Facility (CDTF). Course topics often include:

- CBRN Fundamentals
- WMD Threat Brief
- Combating WMD Strategic Policy
- Chemical-Biological Defense Program Overview
- NORTHCOM: Overview and the Military Role in Homeland Defense
- DHS/DoD Combating WMD Overview
- COCOM Combating WMD Perspective
- Toxic Agent Training—Chemical Defense Training Facility
- WMD Elimination Overview
- Department of State Overview
- Consequence (Incident) Management
- Medical Preparedness & Response to WMD Events
- Tour of CBRN Incident Response Training Facility
- U.S. Service/Coalition CBRN Defense—Training, Organization, and Equipment

#### Course dates:

Class #02-10 15–18 April 2010

Class #03-10 22–25 July 2010

Terry Johnson is a CBRNIAC Subject Matter Expert (SME) employed by Battelle in support of the J8, Joint Requirements Office, Doctrine, Training & Education Section. He can be contacted at (573) 563-6090 or [terry.johnson28@conus.army.mil](mailto:terry.johnson28@conus.army.mil) 

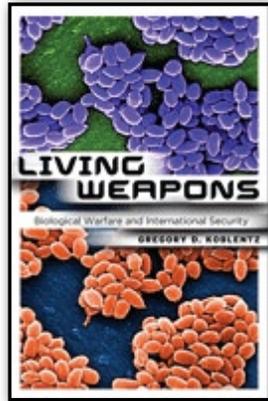




# New CBRNIAC Information Resources

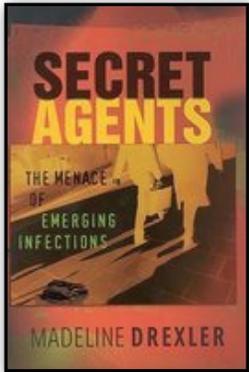
Koblentz, Gregory D. **Living Weapons: Biological Warfare and International Security.** Ithaca, New York: Cornell Press, 2009.

“Biological weapons are the least well understood of the so-called weapons of mass destruction. Unlike nuclear and chemical weapons, biological weapons are composed of or derived from living organisms. In *Living Weapons*, Gregory D. Koblentz provides a comprehensive analysis of the unique challenges that biological weapons pose for international security.” *(Inside Cover)*



CB-091770  
ISBN 978-0-8014-4768-6  
Cornell University Press  
Sage House  
512 East State Street  
Ithaca, NY 14850  
Phone: 1-800-666-2211

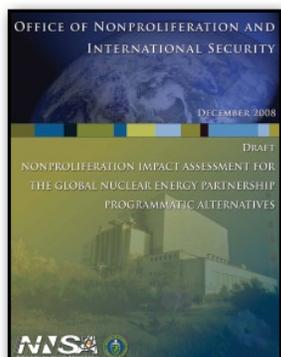
Drexler, Madeline. **Secret Agents: The Menace of Emerging Infections.** Washington, DC: Joseph Henry Press, 2002.



“In this lucid and compelling book, veteran science journalist Madeline Drexler delivers a powerful combination of fresh research and surprising history about today’s most ominous infectious disease threats.” *(Inside Cover)*

CB-160654  
ISBN 0-309-07638-2  
Joseph Henry Press  
2101 Constitution Avenue, NW  
Washington, DC 20418  
Phone: (888) 624-8373

Office of Nonproliferation and International Security. **Nonproliferation Impact Assessment for the Global Nuclear Energy Partnership Programmatic Alternatives.** Washington, DC: National Nuclear Security Administration, 2008.  
[http://nnsa.energy.gov/nuclear\\_nonproliferation/documents/GNEP\\_NPIA.pdf](http://nnsa.energy.gov/nuclear_nonproliferation/documents/GNEP_NPIA.pdf)

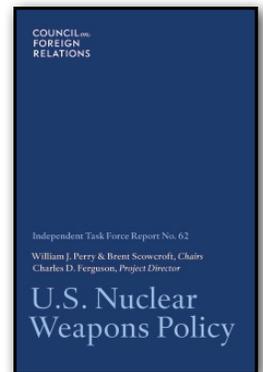


“This draft NPIA [Nonproliferation Impact Assessment] is a comparative assessment of a range of alternatives. Its purpose is to establish a framework for evaluating the nonproliferation characteristics of the nuclear energy technologies evaluated as part of fuel cycle alternatives in the GNEP [Global Nuclear Energy Partnership] PEIS [Programmatic Environmental Impact Statement].” *(Executive Summary)*

CB-092487  
National Nuclear Security Administration  
Office of Nonproliferation and International Security  
100 Independence Avenue, SW  
Washington, DC 20585-1615  
Phone: 1-800-342-5363

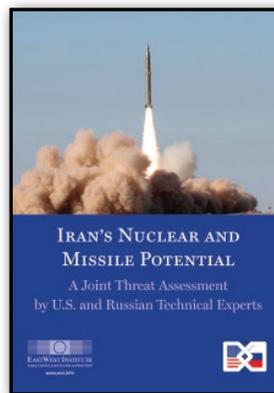
Perry, William J. and Scowcroft Brent, chairs. **U.S. Nuclear Weapons Policy. Independent Task Force Report No. 62.** New York: Council on Foreign Relations, 2009.  
<http://www.cfr.org/publication/19226>

“The imperative before the Obama administration ... is to use all available tools to prevent the use and further acquisition of nuclear weapons. This Task Force reports identifies how to leverage U.S. nuclear weapons posture and policy to achieve that objective. It focuses on near-term steps, primarily over the next four years.” *(Executive Summary)*



CB-093444  
Council on Foreign Relations  
The Harold Pratt House  
58 East 68th Street  
New York, NY 10065  
Phone: 212-434-9400

**Iran’s Nuclear and Missile Potential: A Joint Threat Assessment by U.S. and Russian Technical Experts.** New York: The EastWest Institute, 2009.  
<http://docs.ewi.info/JTA.pdf>



“At the first meeting of the U.S.-Russian Group on Counterterrorism and Strategic Security in Moscow in October 2007, intense discussions led to a proposal to organize a U.S.-Russia joint threat assessment on Iran .... The conclusions and recommendations in the report are the group’s own – EWI [The EastWest Institute] was pleased to convene the group and provide the space and resources for them to do the work, but did not exercise editorial content of the contents.” *(The Mission)*

CB-093952  
The EastWest Institute  
700 Broadway  
New York, NY 10003  
Phone: 212-824-4100

# The JPEO-CBD, DTRA and AESS Celebrate a Groundbreaking Ceremony

By Danielle Benner, Camber Corporation



The Chemical and Biological Defense Community reached a significant milestone Oct. 28, 2009 at the Edgewood Area of Aberdeen Proving Ground, MD, when ground was broken for the Non-Medical Chemical Biological Defense Facility (NMCBDF).

Members of the Joint Program Executive Office for Chemical and Biological Defense (JPEO-CBD), the Defense Threat Reduction Agency (DTRA) Chemical and Biological Directorate, and the 649th Aeronautical Systems Squadron (AESS), 77th Aeronautical Systems Group will occupy the facility in the September 2011 time frame, in support of the 2005 BRAC Commission recommendations.

Slated to become the headquarters for the three organizations, more than 200 guests gathered to celebrate the monumental event that was held on the site where the new \$22 million facility will be constructed by building contractor Bradley/Nason JV LLC and Ewing Cole. For the Aberdeen Proving Ground area, this facility is the pinnacle of about \$1 billion in design and construction, impacting the local community with an influx of more than 8,000 positions that will relocate from Brooks City, TX, Glen, Ohio, and Langley and Falls Church, VA.

In the past several months, Edgewood hosted two other ground breaking ceremonies, welcoming the U.S. Army Medical Research Institute of Chemical Defense and the U.S. Army Research Laboratory. The U.S. Army Test and Evaluation Command headquarters building will be constructed at the Aberdeen Proving Ground area.

Moving to the area comes with a great deal anticipation for many of the relocating organizations. "Today marks a special occasion because it signifies the beginning of a new era for our office," said Brig. Gen. Jess A. Scarbrough, Joint Program Executive Officer for Chemical and Biological Defense.

Each speaker expressed their allegiance to continue supporting our warfighters as best as possible and are enthusiastic to share the NMCBDF with one another.

Following their remarks, senior leaders, executives and civilian representatives donned hard hats and gathered collectively around the sandbox on the grounds of the future NMCBDF to shovel the first plot of dirt.

"This move will positively impact the work force partners as they continue to work cohesively, now under the same roof to better affiliate the Chemical and Biological Defense enterprise," said Col. Michael O'Keefe, DTRA Deputy Director for Chemical and Biological Technologies Directorate. "The collaboration and coordination that will ensue from the cohabitation of the three commands in a modern structure will enhance each one's efforts and strengthen the combat support roles they play for all the military service branches."

Scarbrough echoed those thoughts when he said, the Air Force, the Navy, the Marine Corps and the Army are all represented through this new facility.

"Our Joint efforts ensure all warfighter needs are collectively addressed and we vow to continue providing the best chemical and biological defense equipment and medical countermeasures to warfighters around the nation and around the globe," he said. ♦

Photo by Sean Kief, APG Garrison Photographer.

*The Joint Program Executive Office (JPEO) is the Joint Services single focal point for research, development, acquisition, fielding and life cycle support of chemical and biological defense equipment and medical countermeasures. Within the JPEO, eight Joint Project Managers lead, manage, and direct the acquisition and fielding of chemical and biological detection and reconnaissance systems, individual and collective protection systems, decontamination systems, information management systems, medical devices, drugs and vaccines, and installation and force protection systems. Located throughout the United States, each Joint Project Management Office leverages talent and expertise from across the services under a single chain of command, providing the best chemical and biological defense technology, equipment, and medicine at the right cost, at the right time and at the right place.*



# 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](mailto: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>.

- |           |   |           |   |
|-----------|---|-----------|---|
| Apr 5-7   | <b>2010 U.S. Marine Corps Systems Command Advanced Planning Briefing to Industry (APBI)</b><br>Baltimore, MD<br><a href="http://www.ndia.org/meetings/0900/Pages/default.aspx">http://www.ndia.org/meetings/0900/Pages/default.aspx</a> | Apr 12-16 | <b>COURSE: Field Management of Chemical and Biological Casualties</b><br>Aberdeen Proving Ground, MD<br><a href="https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm">https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm</a>       |
| Apr 5-9   | <b>SPIE Defense, Security, and Sensing 2010</b><br>Orlando, Florida<br><a href="http://spie.org/defense-security-sensing.xml">http://spie.org/defense-security-sensing.xml</a>  | Apr 13-15 | <b>11th Annual Science and Engineering Technology Conference/DoD Tech Expo</b><br>North Charleston, SC<br><a href="http://exhibits.ndia.org/ndia/public/MainHall.aspx?eventid=640">http://exhibits.ndia.org/ndia/public/MainHall.aspx?eventid=640</a> |
| Apr 12-14 | <b>World Health Care Congress</b><br>Washington, DC<br><a href="http://www.worldcongress.com/events/HR10000/">http://www.worldcongress.com/events/HR10000/</a>  | Apr 15-18 | <b>Joint Senior Leaders' Course (JSLC): A Focus On CWMD and CBRN Defense</b><br>Fort Leonard Wood, MO<br><a href="https://www.intelink.gov/wiki/Joint_Senior_Leader_Course">https://www.intelink.gov/wiki/Joint_Senior_Leader_Course</a>              |
| Apr 12-15 | <b>SpecOps Warfighter Expo East 2010</b><br>Fayetteville, NC<br><a href="http://defensetradeshows.com/specops-warfighter-expo-east-2010/">http://defensetradeshows.com/specops-warfighter-expo-east-2010/</a>                           | Apr 26-28 | <b>13th Annual Conference on Vaccine Research</b><br>Bethesda, MD<br><a href="http://www.nfid.org/conferences/">http://www.nfid.org/conferences/</a>  |



**Transformational Medical Technologies Initiative (TMTI) Partnership Symposium**

The TMTI Program Office will host a Partnership Symposium May 3-4, 2010 at the National Conference Center in Lansdowne, VA. Professionals from government, academia, biotechnology, and pharmaceutical industries are invited for a unique opportunity to learn about TMTI, network with TMTI's current performers, and discuss collaborative opportunities with the program, the current state of medical countermeasure preparedness, and plans for enhancing national capabilities to respond to emerging and novel biological threats.

Please check TMTI's website, [www.tmti-cbdefense.org](http://www.tmti-cbdefense.org), often for updates and registration information or send an e-mail to [tmtiwebsite@dra.mil](mailto:tmtiwebsite@dra.mil).

**May 3-4, 2010 | Lansdowne, VA**

## Calendar *cont.*

- Apr 27–29 **Global Explosive Ordnance Disposal**  
Fort Walton Beach, FL  
<http://www.ndia.org/meetings/0950/Pages/default.aspx>
- Apr 28–29 **Border Security Expo 2010**  
Phoenix, AZ  
<http://www.bordersecurityexpo.com/index.html>
- May 2–7 **Chemical and Biological Medical Treatment Symposia (CBMTS)**  
Spiez, Switzerland  
<http://www.asanltr.com/cbmts/cbmts/VIII/CBMTSVIII.htm>
- May 3–4 **Transformational Medical Technologies Initiative (TMTI) Partnership Symposium**  
Landsdowne, VA  
<http://www.tmti-cbdefense.org>
- May 5–6 **2010 Biomedical Research Equipment and Supplies Exhibit at NCI-Frederick/Fort Detrick**  
Frederick, MD  
<http://www.gtpmgt.com/exhibits.php?id=1>
- May 5–6 **Center for the Study of Weapons of Mass Destruction, National Defense University (NDU) 10th Annual Symposium**  
Washington, DC  
<http://www.ndu.edu/WMDCenter/>
- May 7–11 **COURSE: Field Management of Chemical and Biological Casualties**  
Aberdeen Proving Ground, MD  
[https://ccc.apgea.army.mil/courses/in\\_house/brochureFCBC.htm](https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm)
- May 9–14 **PHYSOR 2010**  
Pittsburgh, PA  
<http://www.physor2010.org/>
- May 10–12 **SpecOps West 2010**  
Ft. Lewis, WA  
<http://defensetradeshows.com/specops-west-warfighter-expo-2010/>
- May 11–13 **Disaster Response & Recovery Expo 2010**  
Nashville, TN  
<http://events.jspargo.com/drre10/public/enter.aspx>
- May 12–13 **2010 NIH Spring Research Festival Exhibit**  
Bethesda, MD  
<http://www.gtpmgt.com/exhibits.php?id=6>
- May 12–16 **2010 Integrated Medical, Public Health, Preparedness and Response Training Summit**  
Nashville, TN  
<http://www.integratedtrainingsummit.org/registration.php>

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March 22-24, 2010  
Hilton Alexandria Old Town  
Alexandria, Virginia

[www.dtic.mil](http://www.dtic.mil)



## In the News

### Weapons of Mass Destruction Report Card Highlights OSTP Accomplishments

Peter Emanuel\*

#### OSTP (Office of Science and Technology Policy) Blog

January 27, 2010

"The independent and nonpartisan [Commission on the Prevention of Weapons of Mass Destruction, Proliferation, and Terrorism \(WMD Commission\)](#) released a report card Tuesday assessing the U.S. Government's progress in implementing the recommendations of its 2008 [World at Risk](#) report. The report card highlights the 'issues of highest priority for protecting the American people from WMD threats.'" <http://blog.ostp.gov/2010/01/27/weapons-of-mass-destruction-report-card-highlights-ostp-accomplishments/>

*\*Dr. Emanuel is the Assistant Director for Chemical & Biological Countermeasures at OSTP and a member of the CBRNIAC Executive Steering Committee (ESC) and Scientific Research Council (SRC).*

### Toxic Materials Training Helps Keep Servicemembers Safe

Army Sgt. 1st Class Samantha M. Stryker

#### Special to American Forces Press Service

December 29, 2009

"Twelve soldiers and three sailors conducted a 10-day Toxic Industrial Chemical Protection and Detection Equipment training exercise here recently... According to Karen Kirkpatrick, a civilian instructor with the training team, the 80-hour course is the same training received by stateside emergency services personnel."

<http://www.defense.gov/news/newsarticle.aspx?id=57294>

### Secretary Napolitano Unveils "Virtual USA" Information-Sharing Initiative

#### DHS Press Release

December 9, 2009

"Department of Homeland Security (DHS) Secretary Janet Napolitano today officially launched Virtual USA, an innovative information-sharing initiative—developed in collaboration with the emergency response community and state and local governments across the nation—that helps federal, state, local and tribal first responders communicate during emergencies."

[http://www.dhs.gov/ynews/releases/pr\\_1260375414161.shtm](http://www.dhs.gov/ynews/releases/pr_1260375414161.shtm)

### Secretary Napolitano Announces Grant Guidance for More Than \$2.7 Billion in Fiscal Year 2010 Grant Programs

#### Department of Homeland Security Press Release

December 8, 2009

Department of Homeland Security (DHS) Secretary Janet Napolitano today announced the release of fiscal year 2010 grant application guidance kits for 13 DHS grant programs totaling more than \$2.7 billion—funds for state, local, tribal and territorial governments and private sector entities to strengthen our nation's ability to prevent, protect, respond to and recover from terrorist attacks, major disasters and other emergencies.

[http://www.dhs.gov/ynews/releases/pr\\_1260283102665.shtm](http://www.dhs.gov/ynews/releases/pr_1260283102665.shtm)

### New Effort Probes How Two Groups of Viruses Cause Disease

Emil Veneré

#### Purdue University News Service

November 17, 2009

"Purdue University is leading a team of researchers in a federally funded effort aimed ultimately at developing better vaccines and antiviral drugs against two types of disease causing viruses... One group, called flaviviruses, includes West Nile and dengue. The other group, called alphaviruses, includes eastern equine encephalitis and chikungunya."

<http://news.uns.purdue.edu/x/2009b/091117KuhnViruses.html>

### Cleveland Biolabs Opens Enrollment of Second Safety Study for CBLB502

#### Cleveland BioLabs, Inc. News Release

November 23, 2009

"Cleveland BioLabs, Inc. (NASDAQ:CBLI) today announced the opening of enrollment for the second human safety study for CBLB502, a drug under development for the treatment of Acute Radiation Syndrome (ARS)."

[http://www.cbiolabs.com/press\\_releases/LatestNews.php](http://www.cbiolabs.com/press_releases/LatestNews.php)

### Disinfectant That Quickly Wipes Out Swine Flu, Anthrax Spores, is Being Tested at NJIT

#### The Star-Ledger Continuous News Desk

November 13, 2009

"A disinfectant that quickly eradicates organisms from the swine flu virus to deadly anthrax spores is being tested by scientists at the

Continued pg. 16

## Vol. 6 No. 4 of the Chem-Bio Defense Quarterly Magazine is Now Available!

The Joint Project Manager for Biological Detection (JPM BD) is playing an integral role in the JPEO-CBD development of CBRN Enterprise Architecture that will ultimately provide CBRN capabilities to the homeland as well as troops overseas. The early stages of the JPEO architecture have already yielded successes such as the National Bio-Monitoring Architecture. Read about other successes JPM-BD have experienced in this issue of the magazine.

To view the electronic version, visit: <http://www.jpeocbd.osd.mil/packs/Magazine.aspx>

Would you like to receive the link to upcoming issues or have a hardcopy version for your office or organization? If so, complete the interactive form at <https://jacks.jpeocbd.army.mil/jacks/Public/CBQuarterly/Default.aspx>.



# Domestic Preparedness Equipment Training Assistance Program (DPETAP) Achieves Major CBRN Training Milestone

By Dave Chapman, Pine Bluff Arsenal Homeland Security Program Manager and Ed Ward, Operations Manager, DPETAP



**O**n December 10, 2009, DPETAP achieved a major milestone by providing Chemical, Biological, Radiological, and Nuclear (CBRN) detection, protection and decontamination equipment training to over 90,000 first responders in over 1,600 agencies in 45 states, the District of Columbia, and two U.S. Territories.

Pine Bluff Arsenal (PBA) Homeland Security Program contracts General Physics, (GP) to operate DPETAP, a federally-funded program through the Department of Homeland Security (DHS)—Federal Emergency Management Agency (FEMA). DPETAP was established in 1999 in partnership with the FEMA National Preparedness Directorate and the United States Army's PBA, the Department of Defense's center of expertise for chemical and biological defensive equipment production and support. DPETAP helps emergency responders nationwide better select, operate, and maintain their CBRN detection and response equipment. DPETAP currently offers more than 53 courses and exercises that range from one hour to 24 hours in length, and has provided mobile on-site training in 45 states and two U.S. Territories. DPETAP supports four National Preparedness Goals and 20 Target Capabilities.

According to Dave Chapman, PBA Program Manager for DPETAP, "This milestone demonstrates the success of the mobile training concept in

reaching a nationwide audience. The partnership between PBA and FEMA allows both agencies to leverage our expertise to provide high quality and effective technical training to improve the Nation's all-hazard preparedness. GP has managed and operated this program since inception, and this training has made a difference in the response capabilities for a number of jurisdictions around the Nation."

The DPETAP is a high-impact, mobile program that provides on-site training and technical assistance to America's emergency responders and first receivers. This is accomplished through the use of DPETAP-maintained training materials and training equipment, which allows the jurisdictions to keep all of their equipment in service. Because DPETAP also trains personnel while they are on-shift and available for emergency callouts, jurisdiction can have all of their people trained at the same time. These aspects enhance their capabilities to respond to any incident while also participating in high-quality training sessions, and it eliminates travel costs.

Most attendees of DPETAP training are first responders from Fire and HAZMAT organizations. The breakout of training provided by discipline is indicated in Figure 1 (page 16).

Continued pg. 16

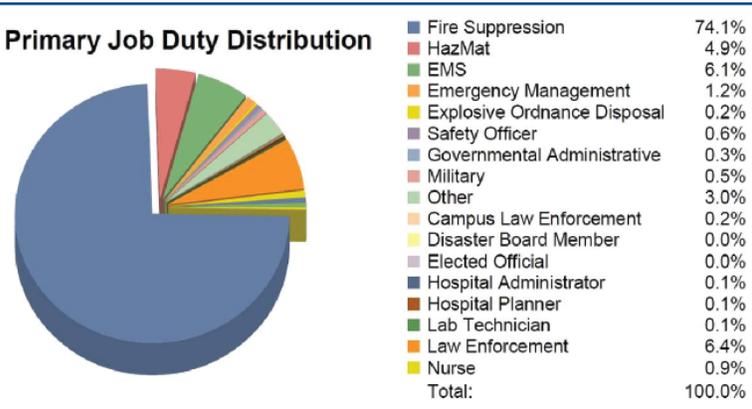


Figure 1. Primary Job Distribution of DPETAP training attendees

DPETAP has provided CBRNE equipment training in the vicinity of more than 80 DoD installations. DPETAP personnel have received more than 150 letters of thanks and recommendations from jurisdictions around the nation. DPETAP instructors come from many different disciplines, military NBC, civilian fire, EMS and HAZMAT and law enforcement. This mixture allows DPETAP instructors to connect with all types of first responders across the nation. DPETAP instructors are representative of the personnel responding to a CBRNE-type event as indicated in Figure 2.

Discipline	# Personnel	# Years Experience
Law Enforcement	1	12
Fire Service	10	65
HAZMAT Operations	19	96
HAZMAT Technician	19	54
EMT/Paramedic	4	64
Tech Escort Unit/CBIRF/Johnston Island	3	15
CBRNE Instructors: Marines-2, Navy-1, Army- 6 & Air Force- 3, Civilian HazMat/EMS/ Fire- 7	19	240

Figure 2. DPETAP instructor cadre background

All DPETAP instructors are DHS Certified Instructors. They also have many different certifications recognized throughout the industry, such as Certified Hazardous Material Practitioner (CHMP) Certified Environmental, Safety and Health Trainer (CET), Certified Instructional Trainer (CIT), Master Exercise Practitioner (MEP) and Certified Emergency Manager (CEM). These certifications give great credibility to the program. ◆

**About the Authors**

Edward F. Ward, CHMP, MEP, CET/CIT, is employed by General Physics Corporation and has worked as the DPETAP Operations Manager for seven years. He served for 13 years in the Marine Corps and 8 years in the Army Reserves and has been a firefighter/EMT since 1994. Mr. Ward can be contacted at [eward@gpworldwide.com](mailto:eward@gpworldwide.com).

Dave Chapman has worked at PBA for 30 years and is the Chief, Chem/Bio Services Division and Program Manager, Domestic Preparedness/Homeland Security. He has 4 years of military service. Mr. Chapman can be contacted at [dave.chapman2@us.army.mil](mailto:dave.chapman2@us.army.mil).

New Jersey Institute of Technology in Newark...Ygiene wiped out the H1N1 virus from surfaces in 20 seconds."

[http://www.nj.com/news/index.ssf/2009/11/disinfectant\\_that\\_quickly\\_wipe.html](http://www.nj.com/news/index.ssf/2009/11/disinfectant_that_quickly_wipe.html)

**ECBC Launches Formal Collaboration with General Dynamics Armament and Technical Products**

**ECBC News Release**

November 10, 2009

"ECBC...announced the establishment of a Patent License Agreement (PLA) and a Cooperative Research and Development Agreement (CRADA) with General Dynamics Armament and Technical Products... pave(s) the way for collaboration between the federal government and industry to further develop and commercialize a low-cost, low-power, lightweight technology that utilizes semiconductor ultraviolet optical sources for reagentless detection of biological aerosols called the Tactical Biological Detector (TAC-BIO)."

[http://www.ecbc.army.mil/pr/download/111109\\_ECBC\\_Launches\\_Formal\\_Collaboration\\_with\\_GDATP.pdf](http://www.ecbc.army.mil/pr/download/111109_ECBC_Launches_Formal_Collaboration_with_GDATP.pdf)

**Ricin 'Antidote' To Be Produced**

Paul Rincon

**BBC News**

November 11, 2009

"An anti-toxin that protects against ricin poisoning is to move into production for the first time. It is the result of eight years of work by researchers at the Defence Science and Technology Laboratory based at Porton Down in Wiltshire. The antidote can protect against death up to 24 hours after exposure..."

<http://news.bbc.co.uk/2/hi/science/nature/8351666.stm>



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# History of Army Chemical and Biological Decontamination – Part VII

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

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

## THE 1980s (CONT.)

### Decontaminating Equipment

#### XM16 Decontaminating Apparatus

During the 1970s, the Army began researching the use of turbine exhaust from jet engines to decontaminate large equipment. Based on intelligence collected on the Soviet TMS 65 decontamination system, the Army started work on the XM16 Jet Exhaust Truck



Mounted Decontaminating Apparatus in 1980. The XM16 consisted of a jet engine, control cab, a diesel fuel tank for the jet engine, and a tank for either decontamination or smoke liquids mounted on a 5-ton military truck. The idea was to direct high-velocity streams of hot exhaust gases onto the outer surfaces of vehicles for chemical and biological decontamination. In addition, the jet engine could also disseminate water, decontaminating agent, or even fog oil to create



smoke screens. Due to several deficiencies in the system, the project was canceled in 1986, but the principle was continued in related development projects.<sup>60</sup>

#### M17 Decontaminating Apparatus

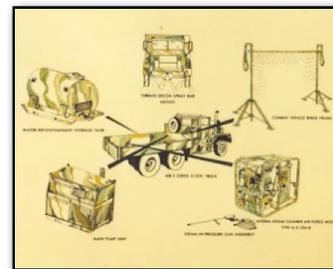
The need for a lightweight decontaminating system to replace the M12A1 Decontaminating Apparatus led the Army to examine a Norwegian device called the NBC SANATOR. Designated the A/E32U-8 by the Air Force, it consisted of an air-cooled engine, water pump, heater, 1,450-gallon rubberized fabric collapsible tank, and an accessory kit. The Air Force procured over 2,100 A/E32U-8 units. In 1984, the Army type classified the A/E32U-8 for urgent, limited procurement of 705 units through the Air Force. After additional developmental work, the XM17E1 unit was standardized as the M17 Lightweight Power-Driven Decontaminating Apparatus in 1987. The standardized version used a 1,580-gallon water tank instead of the



smaller version. The M17 was designed to decontaminate equipment and personnel using either water or decontaminating agents. The personnel showers could handle up to 12 soldiers at one time. The unit was designed to draw water from any natural source and deliver it heated and under pressure on demand. The initial deliveries of the M17 went to both the Army and Marines. After standardization of the M17, the earlier A/E32U-8 version remained in the Army supply system as a substitute item (Standard B). During Operation Desert Shield/Storm, the Army expedited the fielding of the M17 to units deploying to Southwest Asia.<sup>61</sup>

#### XM18 Decontaminating Apparatus

In 1980, the Army attempted to improve the M12A1 Decontaminating Apparatus but then made enough changes that the new configuration was designated the XM18 Skid-Mounted Diesel Powered Decontaminating Apparatus. As redesigned, the XM18 consisted of a 450-gallon stainless steel water/decontaminant tank, a pumper unit, a steam generator/heater unit, and a utility kit containing a nozzle and brush set, a personnel shower, combat vehicle rinse rack, terrain spray bar, a hydrant adaptor set, and storage containers. The XM18 could be used for decontamination of chemical and biological agents, water pumping, firefighting, and for personnel showers. In 1985, the Army decided to terminate the development program after experiencing problems with the experimental units and finding that the unit was too heavy and did not perform as well as the M12A1.<sup>62</sup>



#### XM19 Nonaqueous Equipment Decontamination System (NAEDS)

The XM19 Nonaqueous Equipment Decontamination System program was initiated in 1985 for the Army and Air Force to provide a closed loop solvent system to decontaminate small items such as weapons, electronics, and optical sights. The NAEDS consisted of a glove box cabinet with hand-held spray devices and a solvent distillation and condensation purification system that recycled the solvent. There would be two configurations of the NAEDS: a fixed site system and a mobile system. Problems with the solvent,



Continued pg. 18

## History *cont.*

a chlorofluorocarbon (freon), led to the termination of the program in 1992.<sup>63</sup>

### XM20 Nonaqueous Vehicle Decontamination System (NAVDS)

Following the termination of the XM16 Jet Exhaust Truck Mounted Decontaminating Apparatus in 1985, the Army initiated the XM20 Nonaqueous Vehicle Decontamination System program. The NAVDS



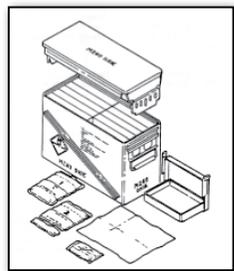
consisted of a jet engine mounted on a High Mobility Multi-Purpose Wheeled Vehicle (HMMWV). The strong point of the system was that it did not require a water source to decontaminate equipment. Although the hot air provided partial decontamination, the overall performance of the NAVDS was not satisfactory in achieving complete decontamination. In 1986, the Army canceled the program.<sup>64</sup>

### M258A1 Personal Decontaminating Kit

The original M258 Personal Decontaminating Kit, standardized in 1975, had two major problems: the decontamination solution bottles were either difficult to break or broke too quickly, and the kit could not be used to decontaminate the face. The



M258A1 Personal Decontaminating Kit, a product improvement in 1980, solved these problems by replacing the two decontamination solution bottles and separate gauze pads with six wipe packets holding pretreated towelettes. There were three DECON 1 packets and three DECON 2 packets. Although the decontamination solutions were still poisonous and caustic, the towelettes could be used for partial facial decontamination. The kit could also be used to decontaminate biological agents, although soap and water was considered better. The reconfigured kit resulted in considerable production cost savings and the initial procurement order was for three million kits. A new



training kit, without the caustic materials, was also standardized as the M58A1 Personal Decontaminating Kit Training Aid at the same time. The caustic nature of the decontamination solutions eventually resulted in the M258A1 kit being replaced by the M291 Skin Decontamination Kit in 1989. All remaining M258A1 kits were ordered removed from the supply system by 1999.<sup>65</sup>

### M280 Individual Equipment Decontaminating Kit (DKIE)

The M280 Individual Equipment Decontaminating Kit, known as the DKIE, was standardized expendable in 1985. The DKIE consisted of a squad-size container holding 20 individual packages. Each package

contained two wipe packets holding treated towelettes similar to the ones used in the M258A1 kit, one for DECON 1 and one for DECON 2. The towelettes were intended to decontaminate protective gloves, overboots, masks, and equipment. They were not intended for decontaminating the skin. The M280 kit was eventually replaced by the M295 Individual Equipment Decontamination Kit and was obsolete in 1996.<sup>66</sup>

### M291 Skin Decontaminating Kit (SDK)

The U.S. Army Medical Materiel Development Activity at Fort Detrick, Maryland, developed the M291 Skin Decontaminating Kit, standardized expendable in 1989, to replace the M258A1 Kit. The M291 was designed to decontaminate skin by adsorption and neutralization of toxic chemical or biological agents without possible long-term harmful effects. The kit consisted of a wallet-size carrying pouch holding six tear-open packets. Each packet contained an applicator pad filled with XE-555 decontamination powder. Two packets were necessary for one complete skin decontamination procedure. Initial production was for 1.5 million kits.<sup>67</sup>



## Endnotes

60. Henderson, 24; CRDC *Annual Historical Review*, FY86, 112-113.
61. MSR 06846006, 11 May 84; MSR 08876013, 23 Jul 87; Albert J. Mauroni and Jacques A. Walden, *New Developments in Chemical-Biological Materiel*, CRDEC-SP-032 (Aberdeen Proving Ground, MD: U.S. Army Chemical Research, Development and Engineering Center, 1991), 13; TM 43-0001-26-1, Change 4, 1991, p. 4-8.5; FM 3-5, 1993, p. A-3; Project Task Fact Sheet, 10 Dec 86; "CRDEC's Support to Operation Desert Shield," *ChemNotes* 34 (December 1990): 3.
62. CRDC *Annual Historical Review*, FY85, 116-117; Project Task Fact Sheet, 10 Jan 86; Cummings, 29.
63. Mauroni and Walden, 30; Project Task Fact Sheet, 10 Oct 92.
64. Program Task Fact Sheet, 10 Oct 86.
64. Historical Office, *Summary History* [Chemical Systems Laboratory excerpt] FY80, 157-158; *Laboratory Posture Report*, RCS-DRCLDC-101 (Dover, NJ: U.S. Army Armament Research and Development Command, FY1980), 20; TM 43-0001-26-1, Change 4, 1991, p. 4-11; FM 3-5, 1993, p. A-1; Electronic Message, CDR RIA Rock Island, IL, subj: Supply Advisory Message on M258A1 Personal Decontaminating Kit, 15 Oct 98.
65. MSR 08855001, 23 Jul 85; Eddy, 16; TM 43-0001-26-1, Change 4, 1991, p. 4-10.1; Project Task Fact Sheet, 10 Jan 86.
66. Information Sheet, "M291 Skin Decontamination Kit," 28 Sep 01; CRDC *Annual Historical Review*, FY90, p. 4-10; TM 43-0001-26-1, Change 4, 1991, p. 4-12.1; FM 3-5, 1993, pp. 2-0 and A-1; Department of Defense, *Chemical and Biological Defense Program: Annual Report to Congress* (April 2007), E-2; Rowe, Steiner, and Lisowski, "An Overview of Chemical/Biological Decontamination," *Chem-Bio Defense Quarterly* (April-June 2007), 28.

## Disclaimer

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# CBRNIAC Co-Hosts Technical Forum on Emerging Chemical, Biological, Radiological and Nuclear (CBRN) Defense Research & Development (R&D) Requirements

**O**n September 23, 2009, the Chemical, Biological, Radiological and Nuclear Defense Information Analysis Center (CBRNIAC) co-hosted a technical forum on **Emerging CBRN Defense R&D Requirements** at the Battelle Eastern Science and Technology (BEST) Center in Aberdeen, Maryland.

This final technical forum of FY09 was funded by the Defense Technical Information Center (DTIC) IAC Program Manager as an informal meeting for information sharing, questions and answers, and collaboration. Co-hosted by the Joint Requirements Office (JRO) for CBRN Defense, the topic was selected by the CBRNIAC Scientific Research Council (SRC) to provide new information on technologies and requirements in CBRN Defense and Homeland Security R&D.

**Mr. Ronald L. Evans**, Director of the CBRNIAC, opened the forum, welcoming participants and attendees. He reviewed administrative details and turned the forum over to guest speakers from the JRO.

**Lt Col Valerie Hasberry**, U.S. Air Force, Chief, Capabilities Integration Branch (CIB), JRO-CBRN Defense, non-medical programs, provided introductory remarks and introduced LTC Robert von Tersch, JRO, who is responsible for the medical programs.

**Mr. Richard (Rick) W. Decker II**, Technical Director of the Edgewood Chemical Biological Center (ECBC), was the keynote speaker. He discussed the *21st Century View* of CBRN Defense, emphasizing that "It's the individuals that make the difference."

## AGENDA

### WELCOME

**Welcome and Administrative Remarks**  
**Introduction**

Mr. Ron Evans, CBRNIAC  
Lt Col Valerie Hasberry, JRO

### KEYNOTE ADDRESS

*21st Century View*

Mr. Rick Decker (ECBC)

### SESSION 1 - DETECTION

**Biological Defense: Department of Homeland Security (DHS) Bio-Detection Requirements**

Dr. Anne Hultgren, DHS

**Radiological/Nuclear Defense: Operational Risk-Based Dosimetry**  
**CBRN: Improving Situational Awareness**

Dr. Eric Daxon, CBRNIAC  
Ms. Emma Wilson, JPEO

### SESSION 2 - THERAPEUTICS

**Biological Defense: Innate Immunity—Lung Defense**

Dr. Larry Schlesinger, OSU

**Biological Defense: Broad Spectrum**

Ms. Heather Wargo, DTRA/TMTI

**Biological Defense: Developing Vaccines**

Dr. Robert House, DVC

### WORKING LUNCH

**Chemical Defense: The Future of Chemical Warfare**

Dr. Jonathan Tucker, Center for Nonproliferation Studies

### SESSION 3 - TESTING

**Biological Defense: Biodefense Testing: Past, Present & Future**

Mr. Kevin Hommema, CBRNIAC

**Radiological/Nuclear Defense: The RDD Operational Guidelines**

Dr. Charley Yu, ANL

### SESSION 4 – THREAT (CLASSIFIED)

**Radiological/Nuclear: R&D Requirements**

Dr. John Mercier (Noblis)

**Chemical: Battlefield Agent Threat Level**

Mr. Jerry Glasow (IDA)

### WRAP-UP

**Concluding Remarks**

Lt Col Valerie Hasberry, JRO

**Conclusion:** The Tech Forum presentations were completed at 1630. Lt Col Hasberry thanked all participants and expressed her appreciation to the CBRNIAC for hosting the technical forum.

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**About the Subject Matter Experts (SMEs)**

**Mr. Richard (Rick) W. Decker II** serves as the Technical Director for Edgewood Chemical Biological Center (ECBC). He directs the execution of research and development for the Department of Defense's non-medical chemical and biological defense programs. Mr. Decker oversees approximately 1,600 personnel located at Aberdeen Proving Ground, MD; Pine Bluff Arsenal, AR; and Rock Island Arsenal, IL, who conduct research, engineering and field operations in support of the joint services and civilian government agencies.

Mr. Decker holds a B.S. in mechanical engineering and a B.S. degree in chemistry from University of Maryland.

**Dr. Anne Hultgren** is currently a Program Manager in the Chemical and Biological R&D Branch within the Science and Technology Directorate of the Department of Homeland Security (DHS). Her main focus is in the development of novel biological sensor systems to provide rapid warning of an indoor air-borne biological attack, collectors which provide a viable sample from the environment to the laboratory, and detectors for locating and identifying concealed hazards in shipping containers.

Anne graduated from Franklin and Marshall College with a B.A. in physics and a minor in mathematics. She earned a Ph.D. in physics at Johns Hopkins University.

**Dr. Eric Daxon** is a CBRNIAC SME and a senior research scientist with Battelle whose work focuses on health physics and radiation risk assessment. Dr. Daxon is active in developing research programs that address both doctrinal issues as well as technological issues such as advanced radiation detection techniques. Dr. Daxon has focused on developing radiation risk assessment paradigms that will allow military commanders and senior civilian decision makers to directly incorporate radiation risk in their decision-making processes. Of particular note, Dr. Daxon developed the methodology for incorporating the radiation and toxicological risks of depleted uranium into the military decision making process. Currently, Dr. Daxon is managing projects that support radiation response teams, personal dosimetry, non-ionizing radiation, and medical health physics.

Dr. Daxon received his B.S. in engineering from the United States Military Academy, M.S. in nuclear engineering from the Massachusetts Institute of Technology, and a Ph.D. from the University of Pittsburgh.

**Ms. Emma Wilson** is an Army Civilian serving as the Deputy Director, Future Acquisition, Joint Program Executive Office - Chemical Biological Defense (JPEO-CBD). She is responsible for a team of scientists, engineers, and analysts dedicated to strategic planning, management, and coordination of the JPEO's future system requirements development, international operations, technology transition and awareness.

Ms. Wilson received a B.A. degree in history from Eastern Washington University in Cheney WA, a master's in public administration from the University of Oklahoma, and a master's in strategic resource management from the Industrial College of the Armed Forces. She is an Army Senior Fellow and a member of the DoD Acquisition Corps with Level III certification in Lifecycle Logistics.

**Dr. Larry Schlesinger, M.D.** is the Samuel Saslaw Professor of Medicine at the Ohio State University. He is Director of the Division of Infectious Diseases, Department of Internal Medicine; Founding Director of the OSU Center for Microbial Interface Biology; and Director of the Medical Scientist Program. He is also chair of the steering committee for OSU's Program on Public Health Preparedness for Infectious Diseases. He is an internationally recognized researcher in tuberculosis pathogenesis and lung innate immunity. His work has defined the major phagocytic pathways for mycobacteria in human macrophages and has focused on lung innate immune mechanisms and their exploitation by intracellular pathogens, most recently Francisella, a select bioterrorism agent.

**Ms. Heather Wargo** is a microbiologist with the Defense Threat Reduction Agency (DTRA) in Fort Belvoir, Virginia. She serves as the Medical Countermeasures Portfolio Manager for the Transformational Medical Technologies Initiative (TMTI), an initiative within the Department of Defense (DoD) Chemical and Biological Defense Program. She is responsible for a team of scientists and project managers dedicated to strategic planning, management, and execution of medical product developments for emerging and genetically engineered biotreats spanning basic research through FDA licensure. Ms. Wargo has held two positions within DTRA prior to joining TMTI, Senior S&T Manager within the Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD) Medical Division, and Program Manager for JSTO-CBD Acquisition Support.

Ms. Wargo received a B.S. degree in chemistry from Mary Washington College in Fredericksburg, VA, a M.S. degree in biomedical science from Hood College in Frederick, MD, and a Graduate Certificate in Regulatory Compliance also from Hood College. She is also a member of the DoD Acquisition Corps and Level III certified in both S&T Management and Program Management career fields.

**Dr. Robert V. House** is President of DynPort Vaccine Company LLC (DVC), a biotechnology firm in Frederick, MD that manages product development programs for U.S. government agencies and provides consulting, technical and program management services to the biotechnology and pharmaceutical industries. Prior to joining DVC, Dr. House worked at Covance Laboratories and IIT Research Institute where he managed programs in safety assessment of pharmaceutical and biotechnology products. He has more than 20 years of experience in biomedical research and development, specializing in the assessment of inadvertent and therapeutic immunomodulation.

He earned his M.S. in public health and Ph.D. degree in medical parasitology from the University of North Carolina at Chapel Hill School of Public Health.

**Dr. Jonathan B. Tucker** is a Senior Fellow specializing in chemical and biological weapons issues in the Washington, DC office of the James Martin Center for Nonproliferation Studies (CNS) of the Monterey Institute of International Studies. He joined the CNS main office in Monterey, CA, in March 1996 as the founding director of the Chemical and Biological Weapons Nonproliferation Program and moved in 2000 to the CNS Washington office.

**Continued pg. 21**

Dr. Tucker holds a B.S. in biology cum laude from Yale University and a Ph.D. in political science (with a concentration in defense and arms control studies) from the Massachusetts Institute of Technology. He has been a visiting fellow at Stanford's Hoover Institution, the U.S. Institute of Peace, and the American Academy in Berlin, and a Fulbright Senior Scholar at the German Institute for International and Security Affairs.

**Mr. Kevin Hommema** is a CBRNIAC SME and a research scientist at Battelle with over 7 years of experience in the test and evaluation of bioaerosol generation, detection, collection, and identification technologies at up to BSL-3 containment. He has been involved in the design, characterization, evaluation, or modeling of several aerosol generation and characterization instruments and aerosol test facilities ranging from bench-top scale to large outdoor scale. Mr. Hommema is the point-of-contact for Battelle's intermediate scale live BSL-3 aerosol testing facility, the BSL-3 ARCA Chamber.

Mr. Hommema holds a B.S. degree in mechanical engineering from the University of Illinois at Urbana-Champaign.

**Dr. Charley Yu** manages and serves as the principal investigator for the RESRAD model development and risk assessment program in the Environmental Science Division of Argonne National Laboratory. He has over 25 years experience in developing multipathway, multimedia computer models and codes. Dr. Yu has focused his research on modeling of radionuclide transport in the environment; radiological dose and risk assessment of humans, flora, and fauna; improving probabilistic dose assessment codes to reduce uncertainty and run time; and development of operational guidelines for responding to radiological dispersal device incidents. The RESRAD family of codes has become an industrial standard for establishing cleanup guidelines for radiologically contaminated sites.

Dr. Yu received a Ph.D. from Pennsylvania State University in nuclear engineering in 1984. Dr. Yu is a Certified Health Physicist by the American Board of Health Physics.

**Dr. John Mercier** joined Noblis (formerly Mitretek Systems) in March 2009 to lead the corporation's WMD Defense portfolio. He retired from the Army as a colonel after having served 25+ years supporting

or leading programs in nuclear policy, nuclear detection, nuclear and radiological threat analysis, emergency response, consequence management, nuclear science, nuclear engineering, health physics and medical radiation physics. He served as the lead scientist for testing UAV-based radiation spectrometer systems for classified operations and provided direct support for flight testing and data interpretation for these systems. He trained special elements for hunting RDD material. His expertise extends to nuclear sampling, nuclear spectroscopy, research reactor operations, nuclear facility emergency preparedness, radiobiology, radiation countermeasures, radiation-based imaging, decommissioning, plutonium site remediation, and nuclear regulatory inspections and compliance. As well, Dr. Mercier is a nationally recognized expert in nuclear weapons effects and radiological emergency response operations and exercises.

Dr. Mercier holds a doctorate in radiological physics and is professionally credentialed and licensed in nuclear engineering and medical radiation physics.

**Mr. Jerry Glasow** is currently a research staff member with the Institute for Defense Analyses (IDA) working on multiple CBRN tasks in support of the CDBP.

Mr. Glasow retired from the U.S. Army as a colonel after 26 years active duty as a chemical officer and operations research systems analyst in various positions including Squadron Chemical Officer, 3/4 CAV, Regimental Chemical Officer, 3rd ACR, Senior Military Analyst/Wargaming Officer, Army Chemical School, Contamination Avoidance Systems Integrator, Army Staff; Munitions Requirements Analyst, Center for Army Analysis; Modeling and Simulation Special Assistant, Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense; Military Assistant for Weapons of Mass Destruction and Chemical Weapons Demilitarization, Deputy Under Secretary of the Army for Operations Research; and Director, Defense Modeling and Simulation Coordination Office (M&S CO, formerly DMSO).

Mr. Glasow has B.S. in chemical engineering from Texas A&M; an M.S. in operations research from the Naval Postgraduate School, and M.S. in strategic resource management from the Industrial College of the Armed Forces at the National Defense University. ♦

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SOAR-95-02	State-of-the-Art Report on Biodetection Technologies/U.S. Government Agencies and their Contractors; Export Controlled . . . . .	\$25.00
SOAR-95-01	Proceedings of the CB Medical Treatment Symposium: An Exploration of Present Capabilities and Future Requirements/ Unlimited . . . . .	\$25.00

 **Shop online for CBRNIAC Information Products at** <https://www.cbrniac.apgea.army.mil/Products/Catalog/Pages/default.aspx>

The screenshot shows the CBRNIAC website's 'User Survey' page. The header includes the CBRNIAC logo and navigation links. The main content area is titled 'About CBRNIAC' and 'User Survey'. It contains a form with the following sections:

- Prefix:** A dropdown menu.
- \*First Name:** A text input field.
- \*Last Name:** A text input field.
- Organization:** A text input field.
- \*Email:** A text input field.
- Phone Number:** A text input field.
- How did you become aware of the CBRNIAC's products and services? (Check all that apply):**
  - Briefing
  - CBRNIAC Brochure
  - Co-worker
  - Referral from another IAC
  - Conference/Display
  - CBRNIAC Newsletter
  - Internet/Website
  - Other
- Please rate the CBRNIAC products and services that you have used:**

	Poor	Satisfactory	Excellent
Web Site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Newsletter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inquiries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical Area Tasks (TATS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Comments on CBRNIAC products and services:** A large text input area.
- What topics would you like to see the CBRNIAC address?** A large text input area.
- Please indicate three CBRNIAC website features that are most useful to you.** A large text input area.

# 2010 User Survey

In less than a minute you can help us develop CBRN defense information resources of value to our user community by completing our online user survey!

## Thank You!

[www.cbrniac.apgea.army.mil/About/UserSurvey](http://www.cbrniac.apgea.army.mil/About/UserSurvey)

