

theshield

THE OFFICIAL MAGAZINE OF DTRA/SCC-WMD
VOLUME 1, ISSUE 3

FALL 2011

Cold Leftovers

How DTRA/SCC-WMD is securing and eliminating Cold War-era small arms and light weapons without breaking the bank. *pg. 6*

WINNER of
12 design/writing
awards in 2011

Letters to the Editor

theshield@dtra.mil



As of this printing, the first two issues of the shield have won a combined 12 awards for design and writing: 11 Communicator Awards (3 Awards of Excellence, 8 Awards of Distinction) and an APEX Award for Most Improved Magazine or Journal.

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Public Affairs

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» Got my copy of *The Shield* and it looks good. They did a great job with the story about Director Myers and I also liked the reference to the (W-54) Davey-Crockett “rifle-nuke”... it gives new meaning to the phrase “shoot and scoot.” I would offer a suggestion that they include a short page about the nuke weapon development years with each upcoming issue, as a tribute to the courage exhibited by those “atomic-vets” who were involved in those activities, back then.

R.J. Ritter

Managing Director and National Commander
National Association of Atomic Veterans, Inc.

» I read the first volume of *The Shield*. I was impressed. I especially liked the articles about Mr. Myers and the one provided by Col. Lee. I think what made the magazine good for me was the personal interest slant it had. Just thought I would let you know that I liked it. I look forward to the next issue.

Steve Van Doren

Watch Officer

DTRA/SCC-WMD Operations Center

» The Nunn-Lugar article is perfect for *per Concordiam*. Can I get a word document of it? Is the writer Anne Marek on your staff? I would like to use the timeline but might turn it into a different visual format. What can I reproduce in the article?

Maj. Joe Matthews, USA

Managing Editor

per Concordiam Journal of European Security and Defense Issues

George C. Marshall European Center for Security Studies

» The article “Partnerships for Protection” (*the shield*, Fall 2010) ran in vol. 1, issue 6 of *per Concordiam*.

Is there a mission you would like to learn more about? Is there a success story that needs to be shared inside and outside of this agency? Or do you have a letter to the editor to point out an additional detail, share your personal anecdote, or correct something that we might have overlooked? Send us an email at theshield@dtra.mil.



Fall2011



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Around the World

GRAPHIC: ANN FOX

BY CHRIS KWAN

USA

Maryland

The U.S. Army Chemical Materials Agency (CMA) announced on March 23 that it achieved 85 percent destruction of the U.S. chemical agent stockpile. At 85 percent, CMA has destroyed 26,019 tons of agent and 2.3 million munitions. Under the Chemical Weapons Convention agreement, CMA is required to destroy 90 percent of the entire U.S. chemical agent stockpile since entry-into-force. CMA sites at Anniston, Ala.; Toole, Utah; and Umatilla, Ore. continue to destroy chemical weapons. ●

USA

Ohio

DTRA/SCC-WMD is providing funding for research at Ohio State University to develop a more effective antidote to lethal chemicals called organophosphorus (OP) nerve agents. The research leverages Ohio Supercomputer Center resources and is focused on countering the effects of exposure to common OP nerve agents such as Tabun, VX, VR, Sarin, Soman, Cyclosarin, and Paraoxon.

Germany

As Germany's dangerously high wild boar population continued to skyrocket in recent years, so too has the number of boars contaminated by radioactivity left over from the Chernobyl nuclear meltdown. Though the accident happened a quarter century ago, high levels of radiation remain in the region's vegetation. Wild boars are especially susceptible to contamination because of their proclivity for mushrooms and truffles which are efficient at absorbing radiation. ●

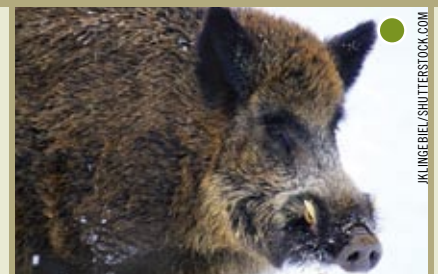
Libya

In response to Operation Odyssey Dawn (now Operation Unified Protector), DTRA/SCC-WMD deployed experts to Stuttgart, Germany, to support the operational efforts of U.S. Africa Command. The deployed personnel provided key planning and liaison officer augmentation support to U.S. and NATO operations in Libya.

MARYLAND

GERMANY

Potential WMD threats exist on almost every continent.



Georgia

Assistant Secretary of Defense Andrew Weber, Georgian Prime Minister Nikoloz Gilauri and U.S. Ambassador to Georgia John Bass attended the inauguration of the U.S.-funded Central Public Health Reference Laboratory in Tbilisi. The \$100 million joint U.S.-Georgian biological research facility will promote public health through infectious disease detection and epidemiological surveillance for the Caucasus region. ●

Uzbekistan

Representatives from various Uzbek government ministries and DTRA/SCC-WMD opened two biodefense facilities in the Fergana Valley cities of Andijan and Fergana. The \$1.3 million DTRA/SCC-WMD-funded facilities are outfitted with modern equipment that will monitor disease outbreaks throughout Central Asia's most populous nations and aid government offices in improving public health.

Japan

A 9.0-magnitude earthquake hit northern Japan, triggering devastating tsunamis that crippled the Fukushima Daiichi nuclear power plant. In support of the Department of Defense's Operation Tomodachi, DTRA/SCC-WMD deployed 33 personnel to Yokota Air Base, Japan, to provide consequence management and liaison officer augmentation support. The forward deployed DTRA/SCC-WMD team members were supported by 200 DTRA/SCC-WMD personnel at Fort Belvoir, Va. ●

Russia

A team of U.S. inspectors gathered in Russia for the first on-site inspection of the country's nuclear facilities as part of the New START treaty which entered into force on February 5. Mutual on-site inspections and data exchanges are key components of verification for compliance with the treaty. Both the U.S. and Russia have the right to conduct on-site inspections beginning 60 days after the treaty's entry into force.

Azerbaijan

DTRA/SCC-WMD Director Kenneth Myers joined U.S. Ambassador to Azerbaijan Matthew Bryza and Azerbaijani Government officials in Baku to take part in a ribbon cutting ceremony celebrating the opening of the Ministry of Defense Epidemiological Monitoring Station. The disease-monitoring facility was constructed under the Department of Defense Cooperative Biological Engagement Program with more than \$1 million dollars in U.S. funding. ●

GEORGIA



AZERBAIJAN



JAPAN



In July 1946, two atomic devices were exploded near Bikini Atoll as part of Operation CROSSROADS. This operation, designed to examine the effects of nuclear weapons on naval vessels and Army equipment, had lasting effects on both the U.S. nuclear program and marked the beginning of the establishment of radiation safety policies and procedures.

In the months leading up to the operation, the atomic bomb producing Manhattan Project, along with the rest of the war industry, was winding down. Like returning soldiers and war industry workers, many of the project's scientists returned to their civilian careers. Those who remained in Los Alamos struggled to expand the U.S. nuclear arsenal for the first atomic weapons effects tests, code named CROSSROADS, scheduled for July 1946 at Bikini Atoll in the central Pacific.

To prepare and plan for CROSSROADS in January 1946 the Joint Chiefs of Staff set up Joint Task Force I (JTF) with members from the Navy, Army, Army Air Forces, and scientists from Los Alamos. Under the command of Vice Adm. William H.P. Blandy, the task force chose the northern extreme of the Marshall Islands as the proving ground for Shot ABLE, an altitude detonation, and Shot BAKER, a low water detonation. The third, Shot CHARLIE, a deep water detonation, did not receive much attention because it was supposed to take place the following year, but was canceled.

In March, site preparations in the Pacific began with the relocation of more than 160 Bikinians to the neighboring Rongerik Atoll, where the Navy's Construction Battalions

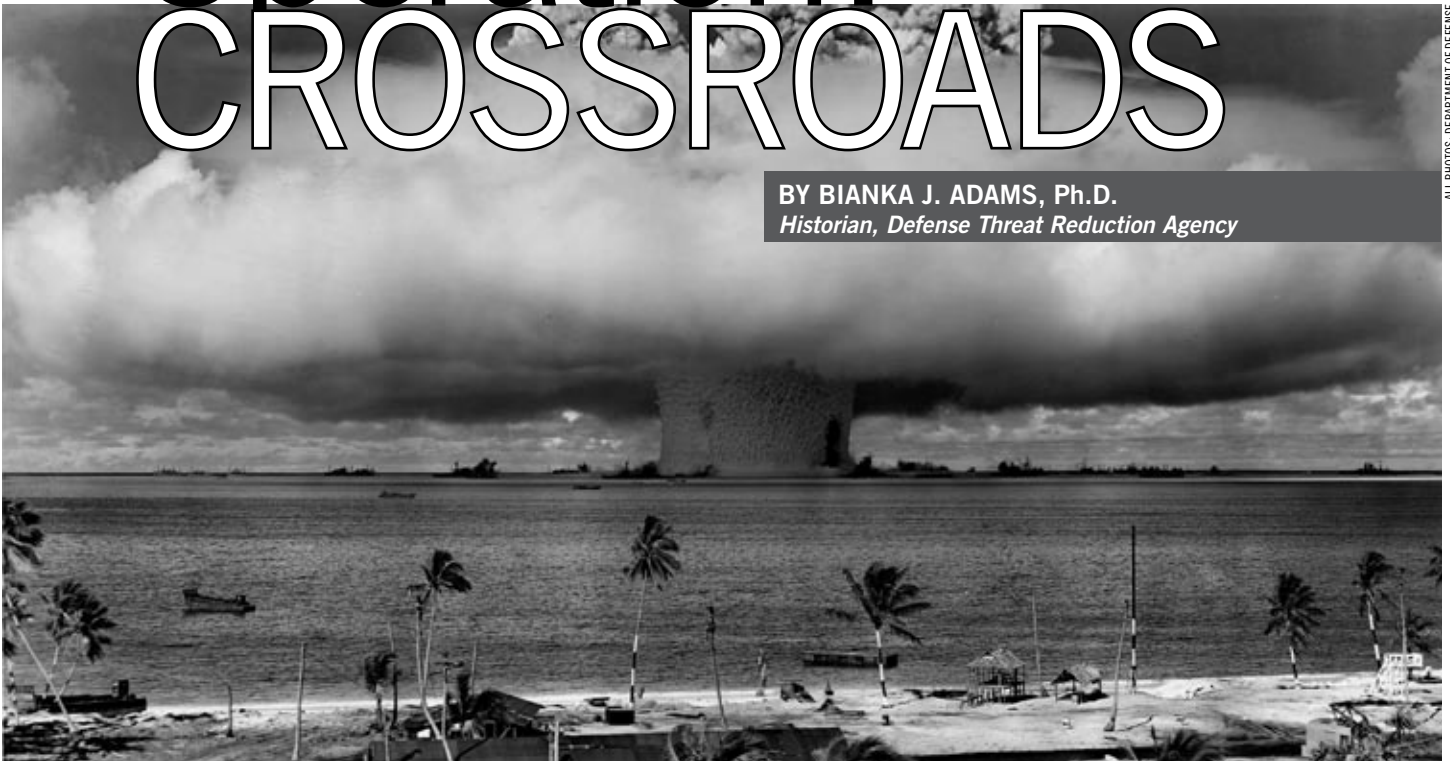
or "Seabees" had constructed houses and infrastructure for them.¹ Meanwhile, the Navy sailed more than 90 vessels, including three captured German and Japanese warships, to the Atoll and anchored them in the lagoon as a target array. Also en route was a fleet of 150 support ships to provide quarters and temporary workstations for the JTF. In Washington, D.C., the services kept JTF planners busy with requests to incorporate more data collection experiments into the plan.

As the events of the spring and early summer of 1946 unfolded, the name for the operation seemed almost prescient. Not only were military research and development, the structure of the armed forces, and the national security apparatus in the United States at a crossroads, but so was America's role in the international arena. The U.S. Congress' inability to pass an atomic energy bill left the future of nuclear weapons development hanging in the balance. During this uncertain period, the Manhattan Engineering District continued to administer the program as a temporary wartime holdover. Without legislative guidance, the program's future, its funding and whether civilian or military authorities would have custody of it remained unclear. As a result, the scientists in Los Alamos continued the wartime practice of handcrafting every compo-

¹ In 1948 the U.S. Navy moved the Bikinians to its base on Kwajalein and eight months later resettled them permanently to Kili Island.

Operation: CROSSROADS

BY BIANKA J. ADAMS, Ph.D.
Historian, Defense Threat Reduction Agency



ALL PHOTOS: DEPARTMENT OF DEFENSE

ment part of the weapons in the laboratory, which slowed production to a snail's pace, and halted research and development of improved weapons, altogether. Instead of newer, more improved devices, the CROSSROADS tests were based on the 21 kiloton-yield Mark III Fat Man implosion weapon dropped on Nagasaki, which approximated 21,000 tons of TNT.

With the future of nuclear weapons uncertain, Army and Navy senior officers were anxious to preserve their respective service's influence on future programs. Rivalry over scarce resources for new weapons technology was especially intense between the Navy and the Army Air Forces. The Navy was defending its traditional role of being the nation's first line of defense; the Army Air Forces were asserting their newly won importance gained in air battles of World War II, and striving to become an independent service. Both claimed exclusive rights to nuclear weapons and to the resources that went with them. While fighting for their share of the budget, the War and Navy Departments were also locked in a fierce debate over unification of the Army and the Navy into a single department.

As the U.S. government struggled to realign its defense establishment to meet peace time requirements, the battle lines of the Cold War began to harden. The Soviet Union installed Communist led governments in Central and Eastern European countries it considered as part of its sphere of influence. Observing this trend with alarm, George F. Kennan, deputy chief of mission at the U.S. Embassy in Moscow, sent his "Long Telegram" to Washington in February 1946, in which he outlined Soviet expansionism and advocated its containment. A month later, Winston S. Churchill, the wartime British Prime Minister, announced during a visit to Westminster College in Fulton, Mo., that "an iron curtain" had been drawn between Stettin on the Baltic and Trieste on the Adriatic Sea.

Aware but undaunted by the building tension on the international stage and within the U.S. military establishment, the JTF planners pressed on with their work. At the same time, the Navy provisioned target ships with live ammunition, torpedoes, and standard amounts of fuel, food and supplies to simulate normal fighting conditions before sailing them to the test site. To make the tests even more realistic, some ships carried Army trucks, tanks, ammunition, and other equipment. As July drew closer, sailors, soldiers, scientists, and invited members of Congress, representatives of the president and the Joint Chiefs of Staff, members of the national and international press, foreign scientists, including the leading Soviet nuclear experts, assembled in the Bikini Atoll. All in all, more than 44,000 members of the military, and another 1,400 scientists, government officials, and reporters observed the tests.

On July 1, 1946, a B-29 bomber released Shot ABLE, which detonated at an altitude of 520 feet over the target fleet moored in the harbor. Although missing the intended aim point by some 700 yards, the detonation sank five ships and damaged more than 20

others. But, it left the rest of the target array and beached landing craft unscratched. The resulting radioactivity dissipated within a day. Three weeks later, on July 25, the Navy suspended the BAKER device in a waterproof caisson ninety feet below a ship at the center of the target array. When the bomb detonated, it destroyed eight ships and seriously damaged eight more. It also sent a huge water column into the air, bathing the whole target fleet in radioactive water containing debris from the device mixed with material dredged from the lagoon. The ships and the waters around them remained intensely radioactive after the explosion, hampering clean up operations and attempts to document BAKER's effects. Nearly three weeks after the second shot, JTF ordered that the salvageable ships be towed to uncontaminated waters at Kwajalein Atoll where ammunition that had survived the blast could be safely unloaded.



JTF personnel worked on the contaminated ships wearing a film-badge dosimeter to measure their exposure to radiation. In early 1946, with only a handful of experienced radiation safety officers, the JTF began an aggressive recruiting campaign for medical officers and others to train as radiation safety monitors. The newly qualified monitors developed policies that stressed detection and avoidance.

Procedures for labeling contaminated areas followed, as did restrictions on who was allowed to enter them and for how long. The decontamination work in Kwajalein led to the creation of safety standards for personnel working in contaminated areas that remained valid for many years.

While most of the effects of Operation CROSSROADS were expected, some came as a surprise. Besides providing the Navy and the Army with valuable data on the effects of nuclear weapons on military hardware, particularly Shot BAKER, it produced more intense radiation contamination that lasted a lot longer and spread over a larger area than anyone had anticipated. In the 1950s, the U.S. radiation safety policies and procedures that grew out of the CROSSROADS experiences served to protect thousands of Army troops participating in nuclear combat training exercises. By this time, atomic weapons had become a vital component of America's defense and the exercises were intended to prepare soldiers to fight on a nuclear battlefield. ■

Suggestions for further reading:

Defense's Nuclear Agency 1947-1997, (Washington, D.C.: U.S. Department of Defense, Defense Threat Reduction Agency, 2002);

Lloyd J. Graybar, "The 1946 Atomic Bomb Tests: Atomic Diplomacy of Bureaucratic Infighting?" *The Journal of American History*, Vol. 72, No. 4 (Mar., 1986) pp. 888-907;

"Operation CROSSROADS," Fact Sheet, (Defense Threat Reduction Agency, Fort Belvoir, VA, July 2007);

Operation Crossroads 1946. United States Atmospheric Nuclear Weapons Tests. Nuclear Test Personnel Review, (Defense Nuclear Agency, Washington, D.C., 1984);

Steven L. Rearden, *The Formative Years 1947-1950*, Vol. 1, (Historical Office of the Secretary of Defense, Washington, D.C., 1984);

W.A. Shurcliff, *Bombs at Bikini*. The Official Report of Operation Crossroads, (Wm. H. Wise & Co., New York, 1947)

Most of the texts are available at: [DTRA/SCC-WMD1 Homepage/Quick Links/DTRA/SCC-WMD Historian Library \(Operation CROSSROADS folder\)](#)

(left) The BAKER explosion, part of Operation CROSSROADS, a nuclear weapon test by the United States military at Bikini Atoll, Micronesia, on July, 25 1946. (above) Crew of USS Fall River watching the ABLE atomic blast during Operation CROSSROADS on July 1, 1946.

Cold

War

How DTRA is diminishing the availability of Cold War-era weapons and minimizing the risk of catastrophic accidents across the globe.



COVERS

BY ANNE MAREK



On April 6, 1994, an aircraft carrying the presidents of Rwanda and Burundi was struck in mid-air by two man-portable air-defense missiles, causing the plane to erupt into flames and crash into the gardens of the Rwandan presidential palace.

The crash killed both presidents and set into motion some of the bloodiest conflicts of the late 20th century, including a Rwandan genocide that killed more than 800,000 people. Responsibility for the attack remains disputed, but its method – man portable air-defense systems (MANPADS), commonly referred to as shoulder-fired anti-aircraft missiles – demonstrates the tragic and destabilizing consequences that can occur when conventional weapons and munitions fall into dangerous hands.

During the Cold War millions of small arms and light weapons (SALW) – pistols, machine guns, shoulder-launched anti-aircraft missiles and rocket-propelled grenades – were manufactured and shipped around the world. Since then, many of these weapons have fueled local and international armed conflicts and supplied low-level terrorists and non-state actors with the ability to cause widespread casualties and economic disaster.

The United Nations estimates that over 500,000 people are killed every year by conventional firearms alone around the globe, with the bulk of these deaths occurring in conflict zones in developing regions. Additionally, at least 40 civilian aircraft have been hit by MANPADS since the 1970s and these weapons continue to pose a potential threat to commercial aviation. Landmines are a prevalent threat in many areas of the world and it is estimated that there are still hundreds of thousands of landmines that remain undetected.

The Small Arms Light Weapons Branch plays a critical role in the effort to reduce SALW proliferation across the globe. The branch assists foreign governments with improving security, safety and management of state-controlled stockpiles of SALW, MANPADS, and conventional ammunition. SALW experts provide foreign governments with assessments and technical advice, as well as orientation seminars on international best practices for physical security and stockpile management (PSSM). By securing and managing these stockpiles, the DTRA SALW Branch is diminishing the availability of weapons and ammunition to terrorists and insurgents. They are helping to reduce regional exposure to destabilizing cross-border weapons transfers, and minimizing the risk of catastrophic accidents across the globe.

“The whole world is affected by the proliferation of small arms and light weapons. If it’s not a concern for tracking and tracing, it’s a concern for import and export control or it’s a concern for illegal trafficking,” says SALW Branch Chief Larry Schultz. “The channels used to smuggle drugs and other illegal substances are the same channels used to smuggle weapons and ammunition.”

DTRA’s On-site Inspection Directorate first became involved in physical security and stockpile management in 2000, following a deadly ammunition explosion in Guyana. Prior to that accident, the agency’s focus centered primarily on arms-control treaties and activities in the former Soviet Union. But after the Guyana event, DTRA was asked to provide technical expertise to the U.S. Department of State to help foreign nations in safely securing and storing stockpiles of arms, ammunitions and explosives. DTRA got the job, largely because of the agency’s expertise in conducting military missions in sensitive environments.

Over the following years, DTRA developed and conducted orientation seminars to assist nations with securing their national SALW and ammunition holdings. In 2006, the agency was designated as the executive agent for supporting SALW destruction initiatives and for providing assistance to countries wishing to improve the security of, or reduce the size of, their stockpiles of small arms and ammunition. Since that time, the agency’s SALW expertise has continued to grow significantly as the types and numbers of missions have developed and evolved.

Today, program requests come from a number of sources – U.S. Embassies, U.S. regional combatant commands (European Command, Central Command, Northern Command, Africa Command, Southern Command and Pacific Command), the Department of State, host nations, and multilateral organizations. For each request, DTRA conducts a thorough, routine coordination process which seeks concurrence from the office of the secretary of defense, joint staff, appropriate staff offices, and the partner country’s U.S. Embassy.

Through additional coordination with the United Nations, NATO, the Multinational Small Arms and Ammunition Group, the Organization for Security and Cooperation in Europe, and other like-minded nations’ arms control and verification agencies, the program has facilitated the execution of many U.S. bilateral and multilateral commitments.

In less than a decade, DTRA has conducted PSSM assessment missions and seminars in 60 countries worldwide.

Funding for DTRA-recommended solutions – ranging from the destruction of conventional weapons to the building of more secure SALW storage facilities – may be provided by the Office of Weapons

(right) SALW Technical Advisor Ben Cacioppo escorts U.S. Sen. Richard Lugar and U.S. officials at storage facility in Burundi – 2010.

“ Practical disarmament in the context of the conflicts the United Nations is actually dealing with, the weapons, most of them light weapons that are actually killing people in the hundreds of thousands.”

– Boutros Boutros-Ghali
United Nations Secretary-General
Jan. 3, 1995

Removal and Abatement in the U.S. Department of State’s Bureau of Political-Military Affairs.

“We’ve done assessments everywhere you can imagine,” says SALW Internal Relations Specialist and SOUTHCOM/PACOM Desk Officer Brett Wise. “Sometimes we have to remind people that just because a place is nice to visit doesn’t mean it doesn’t have problems.”

In 2010, fisherman in the Galapagos Islands pulled up nine severely corroded WWII-era bombs left over from a military air base, abandoned in 1947. A Navy-led investigation revealed that local fishermen have occasionally pulled up and released aircraft bombs from territorial waters and “a large number” of these bombs are still lo-

cated on the seafloor. In addition, a small quantity of aging ammunition was found near the abandoned base. Concerned about the potential threat to its tourist industry, the Ecuadorian government requested U.S. assistance to address the problem. DTRA conducted a subsequent threat assessment, identified all the risks and made recommendations on how Ecuador could best consolidate and destroy the aging munitions.

“That base was built at a time when those islands were considered a worthless wasteland,” says SALW Program Manager Billy Johnson. “It wasn’t until years later, when Ecuador realized the ecological importance of the area, that they began protecting it. Those islands are now a major source of tourism for Ecuador. So an accident there



could have seriously affected their income stream.”

The SALW program may seem like an unusual fit for an agency focused on countering weapons of mass destruction – chemical, biological, radiological, nuclear and high-yield explosives (CBRNE) – but their mission is shared. High-yield explosives – technically classified as SALW – are one of the most easily acquired forms of CBRNE materials and depending on their amount and location, can prove as deadly as their nuclear, chemical or biological counterparts.

Additionally, the cooperative relationships that DTRA has built through the SALW program are demonstrating that the agency can help partner countries control and reduce weapons within their own borders and also provide assistance and training as it relates to WMD.

Last November, DTRA/SCC-WMD Director Kenneth Myers joined U.S. Sen. Dick Lugar, Andrew C. Weber, Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs and Ken Handelman, Principal Deputy Assistant Secretary for Global Strategic Affairs, in leading a mission to Burundi where

experts from the departments of State and Defense are working closely with the Burundi government to destroy stockpiles of weapons and ammunition through the Lugar-Obama SALW destruction program. The program is a by-product of the Nunn-Lugar Global Cooperative Threat Reduction effort that has succeeded in securing, storing and eliminating weapons of mass destruction for more than two decades.

“Whether we’re dealing with conventional weapons or dirty bombs, physical security and stockpile management is a large part of what this agency does,” says SALW Deputy Branch Chief and EUCOM/CENTCOM Desk Officer John Schmitt. “Stockpile management of explosives can help prevent catastrophic events like Khobar Towers and the Oklahoma City bombing, which were not WMD events but they were pretty close.”

But the program’s success is not met without challenges. Three of the program’s desk officers break down the six geographic combatant commands. Together, with a staff of 11, they must brief every defense attaché and every security officer that enters host countries. They must prepare them for what to expect when they arrive and educate them on how the SALW program can provide value. They

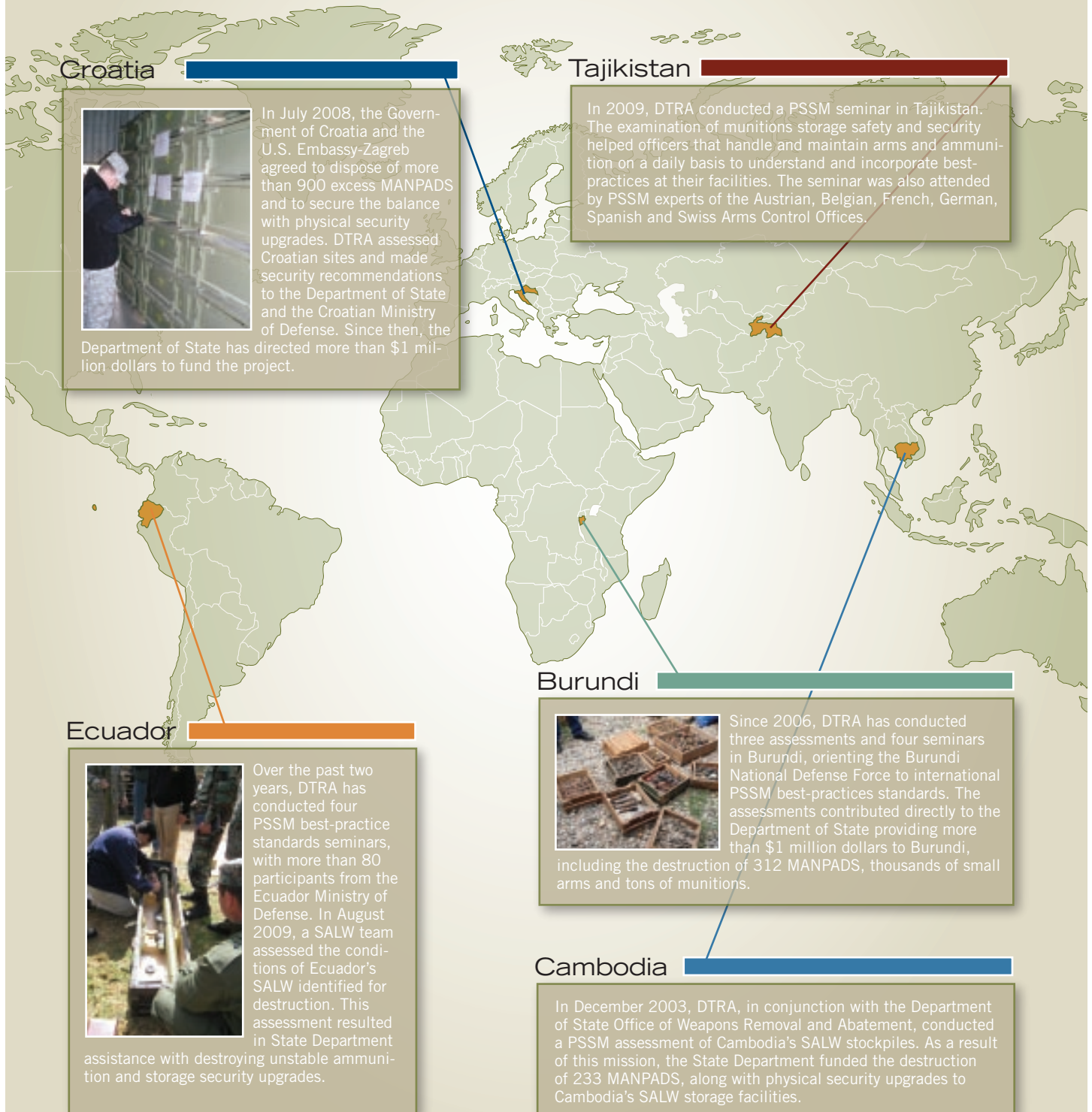
“The State Department was given the mandate to finance destruction of these weapons for the U.S. but they did not have the necessary technical expertise to do it. DTRA became the technical set of eyes to help the State Department carry out that mission.”

– Larry Schultz,
SALW Branch Chief



SALW Global Impact

Everyday, the SALW Branch is working to improve physical security and stockpile management (PSSM), diminish the availability of weapons and ammunition to terrorists and insurgents, and minimize the risk of catastrophic accidents across the globe.





(page 10) African weapons storage facility – 2010. (above) SALW Technical Advisor Ben Cacioppo assesses an ammunition storage site in Central America – 2010. (right) Senior Technical Officer Bill Johnson assess an ammunition storage area in Southeast Asia – 2010.

must gain the trust and respect of the host country to allow them to enter the country and assess their weapons and munitions.

“We can’t just come in and say ‘We want to look at all your stockpiles and possibly destroy some of them’ because they don’t always understand why,” says Wise. “So we go into their country in a cooperative manner and tell them that we know they are the true experts of what they need for their own defense purposes. We explain that we just want to make sure that whatever they have is being secured properly, but that’s not always easy to do.”

DTRA approached Tanzania through the U.S. embassy in 2008 to offer an assessment of the facility which had long been identified as a concern. Tanzania did not take advantage of the opportunity. The following year, an ammunition explosion at the facility killed 26 people, injured hundreds more and destroyed over 7,000 homes. DTRA offered to help the country secure the facility. Tanzania declined. Two years later, an army munitions bunker housing aging ammo exploded in the Mbagala district of Tanzania, near the international airport. The event killed at least 20 people and wounded more than 100.

“Unfortunately, this happens,” says SALW AFRICOM Desk Officer Chanda Brown. “We offer our assistance to countries and they

don’t take it. They have so many other factors for instability – coups, changes in leadership and natural disasters – that they don’t always see us as a priority. But when they do agree to schedule a meeting with us and they don’t cancel... when they listen to what we can do for them and seem to want to make a difference... when they actually work to make tangible improvements themselves or follow up with the State Department for assistance... that’s what I view as a success.”

In March, a SALW team deployed to the Democratic Republic of the Congo (DRC) was preparing to conduct a seminar at a base attached to the DRC presidential palace. Sixty armed rebels subsequently stormed the compound in a violent attempt to assassinate the president of the DRC. After a hail of gunfire that killed numerous soldiers and rebels, the compound was closed for investigation and the SALW team was forced to relocate the seminar.

“We were teaching our seminar to the participants from the base that was attacked,” says SALW AFRICOM Technical Advisor Ben Cacioppo. “With everything that had just happened, it was difficult to get their mindset back onto some of the things we were talking about... but we talked about the tragedy and what could have prevented it to refocus them on why we were there.”

“ We help prevent humanitarian disasters and we do it on a relatively small budget. We would prefer to spend a couple thousand taxpayer dollars upfront over millions of dollars worth of humanitarian aid following a disaster.

– Ben Cacioppo
SALW Technical Advisor





(above) U.S. Army Maj. Sulev Suvari instructing weapons storage procedures in Tajikistan – 2009. (right) Improperly stored ammunition in Southeastern Europe – 2008.

While the global effort to secure SALW has increased, the threat is far from being eliminated. Large stockpiles of ammunition built up during the Cold War continue to deteriorate around the world and many countries – especially, those without strong

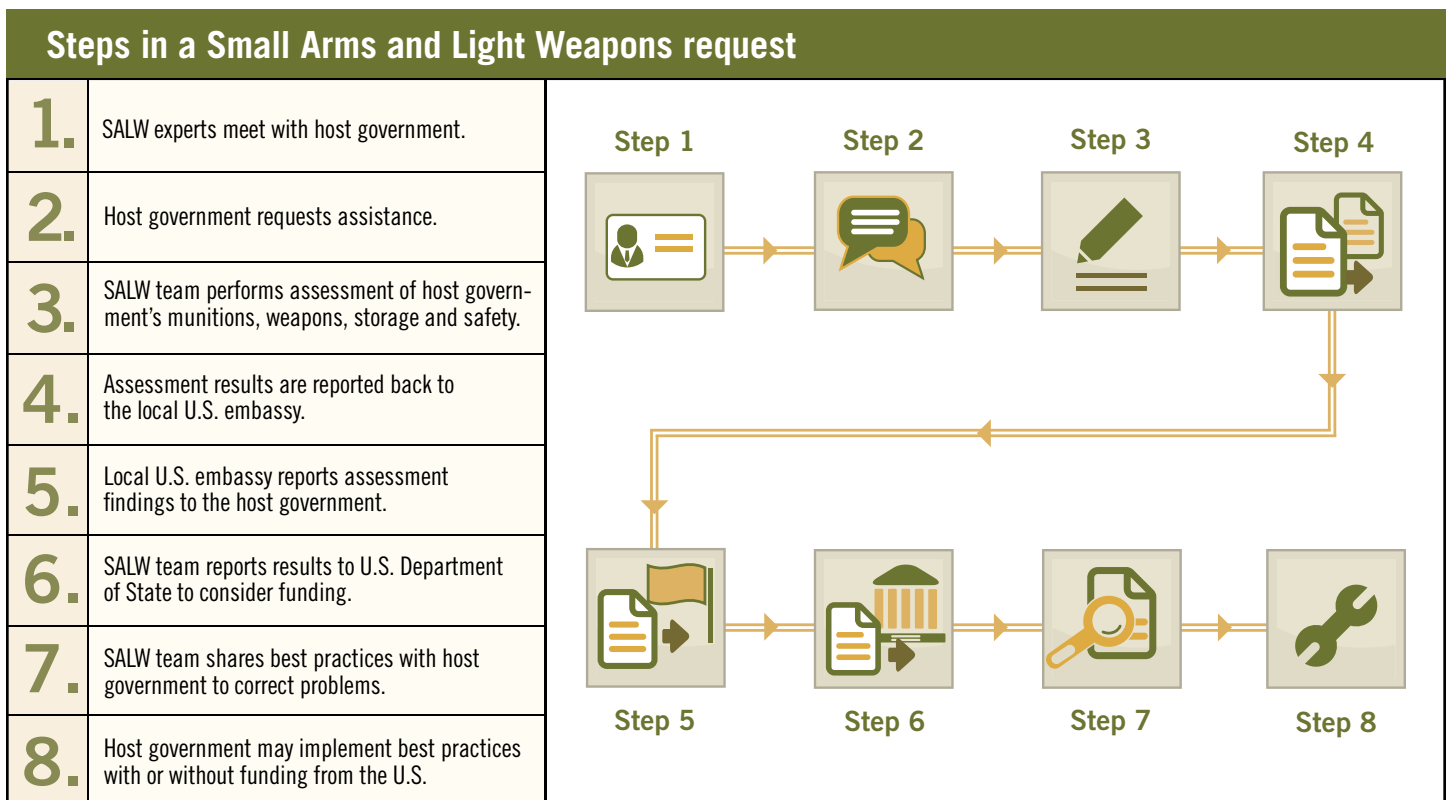
diplomatic ties to the United States – don't request assistance until an accident occurs.

"One of the most difficult things about this program is that we can't do an assessment until they invite us in," says Brown. "When

they do invite us in we prefer to do our assessments first, but when that is not possible, we can use our seminars as a lead-in to the assessments. That way, we are informing countries that aren't familiar with us and don't know why we're there or what we're really after before we do the assessment. Basically, we're trying to earn their trust and build relationships where we can."

In coordination with multilateral organizations and like-minded nations' arms control and verification agencies, the SALW program is doing just that – meaningfully assisting nations with their stockpile management and building lasting relations with the countries where they conduct missions.

"It's an education process worldwide," says Schmitt. "It is free for these countries for us to come in and that's what we try to sell them on, listen to what we have to say and if there's a problem we tell them how to fix it. For the most part, the solutions we offer don't break the bank, but if you think about how much human suffering and economic turmoil that an accident in one of these places may create, our program is a real value." ■





SALW by the numbers

Figures current as of Jan. 5, 2011

Total Assessed (since 2001)

Total MANPADS

27,607

Total SALW

1,657,500

Total Ammunition (tons)

2,686,296

Total Destroyed*

(since 2001)

Total MANPADS Destroyed: 32,000

Total SALW Destroyed: 1.5 million

Total Ammunition Destroyed (tons): 90,000

*Destruction activities funded and administered by the Department of State.

“ Nobody has been killed by a nuclear weapon or dirty bomb in 50 years but people get killed by small arms and light weapons on a daily basis. These weapons are much easier to acquire, conceal and transport. They are the everyday tool of a terrorist.”

– Brett Wise
SALW Internal Relations Specialist and
SOUTHCOM/PACOM Desk Office

Patrick Alston | Command Sgt. Maj.

Alston

BY ANNE MAREK

INTERVIEW

He began his U.S. military career in the post-partum ward of a military hospital and now he's the first-ever Army Chemical Corps command sergeant major working for a four star commander. When *the shield* sat down with Command Sgt. Maj. Patrick Alston, we learned quite a bit more about the man who served as our command senior enlisted leader, his work at the White House, his service in the most forward-deployed chemical battalion in the Army, his role at this agency and how he's used his many opportunities to reach back and help others.



What motivated you to join the U.S. military and why did you choose the Army?

I think the motivating factor probably started out when I was about nine years old... watching my father get dressed everyday, understanding what he was doing for our country and watching his peers and the camaraderie that they had together. It made me feel like I wanted to be part of something. And growing up as a command sergeant major's son, you really don't get a choice of which recruiter is going to come to your house. He narrows that down for you, so it was pretty much the Army or nothing.

You spent the first couple of years in the Army as a medical specialist. Why did you switch to chemical corps?

At the time I enlisted, all four of my sisters were in the medical field. I envisioned following in their footsteps and working in an emergency room or being a paramedic. But my first duty station was Fort Belvoir, where I found myself in the post-partum ward for six months. As a young 18-year-old male, watching women deliver babies was not the career I wanted. So, I quickly called my dad and said two things: 1.) I didn't want to be working in the post-partum ward and 2.) D.C. is a little too fast for me. And my dad suggested I go down to Ft. Bragg, which is what I did. I adjusted to infantry life at Ft. Bragg, and quickly developed an interest in the chemical corps, which was just starting to revamp itself and grow again. So, that's when I made the switch to the chemical corps at what I considered the right time in my career.

During your time in the chemical corps, what was being impressed upon you and what did you impress upon the soldiers within your command?

At that time, we were an Army that literally trained everyday. We were an Army that was being prepared "in case," but we thought that "in case" meant something that would never really happen. And then Grenada broke out. That was really when we had a shift in our thinking. It was where we could be called on at any given time to do whatever our nation needed us to do to



Command Sgt. Maj. Alston with the DTRA/SCC-WMD Color Guard at 2010 National Capital Region Joint CBRNE Green Dragon Ball.

ensure that it remained free. We were going into Grenada, dealing with the Cubans, then Panama started... and quickly after Panama, we found ourselves ramping up for Desert Storm. The mindset became; "We're really the world's strongest Army. We're really the nation's leading agent for ensuring we remain free. But even more than that, we're the world's peacekeeping force." And so we became what we are today; an Army that is ready to react to any situation at any given time.

What was the emphasis of attitude toward chemical, biological, radiological, nuclear, and high yield explosives (CBRNE) threats at the time?

Before Desert Storm, the mindset was that there were nations that possibly had the capabilities of producing some type of CBRNE stockpiles. It was not really anything proven, but the mindset was, "This is something that could happen." But after we went into Desert Storm, when we found out Iraq had the capabilities of deploying some type of agent against us, we saw the reality. Everybody wanted our advice and we were constantly getting questions like; "How do I make sure my mask stays in place? How do I make sure my overgarment works?" The mindset quickly started changing. And then, after the Gulf War, came the terrorist attacks and the Japan subway incident. We started saying to ourselves; "This stuff is not difficult to pro-

duce and it's not difficult to take it and use it against somebody in a harmful manner." That was where we became a value-added asset to the military; a value-added corps.

In 1993, you were assigned as a senior enlisted advisor to President Clinton and his administration on the survivability of weapons of mass destruction (WMD). How were you selected for that position and what can you tell us about that experience?

I had to go through the regular interview and selection process, but coming off of being a drill sergeant, it was very unique to be assigned to the Contingency Support Detachment, which is what it was called. The detachment's responsibility was to ensure that the President of the United States and the President's support entity was prepared for any incident involving WMD. Our main focus was making sure that the White House was kept aware of all threats at all times and that the president and his immediate staff were prepared with all the necessary equipment to survive a WMD attack.

Was your position at the White House a policy-oriented position, rather than a field-operation/unit-training position? And if so, how did that shape your approach with traditional unit and agency positions?



PHOTO COURTESY OF COMMAND SGT. MAJ. PATRICK ALSTON

Command Sgt. Maj. Alston speaking to children during the Month of the Military Child DTRA/SCC-WMD Color Guard demonstration.

It really wasn't a policy-driven organization. It was an organization that implemented the policies and procedures for dealing with the White House or their military offices that were already in place. What the position did for me personally was teach me that there's a greater cause for the military than being "ground pounders". When you're part of a ground troop, you think about ground events. You think about what's happening right there in that orderly room of the 325th Infantry. And your mindset is there. You may grow a little bit to the brigade level, but other than that, you don't worry about how the "Big Army" works, how the other services work, how everybody fits together, and how collectively, we became the fighting machine that we are today.

Working in the Contingency Support Detachment really gave me a different side of the Army. It gave me perspective on the more strategic end and it kind of put me on another level. I had to look across the armed forces to understand cultures and to understand how everybody dealt with different situations. I had to take all of that knowledge and really integrate it into one mindset for the betterment of the nation versus a mindset of "Just Army."

When you're dealing with the president and his direct staff, you stop thinking bipartisan and you start thinking inclusive. You start thinking; "What do civilians do everyday to help our armed forces? And how do the contractors support our armed forces?" You start seeing the "big picture".

Starting with the 23rd Chemical Battalion, you spent several years in South Korea. How did that experience shape your current view on CBRNE weapons worldwide?

Whenever you are forward-deployed in harm's way, at any given time, it kind of gives you a mindset of preparedness. When you're in Korea, you're more prepared than you would ever be in any garrison situation back in the U.S. Your thought pattern changes because you know that, on any given day, somebody could come across the Korean demilitarized zone and cause not only harm to you, but harm to your peers and your subordinates alike. Therefore, your mindset for readiness is keyed into each and every day. You don't have time to react to every situation, but you have time to prepare for situations. So, when it's time to make sure that the protective masks and protective overgarments work, you already know that they work. There's no time to think about them once the enemy attacks.

If you were having lunch with a fellow CBRNE colleague, how would you describe your role at DTRA/SCC-WMD?

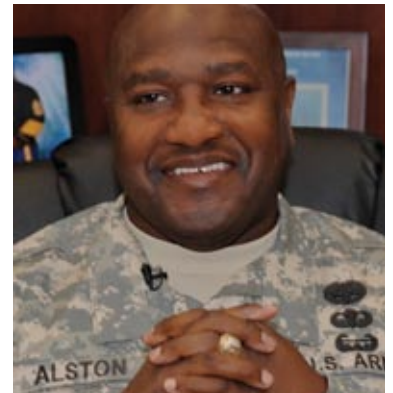
As you grow up as a CBRNE soldier, you usually do the minimum when it comes to doing CBRNE business. You find yourself either in the 23rd Chemical Battalion working in the motor pool or in the 2nd Chemical Battalion dealing with the Foxes, the nuclear, biological and chemical recon-

naissance vehicles. You find yourself doing some CBRNE stuff, but not at the micro level that DTRA/SCC-WMD does it.

The conversation I would have with a CBRNE colleague is that what we're doing here is not something that you can read in a manual. It's real-time. And if you really want to excel in your trade or your business... if you really want to go out and see how the world is being kept safer... if you really want to go see how we're preparing our research and development programs for mission success... and if you're ready to learn even more about your field... there's no better place to do it than here.

How do you leverage a career's worth of CBRNE experience in your role as Command Senior Enlisted Leader at DTRA/SCC-WMD?

If you look at Director Myers, he came from a political background. His CBRNE knowledge and background came largely from the Nunn-Lugar program that he worked on with Senator Lugar. But when it comes to more of a conventional WMD, 20th Support Command, and the conventional units around the world, I give the director perspective at the operational level... how our armed forces, as a whole, deal with CBRNE events. I am here to ensure that we don't overlook the value of our military forces at DTRA/SCC-WMD. They are the minority here, especially our more junior military workforce, but when you look at our mis-



sions around the world and you tap into any mission that you do, there's some young American son or daughter in the grade of E-5 and below doing God's work and representing this agency. When you go over to Russia and you're doing an Open Skies mission for example, those young enlisted military men and women are not just being sailors, soldiers, airmen, or Marines for DTRA/SCC-WMD, but they are being diplomats for our nation. They're over there talking to the Russians, getting the Russians to understand our business, and getting them to be partners with us in the nonproliferation and counterproliferation arenas.

What are some of the changes that you are currently implementing that will enable the success of the agency's people, civilians and military, five, 10, and 15 years from now?

The thing that I really hope I've accomplished in this job is fostering a climate of togetherness... fostering an atmosphere where everyone knows it takes everybody – from a GS-1 to the highest SES – to carry out our mission. And if we work in a collective effort... if we avoid the mindset that our senior leadership are the only ones doing the “important work,” and if we start being more inclusive and asking ourselves; “What if the offices were dirty when we came to work? Would that slow our processes down? What if the guy downstairs wasn't making the copies? Could we still have our meetings? What if the audio/visual team wasn't there to make sure that a PowerPoint presentation would be produced on time? How would that slow down

the process?” It takes all of us to carry out our mission, every single person matters in the big picture of what we do for our nation. That's the attitude I hope that I have fostered here and that's why I make it a point to go around and talk to everybody, so that each and every one of them know that the work they do here is essential to our success.

Taking the long view on your career, what would you want to be your legacy?

I don't see my legacy as being anything tangible. A legacy shouldn't be made off of rank or off of name, but it should be made off of the person. And I want to be remembered as a person who truly cared and understood that everybody was value-added, a person that went the extra mile to make sure that a person at the lowest level felt like what they did every day mattered. If you can do that then your legacy will fulfill itself.

Someday, when I take this uniform off, if I am lucky enough to hand out happy faces at Wal-Mart, I want people to feel like, “Man, that's the guy that did something for me.” I don't want them to say, “Oh, that was my sergeant major.” If they only identify you by rank, then they never knew you, they only knew your rank. I want my legacy to be a legacy that says, “He went the extra mile to make everybody feel like they were just as important as the next person.” That's what I would want to leave behind. ■

On Aug. 12, Command Sgt. Maj. Patrick Z. Alston joined U.S. Strategic Command (USSTRATCOM) as their new command senior enlisted leader. He is the first Army Chemical Corps command sergeant major ever to hold the position.

IT'S BEEN CALLED THE DOOMSDAY PLANE.

Designed for a worst-case scenario. The United States is one of the only countries that has it, yet, most Americans don't know it exists. So what is the real story behind the "Looking Glass"? How did its mission begin? Who's involved? And how has this 24-hour-a-day, 365-day-a-year alert system remained vital for half a century?

KEEPING A SIGNAL ON THE WIRE



DEPARTMENT OF DEFENSE

(above) A “Looking Glass” E-6B Mercury aircraft approaches an Air Force KC-10A Extender for aerial refueling. The E-6B can be refueled repeatedly to keep it airborne as long as needed.
(page 22) A Strategic Air Command airborne command and control crew turns the missile launch keys aboard the EC-135 “Looking Glass” that preceded today’s E-6B.

Marking its 50th anniversary this year, the “Looking Glass” serves as the U.S. aerial command center, providing command and control over U.S. nuclear forces in the event that its ground-based counterparts are destroyed by an attack, accident or natural disaster. The aircraft is named “Looking Glass” because it is designed to mirror ground-based command, control and communications of the United States Strategic Command (USSTRATCOM) Global Operations Center (GOC), the mechanism by which USSTRATCOM controls the nation’s global strategic forces and alerts the nation’s leadership to specific threats around the world.

The “Looking Glass” mission was launched in 1961 by the U.S. Air Force’s Strategic Air Command (SAC). Based out of Offutt Air Force Base, Neb., “The Glass” served as the anchor in the World Wide Airborne Command Post network, a fleet of EC-135 aircraft that could launch from ground alert status and establish air-to-air wireless network connections in the event of a national emergency. No plane landed until another had become airborne, and over the next 29 years, the aircraft remained in the air 24 hours a day, 365 days a year – with only one break in 1980 due to bad weather – and accumulated more than 281,000 accident-free flying hours. The aircraft ceased continuous airborne alert in 1990 but was ordered to

remain on ground alert 24 hours a day.

In 1992, SAC was deactivated and was replaced by USSTRATCOM, an event that occurred in the wake of the dissolving Soviet Union. “Looking Glass” became part of USSTRATCOM, transitioning from an Air Force operation to a joint military mission. The basic mission remained unchanged, as the “Looking Glass” continued to provide an around-the-clock, alternate command post for the commander of USSTRATCOM and the nation’s senior leadership.

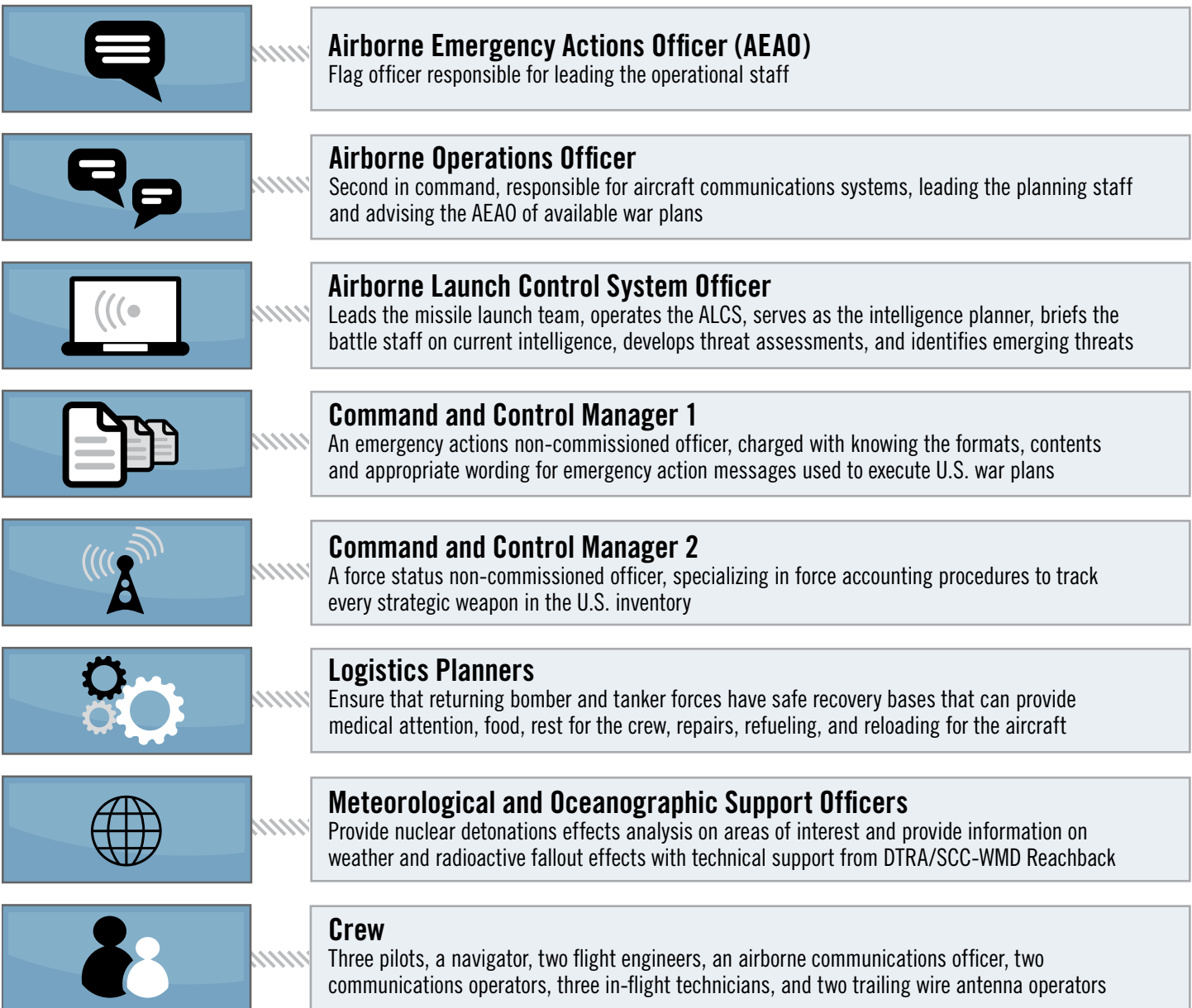
The “Looking Glass” mission transferred to the U.S. Navy in 1994 and the EC-135 was eventually replaced with the Navy’s E-6B Mercury, an air refuelable aircraft loaded with high-tech communication equipment, including an Airborne Launch Control System (ALCS) that qualified the E-6B Mercury as a weapon system even though the aircraft itself cannot fire a single bullet or bomb. The aircraft’s communications system allows the president and the secretary of defense direct command and control capability for America’s strategic forces: ballistic nuclear missile submarines, intercontinental nuclear missiles and strategic bombers. If all or most U.S. ground commands were wiped out by a nuclear attack, the airborne emergency actions officer (AEAO) would take over the direction of U.S. thermonuclear



retaliation. Through a multiple-checked series of authentications, the AEAO would issue the orders for missile sites and bomber bases to send nuclear warheads toward preselected targets.

Today, under the command of an Air Force general or a Navy admiral the “Looking Glass” crew and staff represent all branches of the armed services. Its current battle staff flies the E-6B with the U.S. Navy TACAMO – “Take Charge and Move Out” – based out of Omaha, Neb. The 22-member team flies independent random operations from various deployed sites for approximately 15-day intervals and provides a 24-hour alert posture in the Atlantic and Pacific regions. With its vast array of communications equipment, the aircraft has also been used to support non-nuclear, conventional and covert battle management missions including Operation Desert Storm, Operation Iraqi Freedom, and Operation Enduring Freedom. ■

“Looking Glass” Battle Staff and Crew



GRAPHIC: ANN FOX

Brig. Gen. Whelan



Brig. Gen. Martin Whelan stands in front of the E-6B “Looking Glass” at Offutt Air Force Base, Neb. – July 2011.

Brigadier General Martin Whelan of DTRA/SCC-WMD knows what it means to be “on alert” 24/7. He’s served as the airborne emergency actions officer aboard “Looking Glass” numerous times during his distinguished military career.

Brig. Gen. Whelan moved to STRATCOM in 2008 as the deputy J3 for Operations and became very involved with the “Looking Glass” mission, specifically, the training requirements, scheduling people to fly the duty and making sure they had people who could go airborne at a moment’s notice. With his current grade, he was qualified as an airborne emergency actions officer and could pull “The Glass” duty, something that DTRA/SCC-WMD Director Kenneth Myers has allowed Brig. Gen. Whelan to continue doing to support the “Looking Glass” mission.

“It’s been more than two decades since the end of the Cold War and the “Looking Glass” is still a key component to our deterrent. The U.S. deterrent involves people, weapons, capabilities, and the will to act. And while we base it differently than we did back in the Cold War days, and we are no longer airborne 24/7, we are still on alert 24/7, keeping a signal on the wire to conduct exercise scenarios, to remain in practice and to remain viable.

Having an airplane that is ready and survivable is a key advantage, because as soon as something is launched against the U.S., we know where it is heading and we can fly away from it. It’s a command and control center that is not reliant on any one place and can move to different parts of the U.S. based on what’s targeted. It can send the launch codes directly to the

missile launch complexes and ensure that the U.S. is able to defend itself.

Of course there is a huge logistics piece to all of this. We continually track intelligence around the world; nuclear and conventional weapons, regional instability, armed conflicts, weather, communications, and the locations and accessibility of our nation’s leaders. There’s even a meteorologist on board that uses special software, developed by DTRA/SCC-WMD Technical Reachback to chart what would happen if a nuclear weapon went off and to determine where the plume would go. And when there’s a military situation that draws U.S. forces to deal with it, we determine how an enemy might attack that vulnerability and decide where we would move our sustainment forces if we had to go airborne at that exact moment.

The “Looking Glass” is part of USSTRATCOM, but it’s also the action arm of all the things we do at DTRA/SCC-WMD. Our nuclear surety experts work to ensure that our nuclear weapons are safe and secure... and can therefore be executed by “The Glass.” Our cooperative threat reduction team works to eliminate the threat elsewhere, thereby reducing the WMD scenarios that “The Glass” team has to consider. DTRA/SCC-WMD’s overall mission – to counter and eliminate WMD – enhances the options of the president and the viability of the “Looking Glass” mission. And in turn, our agency benefits from the “Looking Glass” mission, in that it helps to support and defend the constitution of the United States and to secure the American people.” ■

Between 1945 and the signing of the Limited Test Ban Treaty in 1963, the United States used two nuclear weapons to end WWII and tested hundreds more on land, sea and in the air. Decades later, the Defense Threat Reduction Agency is charged with reconstructing those days and figuring out who was exposed to what and helping our veterans in

When an earthquake-triggered tsunami damaged a nuclear power plant in Fukushima, Japan, earlier this year, news of potential radiation leaks quickly became the lead story in the international media. The thousands of people killed, the thousands more missing, entire villages that had been literally wiped off the map, damage in the billions of dollars – they all took second place to a (undetermined at the time) possible leak of an unknown amount of potentially threatening radiation.

Any other story with as many unknown variables would never make front page news, much less when a disaster of truly epic proportions had just taken place, but precisely because of its unknowns – you can't smell it, see it, taste it or hear it – the term radiation can cause a lot of confusion and panic and cause dramatic and extreme reactions, some rightly justified, some completely unfounded.

Unleashing the atom... and some radiation

Between 1945, when the world's first atomic bomb was tested at the Trinity Test site, and 1962, the United States completed more than 300 above ground tests of nuclear weapons, ranging in size from the watermelon-sized, low yield, almost backpack-portable Davy Crockett to the massive 15 megaton CASTLE BRAVO shot. Set off in remote locations – mostly the desert of the American Southwest or the Pacific Ocean – nuclear weapons testing was an intensive ordeal involving thousands of people. Several tests involved troops maneuvering through target areas after the warheads detonated. Setting up equipment and targets on land and sea prior to tests and decontamination of target ships that did not sink, retrieval of recording

equipment, and observation of tests took a lot of manpower – about 235,000 troops and Department of Defense civilians over the years.

In addition to the tests, about a quarter-million U.S. troops and DoD civilians were part of the post-war occupation of Hiroshima and Nagasaki, the targets of the atomic bombs *Fat Man* and *Little Boy*. Add in the American POWs in Japan and there were almost half a million people that could have been exposed to elevated levels of radiation that had the potential to cause health problems later in life – and therein lies part of the riddle: is the “potential” a .0001% or 10% chance of getting cancer? And is “later” 10 years later, 50 years later – or never?

Solving the riddle

In 1977, long after the United States stopped testing nuclear weapons above ground, a retired soldier filed a claim with the Department of Veterans Affairs for disability benefits. The former Army noncommissioned officer attributed his leukemia to radiation received during a 1957 nuclear weapons test. That same year, the media reported on an unusually high number of veterans with leukemia that had one thing in common – they had participated in a nuclear test in Nevada. They were part of the 490,000 people known informally as ‘atomic vets.’

It became apparent that some of this country's atomic vets might be suffering from diseases that were a result of exposure to elevated radiation levels. The United States military was now facing two large issues: providing benefits and care to atomic vets that have medical issues

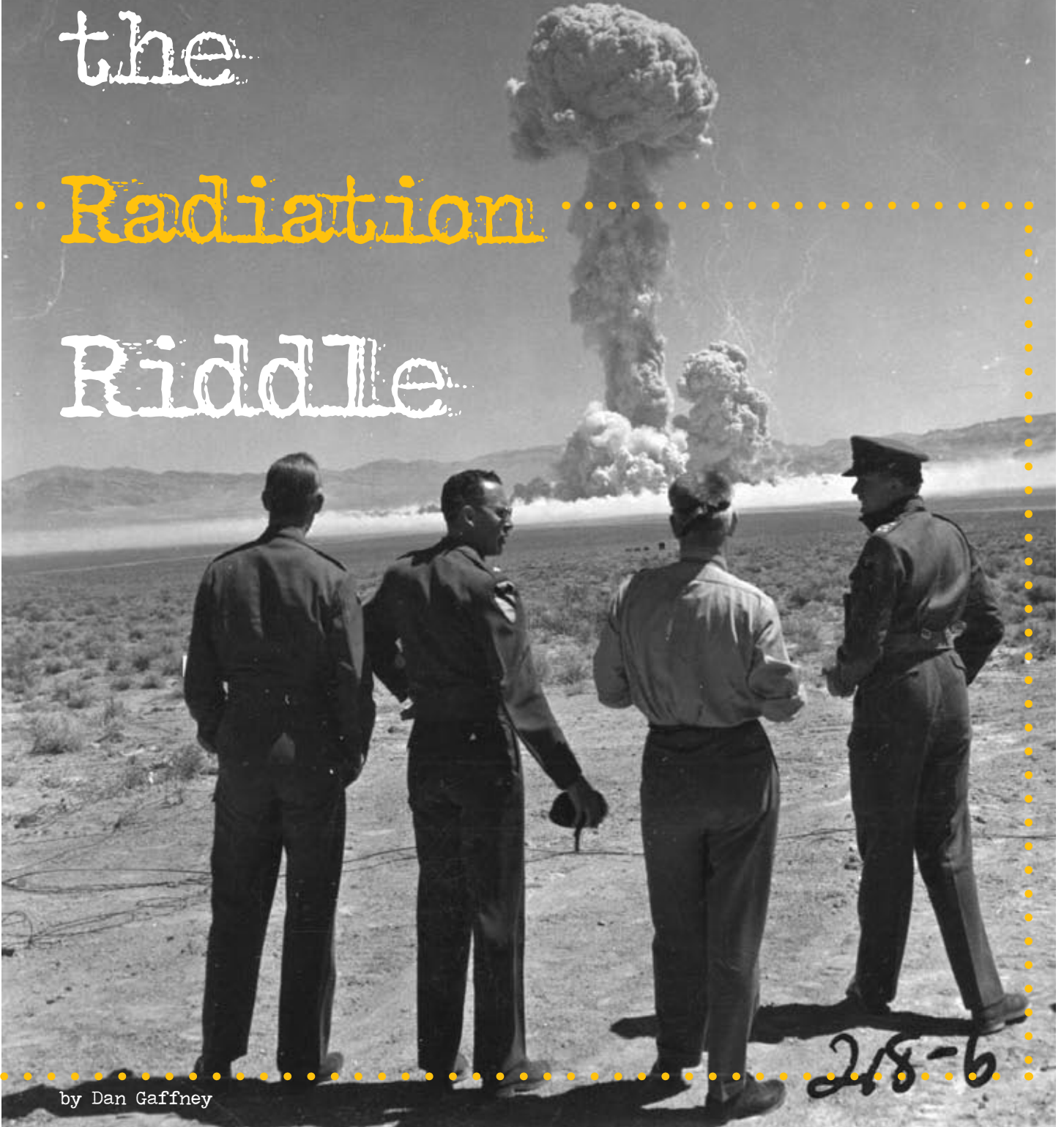


Solving

the

Radiation

Riddle



218-6

ALL PHOTOS: DEPARTMENT OF DEFENSE

by Dan Gaffney

stemming from their participation in nuclear tests or post-war occupation, and – the tricky part – figuring out who those people are.

The tricky part is what the Department of Defense started working on in 1977. To take leukemia as an example, there are plenty of non-veterans that get it, and plenty of atomic vets that do not. Exposure to high levels of radiation is one risk factor, but so is smoking, and some chemotherapy drugs used to fight other types of cancer are also linked to acute leukemia; in fact, men have a 1 in 66 chance of getting some form of leukemia during their lifetime (but doctors still can't say with 100% certainty why people get it).

Given all the uncertainties about cancer, the variables concerning radiation from half a century ago, and pressure to do the right thing, the Defense Nuclear Agency (a predecessor agency of DTRA) worked with the military to set up what is now known as the Nuclear Test Personnel Review Program to collect information on atomic vets and help provide answers to veterans, Congress, the American people – and the departments of Veterans Affairs and Justice, which handle claims, benefits and compensation for veterans and veterans' survivors.

If an atomic vet has cancer, it's almost impossible to prove that his cancer was a direct result of his exposure to elevated radiation levels related to a nuclear test that happened decades ago – but it's just as impossible to prove that it *wasn't*. Radiation was a known hazard even before the first atomic weapon was detonated, but not to the extent that it is understood today. Still, unleashing the power of the atom was cutting edge science, and there was an awful lot of documentation that took place during these tests. They were gigantic, spectacular lab experiments, and scientists and the military wanted to capture as much information as they could about blast damage and the thermal effects on intended targets – as well as how troops could operate on a nuclear battlefield, what contamination took place and what it would take to decontaminate, even

how those effects changed depending on whether the weapon was detonated high in the air, at ground level, or even underwater (see *Operation Crossroads* on page 4).

In addition to all the equipment used to monitor the nuclear explosions, individual pocket dosimeters and film badges were worn by many of the people involved. These small devices changed with minute amounts of radiation, and were used to track total amounts of radiation received and to try and prevent anyone from exceeding acceptable levels. Radiation in small amounts is acceptable – the average American receives about .62 rem from the earth, cosmic rays, routine x-rays – and the average whole body dose during the period of atmospheric nuclear tests was .6 rem; records show that almost all (>99%) of the personnel involved received radiation doses that were less than the current federal standards of 5 rem per year. For almost all of the participants, the amount of radiation received was negligible, even going by today's highly regulated standards. But it's that fraction of one percent that the Department of Defense is concerned about.

According to the latest figures from the National Cancer Institute, men in their 60s have a 1-in-6 chance of developing some sort of cancer; for men over the age of 70, it's twice that. Overall in the United States, men (which make up the vast majority of atomic vets) have a 44 percent chance of developing some form of cancer during their lifetime, and a 23 percent chance of dying from cancer. Of course, those numbers include 19 year-olds and 90 year-olds, and everything from breast cancer (about 1/10th of one percent of men will get it) to prostate cancer (about 1 out of 6). Statistically, a lot of veterans and non-veterans are going to get cancer if they live long enough, and that includes atomic vets.



The NTPR program helps the VA and the Department of Justice figure out who those veterans are – with a large margin of error in favor of the veterans, whose compensation falls into one of two categories: presumptive and non-presumptive. Because of the difficulty in proving or disproving the cause of a particular cancer, several laws have been passed since 1977 that make the VA process much simpler, expedient and gives benefit of the doubt to veterans. Simply put, if a veteran has one of 22 types of cancer AND it can be confirmed that he participated in one of the atomic tests, it is assumed the disease was caused by radiation exposure and he is awarded presumptive compensation. If the above conditions are not met but it can be shown that there is a 50 percent or greater probability that radiation exposure caused the cancer, a veteran is awarded non-presumptive compensation. It is in these cases that additional scientific or medical evidence



(above) At the height of the nuclear weapons testing, thousands of uniformed service members participated in military exercises that tested how well U.S. forces could operate on a battlefield that had been prepped by the most powerful weapons the world had ever seen. Thousands more observed, monitored and recorded the blasts – and their effects – on land and sea.

Is there a “safe” amount of radiation?

Like cancer, the term radiation is rather generic, but for NTPR, the VBDR and atomic vets, the focus is on ionizing radiation – the type that can damage cells and DNA. That includes everything from intense gamma radiation, which can be blocked by thick lead or concrete walls, to alpha particles, which can be blocked by a sheet of paper. The key factor is dose – the amount of radiation received. X-rays are routinely and safely used in the world of medicine, and Gamma Knife radiosurgery uses very limited, very precise beams of radiation to kill cancerous cells. But in both of those medical applications, shielding is used to limit the amount of radiation the patient receives – too much radiation and the cells are damaged faster than the body can repair them.

may be required, or the VA may ask the NTPR program to conduct what is called a dose reconstruction.

Part detective, part historian, part scientist

For some veterans, film badges may be damaged or may not exist, military service records may be incomplete, their memory may not be as sharp in 2011 as it was in 1945 – or the veteran may have passed away and survivors know only what was shared with them, which might not be much. And some records for WWII and Korean War veterans were destroyed in a fire at the National Military Records Center. In these cases, the NTPR program takes on the role of a detective agency and a forensics lab, searching through volumes of records, piecing together what is known about their service, trying to match it up against existing records, and estimating – with both a high degree of confidence and benefit of the doubt tilted to favor the veteran – just how much radiation an atomic vet could have received.

To say a dose reconstruction is complicated is an understatement. Imagine trying to figure out how much sun you got, how much water you drank, and how many calories you consumed on, say, the third Wednesday of July – when you were *seven*. Not just a guess,

but a scientific calculation with an extremely high confidence level that will be matched against your childhood friends whose mothers – let’s pretend – *did* keep those types of scientific records. A dose reconstruction is neither quick nor easy, but most riddles aren’t.

Consider all the factors—then assume the worst

A dose reconstruction looks at a lot of factors that affect how much radiation an atomic vet might have received. The following are just a few of the variables taken into consideration:

- Gamma rays from fallout
- How much contaminated dust might have been inhaled (which looks at a soldier’s lung capacity, the breathing rate for various physical activities, and the total volume of air breathed given a set amount of time)
- Types and quantities of radiation present and their half-lives
- Types and quantities of radiation that are absorbed by different organs (which looks at the types, quantities and half-lives of various isotopes)
- What previously settled radioactive material from earlier tests could have been stirred up at test sites that were used repeatedly
- The amount of fallout that landed on target ships (*con’t on page 28*)

The Department of Justice operates a program under the Radiation Exposure Compensation Act of 1990. RECA provides compensation to people who were exposed to radiation released by nuclear tests, or who worked in the uranium industry (RECA is strictly presumptive). The VA handles compensation and health care benefits for veterans and their survivors. The NTPR program and the Veterans’ Advisory Board on Dose Reconstruction – the VBDR – play supporting and oversight roles in relation to the Department of Justice and the VA – they do not process claims.

Expert Oversight: the Veterans' Advisory Board on Dose Reconstruction

Because of the complexity of a dose reconstruction – and its importance in determining compensation and benefits for atomic vets – there is a lot of concern about the accuracy and validity of the dose reconstruction process. After hearing from concerned veterans, Congress ordered the General Accounting Office to conduct an independent review of the dose reconstruction process. The GAO concluded that the process was valid but it also noted that there was room for improvement, including the need for an independent review. The National Research Council was then asked to review dose reconstruction and determine the accuracy of the whole process. In December of 2003, Congress passed and President Bush signed the Veterans' Benefits Act of 2003, which established a board charged with oversight of dose reconstruction and sharing information with atomic vets – the Veterans' Advisory Board on Dose Reconstruction.

Having a board responsible for oversight and auditing the process is a good idea, but the VBDR needed to have the right people in order to conduct complex audits and make meaningful recommendations. The law specified that the board, at a minimum, must include:

- a historical dose reconstruction expert
- a radiation health expert
- a risk communications expert
- representatives from DTRA and the VA
- three veterans (at least one must be a member of an atomic veterans group)

The current board includes eight veterans, eight doctors, three certified health physicists, two scientists, and the chairman of the board is a former Surgeon General of the United States Air Force: retired Lieutenant General Charles Roadman II, M.D. The VBDR has conducted dozens of dose reconstruction audits and made dozens of recommendations to the VA and DTRA's NTPR program that have resulted in faster claims process, a reduced backlog and improved communications with atomic vets. The VBDR continues to look at ways to improve the dose reconstruction process, how that information is shared with atomic vets, how to minimize the time and cost of the whole process, and ways to make complex, scientific dose reconstruction assessments easier to understand for atomic vets.

The VBDR held its eleventh meeting earlier this year; five presentations were given and the board made four recommendations for improvement to the VA; there were no recommendations made to DTRA at this time. ■



(above) Crew members decontaminate a B-17G Flying Fortress after a nuclear weapon test. Vehicles, planes, and even some of the target ships used in multiple tests had to be scrubbed down or hosed off after each test, although underwater and high altitude bursts usually had less or little ionizing radiation compared to tests on land. (left, top) Operation HARDTACK I, June 8, 1958. The ship in the foreground is the SS *Michael Moran*, a mothballed Liberty ship used as a target in two underwater nuclear weapons tests, Shot WAHOO and Shot UMBRELLA (pictured here), conducted near the Enewetak Atoll in the Pacific Proving Grounds. (left, bottom) Operation BUSTER-JANGLE, Nov. 4, 1951. Exercises Desert Rock I, II and III were conducted during this test series (Shot DOG pictured here); thousands of troops from all four branches of the military participated in observer programs, tactical maneuvers and damage effects tests.

- How much protection various structures offered and where the veteran was (topside on an observation ship, or down in the boiler room?)

In addition to all those variables, there are still some uncertainties that still exist today, like post-detonation measurements that were marked on a paper map by hand – something that would be accomplished by computers and GPS readings today with extreme accuracy.

Some cases may have large information gaps that need to be filled in, but dose reconstructions are not simply hypothetical 'guesstimations.' As with any scientific research, a known benchmark is required. Six different military units involved in land and sea-based tests during the 1950s for which detailed records exist were used as case studies. The NTPR program completed dose reconstructions to see if the methods and tools used came up with answers consistent with the data that already existed. The methods and tools used were proven to work, but with any scenario, there is a wide spectrum of results, from veterans who were exposed to barely any radiation to those exposed to a significant amount. The NTPR solution to ensure atomic vets get benefit of the doubt? Assume a worst case scenario.

It's actually a lot more scientific and complex than that, but in giving benefit of the doubt to atomic vets, the NTPR program tries to see if the results are greater than what 95 percent of the exposed population would have received. This practice probably means some veterans that received little or no radiation are treated as if they did, but more importantly it also prevents the Department of Defense from treating veterans that probably did get a not insignificant amount of radiation as if they didn't. In solving the radiation riddle for our atomic veterans, though, it makes perfect sense – try to get the right answer, but make sure you do the right thing. ■





Are you an atomic vet or an atomic vet's survivor? You do not need to contact the NTPR office directly – you can file a claim with the VA and the Department of Justice and they will submit the request for information or a dose reconstruction. Additional links and phone numbers can be found at www.dtra.mil – look or search for “Nuclear Test Personnel Review.”

*Department of Veterans Affairs
1-800-827-1000
www.va.gov*

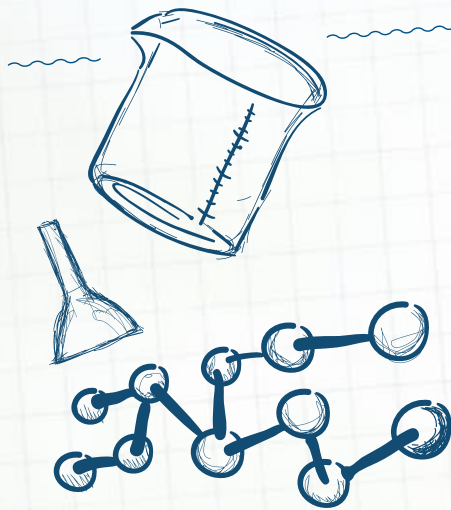
*Department of Justice
Radiation Exposure Program
1-800-729-7327
www.usdoj.gov/civil/torts/const/reca*

*Nuclear Test Personnel Review Program
1-800-462-3683
Email: ntpr@dtra.mil*

*Veterans' Advisory Board on Dose Reconstruction
1-800-657-8237
www.vbdr.org
Email: pa@vbdr.org or aa@vbdr.org*



Experimenting with Success



How a high school graduate with a gift for math and science made it from the aisles of Wal-Mart to the halls of academia, to countering the biological threats of the 21st century... Meet Ada Bacetty, Ph.D.

BY ADA BACETTY, PH.D.,
AS TOLD TO ANNE MAREK

Science was always something that intrigued me. Even as a kid, I liked to experiment and figure out how stuff worked. My fourth grade teacher, Mr. Sackler, at PS 198 gave me science projects to work on and they got me thinking even more about the mechanics of everything around me. I remember he once asked me to evaluate how a light bulb turns on. It was just a battery, some wires and a little bulb hooked into the base with two screws on the end. But once I hooked it up, the light turned on and it made me think, "Wow, I can make light!" An even greater motivator was my 10th grade science teacher who said to me, "Girls don't have a mind to completely understand science." At which point, I said to myself, "I'll show him! It's on!"

I guess you could say that my career went a little backwards. I grew up in Brooklyn and when I finished high school, I didn't want to go to college. No one in my family had gone to college, so I didn't view it as a priority. I found myself working three jobs to pay the bills... 2:00 a.m. to 4:00 a.m. at UPS, packing boxes onto air freight carriers and delivery trucks... 10:00 a.m. to 2:00 p.m. at various stores at the local mall... and 5:00 p.m. to 10:00 p.m. at Wal-Mart as a

customer service representative. I slept between shifts.

One day, while I was working the cash register at Wal-Mart, a woman came through my line wearing a beautiful canary diamond ring. I've always loved talking to people, so I said to the woman, "Wow. Your husband must love you!" And she replied, "I'm not married." So, I said, "Well, your boyfriend then..." And she said, "No, I bought this for myself." I asked her what she did for a living and she told me she was a biochemist. I said, "Do you think I could do something like that?" And she said, "Yes, but you have to go to college." I asked her which college I would have to go to. She said, "All of them." And I said, "I think I am going to do that!" Three months later I enrolled in the local community college, Midlands Tech, where I studied biology. I loved studying anatomy, performing frog dissections, performing chemical manipulations, all of it... I loved it!

Urged to go further, I transferred to South Carolina State University (SCSU) where I majored in biology and minored in chemistry. I thought I might want to become a physician someday, so I decided to volunteer at the local morgue. I

figured that was the best way to figure out if I really wanted to become a physician. It turned out this was the best pre-determining step to make. The staff at the morgue was wonderful, but seeing bodies disfigured and ravaged with disease was not for me. I'm not great with sick people, but I'm glad I volunteered there. This experience prevented me from going down the very long path in the M.D. field, only for people to say, "She is a good doctor but does not have a good bedside manner."

After graduating from SCSU with honors, I applied and got into Georgetown University where I pursued a master of science degree in biochemistry and molecular biology. While at Georgetown, I worked in a lab researching the role of the androgen receptor in the etiology and progression of prostate cancer. Working behind the bench was a whole new world and interested me way more than the operating table.

Following my master's degree, I got a call from a man at the U.S. Department of Agriculture (USDA) Agriculture Research Service. He told me about an opportunity where the USDA would pay for my doctorate if I attended the University of Georgia and worked in one of their science departments. It was a good career path for me, because I would be back in a lab, working with mycotoxins and how they relate to the mechanisms of the host-pathogen interaction in people, animals, insects and the plant population at large. I was accepted into the department of plant pathology and funded through USDA's student career experience program.

I had the extreme honor of working in the toxicology and mycotoxin research unit (TMRU) under Dr. Charles Bacon. I'm sure that I'm biased, but I can't think of a better, more well rounded scientist out there now. Dr. Bacon is a highly respected mycotoxin expert across the globe who instilled in me the intense scientific drive that made me the scientist and manager I am today. He never accepted an answer of "I can't figure this out!" Dr. Bacon, in his form of tough-love molding, would say "Come back when you have!" He didn't hand-hold, but he was always there to make sure I progressed along a path that yielded me the answer I needed. It was in the

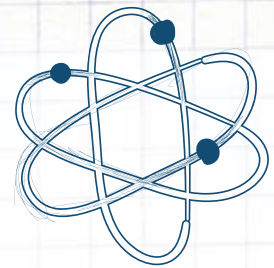


TMRU labs that I learned about true science. Science is a universal language that transcends all cultures, countries, and specialties.

Crafting and successfully executing my own research was a phenomenal time in my life, but unfortunately a year before graduation we experienced a hiring freeze and Dr. Bacon was unable to bring me on as a permanent employee. I knew I wanted to work for the federal government because I had been the recipient of so many wonderful things that the United States Government had to offer. I wholeheartedly believe that working for the government is the best way I can give back without wearing a uniform. So, I started job hunting by sending emails to numerous federal agencies to share my background and inquire about any available career opportunities.

A recruiter from the civilian personnel management service kindly answered my crazy request for information and forwarded me to the Defense Threat Reduction Agency. Kim Chappell informed me about DTRA/SCC-WMD's different programs, fellowships and permanent jobs that could be a good fit for me. I applied and interviewed for one of the agency's





fellowships. This is where I met John Connell for the interview and it was like talking to an old friend. By the end of our conversation I knew DTRA/SCC-WMD was where I wanted to be. Two weeks later, John called and told me that I was hired as the Research and Development – Chemical and Biological Technologies Directorate’s first DTRA/SCC-WMD fellow.

One week after graduating with my doctorate in plant pathology and toxicology, I started my first program rotation in the DTRA/SCC-WMD Chemical and Biological Technologies Directorate working with Fred Crowson, Ngai Wong, Christian Whitchurch and Brandi Vann. They taught me about the other side of science... the program management side. My role was to ensure our supported efforts met the triumvirate of cost, schedule and performance while pushing the scientific limits for success.

to strengthen our portfolio.” Capt. Flood wanted me to analyze their research – with a focus on biotreats – and make recommendations on how to leverage existing efforts that will help BTRP scientific endeavors outside of the former Soviet Union. I agreed to work with CTR, thinking I’d be going back to RD-CB at the end of my rotation. When my six month rotation was over, I was offered a permanent position in CTR-BTRP and I gladly accepted. I couldn’t pass up the chance to continue to work with Will Chapman, Chip Karn, the Science and Tech Team of Gavin Braunstein, Sarah Kennedy, Chris Biegun, and now Dr. Elizabeth George our new CTR Director. The BTRP position allows me the opportunity to maintain my ties with RD-CB Physical, Medical, and Basic divisions working on the “whole of DTRA approach.” These are exciting times!

What I did for CTR and what I continue to do for them is function as a senior scientific project manager. I pretty much have my hand in everything science-based that happens in BTRP. Projects are proposed to us or we try to elicit for projects with different inter- and intra-agency partners, non-governmental organizations and academia. Our delegation of subject matter experts travels to different countries, visiting laboratory facilities to understand and address countries’ needs on the bio front. We observe scientists and lab technicians perform their work under both good and bad conditions. I’ve had the opportunity to



After one year, it was time to figure out what the next step in my career would be. I kept hearing about cooperative threat reduction (CTR) from John and others, but what did I care about nukes? Who knew how wrong I was? John did! I had an opportunity to cross paths with Capt. Paul Flood, the project manager for the Biological Threat Reduction Program (BTRP), in a meeting. He is a frank man and said “You would fit in great with our team. We need another set of unbiased science eyes



(page 31) Dr. Bacetty examines pathogen sample in a Kenya laboratory. (above left) Center for Disease Control visit to Kenya laboratory. (above) Discussing isolation methods for some zoonotic highly pathogenic strains at the Uganda Viral Research Institute.



(above) With her mother and sister after receiving her Ph.D. in plant pathology and toxicology from the University of Georgia.

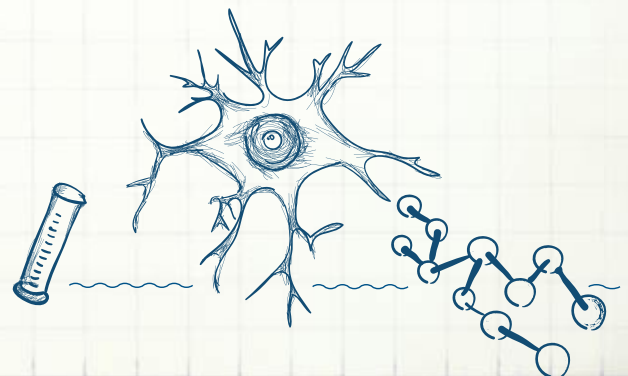
perform experiments side-by-side with in-country scientists to get a sense of what is and isn't working.

My job is to consider what these laboratories need scientifically, and if they have the necessary in-house knowledge, skill level and support channels to be successful. I consider all of these working parts to see if we can provide them with something to address their issue – whether that is training, samples, quality assurance/quality control dialogue, collaborative projects, or any number of needed items. I could really go on and on about what I do in support of the BTRP missions and goals because I love it. I truly love it! Travelling to our foreign partner facilities is really humbling, especially the locations that are 30 or 40 years behind, even on the most basic level, what we have here in the U.S. It really makes me thankful for what we have here.

I've performed these assessments in Kenya, Uganda, Uzbekistan, Georgia and in many other areas of the world as well. We have visited – or plan to visit – countries on almost every continent. We've even gotten involved with several countries in the Middle East, meeting with them for open and honest discussions about their current capabilities and how we can work together in combating WMD. They are generally very welcoming of us, regardless of their political relationship with the U.S., because they can finally talk to someone who speaks the same scientific language they do and can help them troubleshoot. It's my job as a scientist supporting BTRP to get our partners primed and ready to move out on areas of mutual scientific interest. Science policy is a surprising niche I am learning to occupy.

A BTRP program that I am especially proud of is our diagnostics library. Basically, it's a large-scale cataloging system to identify assays and tests that are commercially available in the international market to diagnose biothreats and looks for the gaps to better focus program support with our foreign partners. Eventually, it will allow us and our partners across the world to take a sample and determine what kind of pathogen they are dealing with, whether it's Ebola, anthrax, or anything else. It's an international effort that will live longer than any rotation I can do and it will aid not only our program but other programs as well. There is so much more that we don't know about the select agents and this is one drop in the bucket to get there.

What I love most about my job is that my work environment at DTRA/SCC-WMD is always changing. Whether I'm crafting an international agreement, meeting with the different ministries overseas to discuss their issues, or forming a research project to answer different hypotheses, not one of my work days is the same as the day before. I don't just work for the paycheck. I do it because I thrive on it. I guess you could say I'm hooked. Ask the weekend guards... they'll tell you! ■





BY ANNE MAREK

A DTRA/SCC-WMD Consequence Management Advisory Team (CMAT) in South Korea was finishing up an exercise on March 11 when a 9.0 magnitude earthquake occurred off the northeast coast of Japan, followed by a devastating tsunami that struck three of Japan's major nuclear power stations and caused critical damage and a release of radiological materials at the Fukushima Daiichi Nuclear Power Plant.

Following a request for assistance from U.S. Forces Japan (USFJ), the CMAT was quickly diverted to Yokota Air Base where they became part of the first responders effort. Even before the full scope of the nuclear accident was known, the team was working with USFJ and the Japanese Ministry of Defense to develop courses of action to contain the nuclear release, monitor radiation levels and help the people of Japan.

With support from DTRA/SCC-WMD Technical Reachback, the CMAT participated in working groups, briefed USFJ senior leaders and U.S. Ambassadors to Japan and planned and developed capabilities that were needed to tackle the potentially disastrous situation.

Approximately 33 DTRA/SCC-WMD personnel responded to the disaster in Japan including the CMAT, liaison officers and Reachback experts, plus 200 in the DTRA/SCC-WMD Operations Center providing Technical Reachback support. ■



Inside

DTRA/SCC-WMD



Maj. Gen. Howlett Retires

BY ANNE MAREK

On March 18, Maj. Gen. John M. Howlett retired after 37 years of distinguished service in the U.S. Air Force.

Since 2008, Howlett served as Deputy Director for the U.S. Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD) and Acting Deputy Director of the Defense Threat Reduction Agency. In this position, he has played a key role in integrating and synchronizing Department of Defense-wide efforts to combat weapons of mass destruction.

Howlett was commissioned as a second lieutenant through Officer Training School in 1973. He served as a command pilot with more than 7,000 hours supporting airlift and air refueling missions in the C-141 Starlifter and the KC-10 Extender. A veteran of operations Desert

Shield and Desert Storm, his special assignments include serving as a facilitator for the Air Force Reserve Future Strategic Planning Initiative, Reserve Crisis Action Team officer at the 21st Air Force during Operation Desert Shield and as Reserve adviser to the Commander of the 21st Air Force.

In 2005, Maj. Gen. Howlett deployed as the Director of Mobility Forces for U.S. Central Command, and in 2006, was selected for a short tour as Director of Regional Affairs, Secretary of the Air Force International Affairs Office. Prior to his assignment to the SCC-WMD, Maj. Gen. Howlett was the mobilization assistant to Commander, Headquarters Air Mobility Command, Scott Air Force Base, Ill.

His awards and decorations include the Bronze Star, Meritorious Service Medal



with oak leaf cluster, Aerial Achievement Medal, Air Medal, Air Force Commendation Medal, and the Southwest Asia Service Medal with three bronze stars. ■

DTRA/SCC-WMD Bio Engagement Program makes Progress in Azerbaijan

BY ANNE MAREK

In April, DTRA/SCC-WMD Director Kenneth Myers traveled to Azerbaijan to join U.S. Ambassador to Azerbaijan Matthew Bryza and Azerbaijani government officials in opening the country's

new state-of-the-art disease-monitoring laboratory, part of Azerbaijan's Ministry of Defense.

The construction of the laboratory was financed by the U.S. government within the framework of DTRA/SCC-WMD's Cooperative Biological Engagement Program (CBEP). Through the program, DTRA/SCC-WMD works with a number of partner countries to counter the threat posed by select agents, related materials, expertise, other emerging infectious disease risks, and to prevent these agents from reaching any state or non-state actors who may use them against the United States or its allies. The program aims to secure dangerous pathogens; promote open and active disease

reporting and response; and advance transparent research to understanding pathogens and developing potential countermeasures.

The new disease-monitoring laboratory is the first-ever opened within the framework of CBEP. Once all CBEP labs are fully operational in Azerbaijan, they will deliver the data about the diseases to the local and republic labs.

To date, the U.S.-Azerbaijan cooperation has led to the construction of ten epidemiological monitoring stations in Azerbaijan for the State Veterinary Service, Ministry of Health and Ministry of Defense. ■



DEPARTMENT OF DEFENSE

SCC-WMD Welcomes New Deputy Director Maj. Gen. Crabtree

BY AMANDA MARTIN

In March, U.S. Air Force Maj. Gen. Eric W. Crabtree became Deputy Director of U.S. Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD). Since that time, Maj. Gen. Crabtree has played a key role in advising combatant commands on CWMD-related matters and providing recommendations to prevent the proliferation and use of WMD.

Maj. Gen. Crabtree began Officer Training School where he completed undergraduate navigator training in 1975 and began flying as an F-4 weapon systems officer. In 1978, he attended undergraduate pilot training and graduated from Reese AFB, Texas, as a distinguished graduate. In 1989, he joined the Air Force Reserve as an Air Reserve Technician.

Crabtree completed the National Security Managers Course at Syracuse University, in addition to graduating from Squadron Officer School, Air Command, Staff College and Air War College. As a civilian, he earned a Bachelor of Arts degree in English from St. Law-

rence University and a Master of Arts degree in Management from Webster University.

A command pilot with nearly 5,000 flying hours, Crabtree has held several key operational leadership positions, including; tactics officer and Chief of Standardization and Evaluation, 934th Airlift Group, Minneapolis-St. Paul International Airport Air Reserve Station; Commander of the Air Reserve Personnel Center, Denver; Wing Commander, 446th Airlift Wing, McCord AFB, Wash. Prior to his assignment to the SCC-WMD, he was the Commander of 4th Air Force, Air Force Reserve Command, March Air Reserve Base, Calif.

Crabtree's awards and decorations include: the Air Force Distinguished Service Medal; Legion of Merit with two oak leaf clusters; Meritorious Service Medal with silver oak leaf cluster; Aerial Achievement Medal with oak leaf cluster; Air Force Commendation Medal with two oak leaf clusters; Combat Readiness Medal with four oak leaf clusters; Armed



Forces Expeditionary Medal; Global War on Terrorism Expeditionary Medal; Global War on Terrorism Service Medal; Armed Forces Service Medal and the Armed Forces Reserve Medal with "M" device and gold hourglass. ■

Reachback Supports Superbowl XLV

BY ANNE MAREK

As Super Bowl XLV drew near, DTRA/SCC-WMD's Reachback was facing a bigger challenge than deciding whether to support the Pittsburgh Steelers or the Green Bay Packers.

Reachback received a request for information from the U.S. National Guard Civil Support Team (CST) assigned to provide security at Cowboys Stadium. The CST supplied Reachback with specific information about the environment

within and around the stadium. Through extensive in-depth computer modeling and analysis, Reachback delivered a timely detailed response, identifying the potential hazards of a terrorist attack at the site. The information provided was used to aid in event planning and to determine the necessary security measures.

Reachback serves customers from throughout the military, including: the combatant commands (COCOMs),

joint staff, National Guard Bureau and more than 50 full-time National Guard WMD CSTs. Following an event involving weapons of mass destruction or a natural disaster that unleashes hazardous materials, partners are able to contact Technical Reachback via phone or secure web portal 24 hours a day, 365 days a year for support and assistance. Technical Reachback experts provide "up to the minute" analysis on the full spectrum of WMD threats. ■

DTRIAC Marks 50 Years of Service

BY LT. COL. CRAIG HESS, USAF

The Defense Threat Reduction Information Analysis Center (DTRIAC) – maintaining the largest collection of nuclear-related information in the nation, and arguably the world – marks its 50th anniversary this year.

Enshrined in a legacy that began in 1961, DTRIAC serves as the Department of Defense (DoD) official repository for all scientific and technical data pertaining to nuclear weapons. The largest of DoD's 19 Information Analysis Centers, the organization is located on Kirtland Air Force Base, N.M., and the Scientific and Technical Information Center is at DTRA/SCC-WMD headquarters on Ft. Belvoir, Va.

DTRIAC has a focused initiative in place to preserve and digitize a backlog of approximately 10 million feet of film and approximately 230,000 documents. A vast amount of digitized data is already available via the Scientific Technical Information and Archival Research System (STARS), a system that currently contains over 400,000 abstracts and 150,000 media files available for download. A variety of new system enhancements will soon make research efforts quicker, easier and more productive for STARS users.

The DTRIAC staff prides themselves on superior customer service and, as they have been for the last 50 years, stands ready to support the ever-evolving needs of the research and development community and the warfighter.

*In honor of DTRIAC'S 50th anniversary, a piece on the center's history, legacy and impact will be featured in the next issue of **the shield**.*

Enlisted Education Achievement Initiative

BY AMANDA MARTIN

In March, DTRA/SCC-WMD launched the enlisted education achievement initiative to promote the value of higher education for enlisted personnel.

“The enlisted leaders of today are asked to do a lot, more perhaps than the enlisted leaders of 20 or 30 years ago,” said DTRA/SCC-WMD Director Kenneth Myers. “The level of education required for that continues to grow. I don't think that's a steady-state situation.”

The program, themed “Building Tomorrow's Leaders with Education Today,” encourages military members to continue their educational goals and persevere through the scheduled and unforeseen events that honor their commitment to serve. The initiative aims to afford en-

listed members the opportunity to meet with education counselors from a variety of institutions and with experts from the community colleges of the various services, and the Institute for Noncommissioned Officer Professional Development to discuss respective service-related educational opportunities.

To promote the success of enlisted personnel, agency leaders and supervisors are encouraged to be supportive and mindful of the challenges and stressors associated with balancing a military career and an education.

DTRA/SCC-WMD will also hold a yearly commencement exercise to honor its military members who have earned degrees. ■

Chief Information Officer (CIO) Update:

DTRA/SCC-WMD1:

The agency's new DTRA/SCC-WMD1 portal with comprehensive search and content management functions is now operational. This will facilitate greater information management and sharing as DTRA/SCC-WMD continues to mature its overall knowledge management capabilities.

Remote Access:

The Office of the CIO (OCIO) improved the agency's remote access capabilities for users accessing DTRA/SCC-WMD's systems and information capabilities from remote and other external locations.

Computer Network Defense (CND):

The OCIO continues to upgrade and enhance its robust CND capabilities to protect the agency's information, systems and networks against cyber threats.

DTRA Enterprise Cloud:

The OCIO successfully tested the capabilities required to establish a computing cloud as part of the new information technology infrastructure scheduled to be operational in 2013, in support of DTRA/SCC-WMD's ever-evolving mission. ■

HONOR ROLL

Congratulations to the annual award winners for 2010!

MILITARY CATEGORIES AND WINNERS

Field Grade Officer of the Year 2010

Maj. Michael Bonura, USA

Company Grade Officer of the Year 2010

Ens. Tanner Feistner, USN

Senior Enlisted Member of the Year 2010

Master Sgt. Piotr Ratuszny, USAF

Junior Enlisted Member of the Year 2010

Petty Officer 1st Class Bernadette Cherry, USN

CIVILIAN CATEGORIES AND WINNERS

High-Level Civilian of the Year 2010

Cynthia Dean
Robert Kehlet

Mid-Level Civilian of the Year 2010

Norman Hoerer
Elizabeth Lenox

Junior-Level Civilian of the Year 2010

Harold Johnson

DIRECTOR'S ANNUAL TEAM AWARDS (SMALL TEAM)

Counter Weapons of Mass Destruction Analysis Cell Technology Support Team

Thomas Ward
Dr. Salvatore Bosco
Maj. Sean Duvall, USA
Maj. Eric Moomey, USAF

Countermeasures Branch

Lt. Col. Tim Meserve, USAF
Nelson Jackson
Jim Martin
Maj. Brad Armstrong, USAF
Maj. Keith Gibeling, USAF
Capt. Delvin Schmunk, USAF
Brian Kenney
Ted Carlson

U.S. Strategic Command Proliferation Security Initiative Support Cell

Patrick Christian
David Cameron
James Hebert

Larry Giusti
Maj. Dirk Barber, USA
Lt. Sean Cronin, USN

DIRECTOR'S ANNUAL TEAM AWARDS (LARGE TEAM)

Basic Research Team

RD-BA
Joan Ma Pierre
Robert Kehlet
Dr. Michael Robinson
Dr. Su Peiris
David Petersen
Dr. Calvin Shipbaugh
Col. Thomas Timmerman, USAF
Maj. Keith Simmers, USA
Joyce Bobo
Dr. Don Silversmith
Dr. Heather Meeks
Janet Caramanica
Heather Lewis
Terri Bozarth
Dr. Justin McIntyre
Dr. James Reed

BE-BC

Don Shires
Theresa Hyman
Gena Leake
Carol Anderson
Julie Bardo
Mary Kay Chase
Asli Wright
Arlene Warren

SP-AS

Jonathan Fox

RD-CB

Dr. Alan Rudolph
Dr. Eric Moore
Dr. Jonathan Kaufman
Lt. Col. Michaela Demboski, USAF
Dr. Ilya Elashvili
Dr. Anthony Esposito
Dr. Amanda Horstman
Dr. Daniel Wolfe
Maj. Patrick Kennedy, USAF
Dr. Matthew Tobelmann
Al Graziano

Massive Ordnance Penetrator Quick Reaction Capability Team

Lt. Cmdr. Timothy Allen, USN
Lt. Cmdr. David Blauser, USN
Maj. Michael Bonura, USA
Maj. Timothy Hill, USA
Maj. Christopher Jones, USA
Maj. Jeffery Moran, USA
Capt. Tim Eng, USA
Lt. Jessica McClay, USN
Lt. Valla Olliver, USN
Capt. Harold Pope, USAF
Sgt. 1st Class Richard Kliniewski, USA
Tech. Sgt. Christopher Brown, USAF

Sgt. Karen Vannoy, USA
Dr. Philip Randles
Dr. Eric Rinehart
Dr. Philip Reppert
Roger Bevins
James Billot
Bill Brennan
Randy Carpenter
Benny Cruz
Derrick Duke
Jeffrey Fraher
Donald Gross
Darin Gutierrez
David Hoag
Cynthia Laughlin
Dennis Mulnix
Ricky Oestreich
David Pepper
Eric Perales
Shawn Quillen
Innocencio Salinas
Kayur Shah
Peter Thompson
Charles Wilson
Kash Winningham
Michael Wortman

Technical Reachback Team

David Myers
Col. Ron Neff, USMC
Todd Hann
Ron Meris
Lt. Col. Mark Witzel, USAF
Maj. Jeff Bacon, USA
Maj. Erik Grant, USAF
Maj. Chae Han, USMC
Maj. Mona Wheeler, USAF
Maj. Tom Wofford, USAF
Dr. Andy Grose
Jim Miles
Rich Ringler
Shari Brothers
Master Sgt. Bill Holstein, USAF
Petty Officer 1st Class Toja Hoffman, USN
Petty Officer 1st Class Larisha McKnight, USN ■


Operation CROSSROADS, 1946: Prospective target ships and support ships are shown in this photo released February 27, 1946. Ships present from front to rear include the attack transport ships USS *Crittenden*, *Catron*, *Bracken*, *Burleson*, *Gilliam*, another unidentified transport and USS *Fillmore*. Also pictured are the supply ships USS *Kochab* and *Luna*, an unidentified tanker and a Liberty ship. Identifiable on the right are two amphibious assault craft (LSM-203 and LSM-465), a floating drydock and a merchant ship hulk.



SCC-WMD

INTEGRATING AND SYNCHRONIZING
OUR DEFENSE EFFORTS TO COMBAT
WMD ACROSS THE GLOBE.





15 years of experience.

Conducting 1,100 on-site inspections.

Reducing thousands of strategic
offensive arms.

...and we're at it again.

The New START

IN THE NEXT ISSUE.