

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

Partnerships for Protection

Nunn-Lugar from CTR to present: building safety and transparency based on mutual interests pg. 6

Letter from the Editor

Public Affairs is proud to bring you the first issue of *the shield*, the new quarterly publication of the Defense Threat Reduction Agency and the USSTRATCOM Center for Combating Weapons of Mass Destruction. Our goal is simple: to provide an interesting and eye-catching magazine that tells the DTRA/SCC-WMD story and shares our success stories... without getting too technical, or boring you. Our hope is that you find this magazine good enough to share with your co-workers and the people you work with in other government agencies and partner countries.

Why *the shield*? In addition to being the one element shared by the DTRA and SCC-WMD seals, it sums up what we do: protect our warfighters, the American people and our allies from the threat of WMD. Our missions, programs, and Research and Development are much more complicated and diverse, but for representing our overarching protection mission, these two little words do a pretty good job.

Our relatively small agency has a tremendous footprint, with some incredibly vital missions – but we've found that a lot of people inside the agency don't fully understand or even know about other missions that are unfolding in offices on the floor above or below them, much less in another time zone. We hope **the shield** can change that. Did you know there is one branch alone that sends its teams out on about a hundred week-long missions every single year? (*page 20*) That our R&D teams are on the cutting edge of science, and part of that is due to llamas? (*page 2*) That the organization's director started working in Ukraine as soon as he got out of college? (*page 16*) That dressing up like hip-hop artists helped this agency win an award and help charities? (*page 32*)

We have some extraordinary people in our agency, incredible missions, and an amazing history that deserves to be remembered. Let us know what you think, what you like, what you would like to see or learn about, and what other programs or people have great stories that belong in *the shield*.

Is there a mission you would like to learn more about? Is there someone whose life or career path has an interesting relationship to WMD? 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 dtra.publicaffairs@dtra.mil.



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ON THE COVER: Attack submarines are dismantled as part of the Nunn-Lugar program. (SHUTTERSTOCK)

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Around the World

USA

Washington, D.C.

President Barack Obama's Nuclear Security Summit in April brought leaders of 47 nations together to discuss securing nuclear material and preventing illicit nuclear trafficking and nuclear terrorism. More than half of the attending heads-of-state made new commitments, from joining the Global Initiative to Combat Nuclear Terrorism, to committing additional funds towards nuclear security efforts, to signing international pledges, protocols and agreements.

NYC

In March, a package containing a suspicious white powder was sent to the Queens office of U.S. Rep. Anthony Weiner along with a letter criticizing the Congressman's vote on a high profile piece of legislation. Workers were decontaminated and the office was shut down as a precaution; NYPD tests later determined that the substance was not hazardous.

Brazil / Turkey / Iran

The foreign ministers of Brazil and Turkey agreed on a plan that would allow Iran to transfer nearly half of its estimated supply of low-enriched uranium to Turkey in exchange for the 20 percent highly enriched uranium needed for nuclear reactors and for medical purposes. The plan may help Iran to avoid new U.N. sanctions over its controversial nuclear program. Despite the agreement, the Iranian government announced it would continue enriching some uranium to a level of 20 percent.



San Antonio

Scientists discovered a new way to detect botulism-causing toxins by using llama antibodies. In research funded by DTRA/SCC-WMD's Medical Diagnostics Program, researchers at the Southwest Foundation for Biomedical Research cloned the antibody genes of a llama that had been exposed to inert botulinum toxins for the test.





SAN ANTONIO



Potential WMD threats exist on almost every continent.

United Kingdom

England

The father-son team of Ian Davison and Nicky Davison were convicted of plotting acts of terrorism and producing ricin, a deadly chemical weapon. Members of a group called the Aryan Strike Force, they were plotting to overthrow the government. Police found copies of The Poor Man's James Bond and the Anarchist's Cookbook on two computers along with a sealed jar of ricin.

Scotland

Two Russian bombers capable of carrying nuclear weapons entered British airspace and flew over Scotland before Royal Air Force fighter jets were scrambled to shadow the Tu-160 Blackjacks until they departed.

North Korea

Iran

In May, Iran disclosed that it is building a second uranium enrichment plant in Tehran. Under the leadership of President Mahmoud Ahmadinejad, the country has been widely criticized by the international community for enriching uranium and failing to answer outstanding questions about whether its enrichment program is peaceful or aimed at developing a nuclear weapon. On May 25, 2009, North Korea confirmed to have performed a "successful" underground nuclear test. It was the second such test and it was said to be much more powerful than the first. The same day a successful short range missile test was also conducted. Earlier this year, the North Korean government announced that the country's nuclear facilities had been reactivated, and that spent fuel reprocessing for arms-grade plutonium had been restored.

Africa

Africa's Regional Workshop on Biosafety and Biosecurity gathered 120 participants from the U.S. government, military and international organizations together in Kenya to address biosafety and biosecurity as essential to promoting public health in Africa as well as cross-cutting, vital elements of nonproliferation.

India

The Indian military has recently tested a number of nuclear-capable missiles: the short-range Prithvi-II and Dhanush, the medium-range Agni-I capable of carrying a one ton payload and the long-range (2,200 miles) Agni-III. The Dhanush was fired from a warship in the Bay of Bengal, while the surface-to-surface weapons Prithvi-II and Agni-I and III were fired by mobile launchers.

BRAZIL/TURKEY/IRAN



SCOTLAND





Sentinels for Peace BY ANNE MAREK

U.S.NAVY

Polaris A-3 on launch pad in Cape Canaveral.

It began as a pipe dream. In the early days of the Cold War, the notion of creating an intercontinental ballistic missile that could be launched from a submarine was viewed by many as a flight of the imagination.

Until the 1950s, rockets were considered largely unreliable, delivering air to ground warheads less than a thousand miles. As Cold War tensions increased, the United States began to explore the prospect of creating more practical deterrents, longer range missiles that could be launched submerged, improving their range, accuracy, and concealment.

In 1956, the United States initiated the Polaris program to create nuclear-armed submarine-launched ballistic missiles that could serve as effective deterrents in thermonuclear war. Named after the North Star, the first Polaris, Polaris A-1 was a two-stage rocket with a launch weight of 28,000 lbs. and a length of 28.5 feet. It carried a thermonuclear warhead with a yield of 500 kilotons and had a launch range of 1,000 nautical miles.

On July 20, 1960, the USS *George Washington*, the first U.S. missile submarine successfully launched the first Polaris missile from a test site in Cape Canaveral, Florida. The event was viewed as a major accomplishment for the United States, demonstrating America's nuclear capabilities and presence across the world.

With European medium-range missile systems lacking the range and accuracy to attack major Soviet targets, Polaris increased the level of nuclear deterrence, having the accuracy to destroy targets at closer range with little risk of counter attack. While the Polaris missile was never used in an act of war, its legacy endures as one of America's most strategic assets in countering nuclear warfare.

⁴⁴ This year, moreover, growing numbers of nuclear-powered submarines will enter our active forces, some to be armed with Polaris missiles. These remarkable ships and weapons, ranging the oceans, will be capable of accurate fire on targets virtually anywhere on earth. Impossible to destroy by surprise attack, they will become one of our most effective sentinels for peace."

President Dwight D. Eisenhower,
Annual Message to the Congress on the State
of the Union, January 7, 1960

"The USS *George Washington*, the first US missile submarine successfully launched the first Polaris missile from a test site in Cape Canaveral, FL."



PARTNERS PRRDTE

Call it Nunn-Lugar, call it the Nunn-Lugar Global Cooperative Initiative —

It's one of the more recognizable programs not only in DTRA/SCC-WMD, but the entire Department of Defense. Yet most people outside of the Cooperative Threat Reduction Directorate probably know the two-decade old program in vague concepts. Did it begin with the USSR and Strategic Arms Limitation Talks or Strategic Arms Reduction Treaty? Is it only with Russia? Is it strictly nuclear? Who does the legwork – the International Atomic Energy Agency? The U.N.? NATO? Considering the build-up since the end of WWII, this program has reduced the amount of Weapons of Mass Destruction in the world by a tremendous amount – but the job is far from over.





IN THE SECOND HALF OF 1991,

people across the world watched in amazement as the Soviet Union slowly collapsed before their eyes. America rejoiced as the Cold War, which dominated world politics for the second half of the 20th century, was undoubtedly over. But as a repositioning of political, economic and military alliances began to form all over the globe, the dangers of uncertainty quickly became clear. The West's archrival of the Cold War had been vanquished but the Soviet arsenal had not – and while Moscow tried to quickly adjust to new political

and economic realities, a half a century worth of nuclear, chemical and biological weapons were scattered across independent nations, many lacking the proper infrastructure or manpower to secure them.

With the Soviet landscape in a rapid state of disarray, Soviet President Mikhail Gorbachev turned to the United States for assistance in securing and reducing the enormous stockpiles of nuclear weapons scattered across his failed country. Two members of Congress – Sen. Richard Lugar and former Sen. Sam Nunn – subsequently co-authored the "The Soviet Nuclear Threat Reduction Act of 1991." The legislation sought to provide U.S. funding and expertise to help states of the former Soviet Union safeguard and dismantle their nuclear, chemical and biological weapons, related materials, and delivery systems.

With Congressional support, "The Soviet Nuclear Threat Reduction Act of 1991" was signed into law and later renamed the Nunn-Lugar Cooperative Threat Reduction (CTR) program, a broad set of initiatives across different agencies, primarily the departments of Defense, Energy and State. The Nunn-Lugar program was applied widely across the former Soviet Union and demonstrated unparalleled success in securing, storing and eliminating weapons of mass destruction throughout Eurasia. Through Nunn-Lugar, the U.S. deactivated thousands of nuclear warheads and their delivery systems, as well as thousands of tons of lethal chemical and biological weapons. When the Soviet Union dissolved, individual states retained control over whatever factories, supplies, materials or resources physically remained, from power plants to car factories to nuclear weapons. Overnight, Ukraine, Kazakhstan and Belarus became independent countries and three of the world's largest nuclear powers. Through the Nunn-Lugar program, these countries voluntarily disarmed within five years of the fall of the Soviet Union.

Nuclear weapons were physically dismantled. Strategic bombers, submarines, missile silos and ground vehicles were destroyed, ripped apart, blown up or otherwise made irreversibly unusable for war. After a half-century of Cold War, former foes were working together to reduce the number of weapons that could be used to literally destroy humanity. The world's greatest military superpowers were willingly standing down and openly reducing their arsenal.



(bottom right) Senators Sam Nunn and Richard Lugar leave The White House after briefing the President on Nunn-Lugar – December 9, 1991. *(top left)* Russia's first democratically elected leader, Boris Yeltsin speaks from the turret of a tank, opposing a coup attempt by the Communist Party and declaring an end to the Communist regime – August 20, 1991.

"The Nunn-Lugar program has demonstrated that the threat of weapons of mass destruction can lead to extraordinary outcomes based on mutual interest. No one would have predicted in the 1980s that Americans and Russians would be working together to destroy weapons in the former Soviet Union. Taking the long view, a satisfactory level of accountability, transparency, and safety must be established in every nation with a WMD program."

> Senator Dick Lugar addressing the Senate on December 18, 2009







Nunn-Lugar Timeline1991-2010

-Failed coup attempt against General Secretary of the Communist Party of the Soviet Union, Mikhail Gorbachev; Boris Yeltsin becomes Russia's first democratically elected leader.

-Gorbachev resigns on Dec. 25 and the Soviet Union collapses.

-Senators Sam Nunn and Richard Lugar visit The White House on December 9 to brief President George H. W. Bush on Nunn-Lugar. Three days later, the legislation is signed into law.



1991

-Russia, the world's second largest nuclear power, agrees to implement the program.

-Belarus, having inherited 81 single warhead missiles after the fall of the Soviet Union, agrees to implement the program.

1992

-Ukraine, the world's third largest nuclear power after the fall of the Soviet Union, agrees to implement the program.

-Kazakhstan, having acquired 1,400 nuclear weapons from the Soviet Union at the end of the Cold War, agrees to implement the program.

1993

-All nuclear warheads and 600 kilograms of weapons-grade uranium are removed from Kazakhstan as part of Project Sapphire.



1994

-Science and Technology Centers open in Russia to help employ former Soviet weapons scientists.



OFFICE OF U.S. SENATOR RICHARD G

1995

-In 1991, with the collapse of the Soviet Union, so collapsed the infrastructure that protected a half a century worth of nuclear, chemical and biological weapons. With thousands of warheads, ICBMs and chemical weapons agents scattered across the globe, and hundreds of bombers, SSBNs and ICBM launchers having disappeared, one program forged a cooperative non-proliferation effort to locate and destroy these weapons of mass destruction and keep America safe from WMD. -U.S. Secretary of Defense William Perry joins Ukraine Ministry of Defense and Russian Ministry of Defense to celebrate Ukraine's completed nuclear weapons arsenal dismantlement.

-All ICBMs are removed from Belarus.



1996

-President Bill Clinton calls for further expansion of the program. Russia, under the leadership of Boris Yeltsin, agrees to renew its implementation.



1999

-New York and Washington are attacked by foreign terrorists. Congress expands the program's funding at the request of President George W. Bush.

2001

-Program funds are used for the first time outside the former Soviet Union; Albania becomes the first nation to certify to the Organization for the Prohibition of Chemical Weapons that it completely eliminated its chemical weapons.

2004

-U.S. and Russia enact Bratislava Nuclear Security Initiative to upgrade 24 nuclear weapons storage sites in Russia, initiating training programs for personnel and enhancing the security of nuclear weapons during transportation. The program becomes one of the largest U.S.-Russian Cooperative Threat Reduction efforts.

2005

-The first Chemical Weapons Destruction Facility opens in Shchuch'ye, Russia. The facility is expected to eliminate approximately 2 million chemical weapons containing VX nerve agent and other chemical weapons that have been stored since the Soviet era.



2009

-President Barack Obama hosts leaders from 47 governments at the Nuclear Security Summit to find new ways to secure loose fissile material and prevent nuclear terrorism.



2010

-Serving three former presidents and spanning two decades, the Nunn-Lugar program has succeeded in helping states of the former Soviet Union safeguard and dismantle their nuclear, chemical and biological weapons, related materials, and delivery systems. The initiative has had unparalleled success in securing, storing and eliminating weapons of mass destruction and three of the world's largest nuclear powers - Ukraine, Kazakhstan, and Belarus - voluntarily disarmed.



Typhoon-class submarine being dismantled at the Zvyozdochka Ship repairing Center in Severodvinsk, Russia – July 2008.

Today, the threat of WMD is just as great and the

challenges are greater. The Soviet Union had some of the largest and most advanced WMD programs in history and a significant amount of these weapons still exist – inside and outside of the former Soviet Union. Thousands of former Soviet scientists and engineers specializing in WMD have not found gainful employment and there is concern that some may be willing to sell their expertise to the highest bidder. Iran continues to enrich uranium that could develop fissile material for nuclear weapons; North Korea is expected to deploy a nuclear-tipped missile capable of reaching the United States within the next decade and terrorists have vowed to attack Americans on their homeland before the year's end. The continued existence and proliferation of these weapons allows for the possibility that they might fall into enemy hands, an event that could have cataclysmic consequences for the United States and its allies.

The Nunn-Lugar Cooperative Threat Reduction program has evolved over the past two decades and is now a global initiative that addresses today's most pressing security needs, an effort supported by President Obama that is building momentum in Congress. A key component of the latest Congressional budget is aimed at continuing Nunn-Lugar's success in the former Soviet Union and replicating that success with other weapons programs across the world. Leading that effort is the Nunn-Lugar Global Cooperation Initiative, a collaborative effort to engage a wide range of countries, international organizations, and non-government partners to prevent, reduce and eliminate WMD threats to U.S. national security and global stability. The Defense Threat Reduction Agency has been the agency responsible for implementing and monitoring all components of the program, working to build global partnerships that address the WMD threat at every level, on every continent.

Everyday, DTRA/SCC-WMD's experts are working on the ground, across Russia, to help the country scale back its nuclear forces, providing tools and services to deactivate their nuclear warheads and dismantle their missiles, submarines, silos and ground-based launch systems. Through regular safety and security inspections, our experts are helping Russia to improve the integrity of their security "The Nunn-Lugar Global Cooperation Initiative is key to successfully protecting the United States and our allies from weapons of mass destruction in the 21st century. To be successful we must continue to engage the best experts, the most knowledgeable leaders, the newest technology and the quickest teams we have ever had to field. These teams understand the consequences of failure and that there are no second chances."

Kenneth A. Myers,
Director of DTRA/SCC-WMD

Nunn-Lugar Global Impact

Everyday, Nunn-Lugar makes substantial progress in destroying and containing the nuclear threat, neutralizing chemical weapons, combating the global biological weapons risk, and preventing the proliferation of WMD across the world.



Ukraine and Moldova



Providing border and maritime security at Ukraine's State Border Guard Service with a maritime and land border command and control network to secure a high priority border with Transnistria and to monitor key shipping lanes in the Black Sea, where the potential threat of WMD smuggling is a concern.



Operating an Interim Central Reference Laboratory at the Anti-Plague Station in Baku to provide consolidated, safe and secure storage for pathogens and highly infectious disease strains inherited from the former Soviet Union and those which occur naturally in that part of the world. The facilities also house near real-time detection and reporting of a bio-terrorist attack or naturally occurring pandemic, which helps allow for an effective and timely response.

GRAPHIC: ANN FOX

NUNN-LUGAR by the numbers

Percent Achieved

Achieved	
100%	Nuclear Weapons Storage Site Security Upgrades
100%	Nuclear Test Tunnels/Holes Sealed
100%	Bombers Eliminated
100%	Nuclear ASMs Destroyed
91.8%	ICBM Silos Eliminated
91.4%	SLBMs Eliminated
91.4%	Warheads Deactivated
88.9%	SSBNs Destroyed
87.5%	SLBM Launchers Eliminated
79.0%	Nuclear Weapons Transport Train Shipments
75.4%	ICBMs Destroyed
69.0%	ICBM Mobile Launchers Destroyed
46.5%	Biological Threat Reduction Zonal Diag- nostic Laboratories Built and Equipped
27.5%	Declared CW Agent Destroyed (Metric Tons)

systems at nuclear weapons storage sites and safeguard nuclear and radiological weapons during transportation. Nunn-Lugar experts are also working to control and eliminate chemical and biological weapons across Eurasia. From Azerbaijan to Georgia, Kazakhstan to Ukraine, these experts are helping prevent the proliferation of chem-bio technologies and keeping them out of the hands of terrorists. DTRA/SCC-WMD is coordinating with other government agencies, partner governments and internal programs to identify especially dangerous biological pathogens and chemical agents and enhance their capacity to contain these elements into secure national-level laboratories. Nunn-Lugar experts are working to detect, diagnose, and report chem-bio terror attacks and potential pandemics, improving the safety and security of chem-bio facilities throughout these countries. As the world enters a new decade, it is clear that leaders across the international community agree that the Nunn-Lugar model should be applied globally. In April, President Barack Obama and Russian President Dmitry Medvedev signed an historic treaty to reduce long-range nuclear weapons, an agreement that replaced the 1991 Strategic Arms Reduction Treaty (START), which expired in December 2009. The deal marked a renewal of the level of trust and cooperation between the U.S. and Russia, setting limits on both sides' strategic nuclear warheads and reducing the permissible number of strategic launchers. Following the renewal of START, the President held a Nuclear Security Summit focused on securing weapons-grade plutonium and uranium to prevent nuclear terrorism. The Summit was attended by delegations from 46 governments, marking the largest gathering of heads of state called by a U.S. president since 1945.

The attacks of Sept. 11 and subsequent acts of

terrorism against America and its allies are a sobering reminder that terrorists have been working hard to acquire weapons of mass destruction. To prevent this, the Nunn-Lugar model can be applied globally. Doing so will require a worldwide effort, led by countries that have more than two decades of cooperative experience. As Senator Nunn has said, "If the United States and Russia begin working together as partners in fighting terror and the weapons of mass destruction threat, and encourage others to join, the world will be a much safer place for our children and grandchildren. Yes, we face major challenges but also an historic opportunity. We must seize it now."



Senator Richard Lugar and then Senator Barack Obama tour a Russian site where WMD are being destroyed.

Preventing a Nuclear Nightmare

BY ANNE MAREK

In a peaceful valley, behind rolling hills, there is a place where tall grey vent stacks pierce the sky. A rusty chain link fence encircles drab green containment buildings. The walls are crumbling. The roof is sunken in. A single unarmed guard stands watch at the gate. It's a quiet place, a place not often remembered by the millions that live in its neighboring cities. And as they go about their daily lives, most do not realize that a terrorist attack on this facility could cause

a massive nuclear explosion that would flatten the surrounding hills, scorch the trees barren, and send a cloud of smoke and radiological debris miles into the atmosphere. A firestorm with gale force winds would topple nearby buildings and bridges, crushing pedestrians and vehicles, making emergency roads impassable. Hundreds of thousands would be killed by sudden trauma and acute radiation exposure and the few that that survived would suffer from burns and blindness, bone marrow damage and cancer.

Preventing this scenario was the focus of President Obama's Nuclear Security Summit in April. The goal of the summit was to create a global consensus to secure weapons-grade nuclear and radiological material in an effort to prevent nuclear terrorism. Delegations from 47 governments attended the summit, marking the largest gathering of heads of state called by a U.S. president since 1945.

While the risks of nations going to war with nuclear weapons has decreased, the risk of a nuclear attack and terrorists getting their hands on nuclear materials has increased, a "cruel irony" after the end of the Cold War, said President Obama. Unsecured nuclear materials that can be stolen, smuggled, and used to build a nuclear weapon exist in countries across the world and our adversaries know it.

The President has called for the world's loosely guarded uranium and plutonium stockpiles to be accounted for and secured within four years. The effort is a key priority of his administration, evidenced by his FY11 budget that provides critical funding to keep America safe. DTRA/SCC-WMD plays an essential role in supporting the nation's nuclear security and defense, an effort that began with Cooperative Threat Reduction and continues to be multifaceted in nature; ensuring America's safe, secure, ready and reliable arsenal, and securing and eliminating WMD across the globe.

DTRA/SCC-WMD will have an important role as we move forward; the agency already has a stellar track record of helping other countries identify, assess, consolidate and – perhaps most



World leaders gathering to participate in the Nuclear Security Summit.

importantly – store or eliminate WMD in the most safe and secure manner possible. Our effort to do the same with known weapons in places where records are kept is far from over, but DTRA/SCC-WMD has a track record second to none, including storage sites in Bratislava, a chemical destruction plant in Shchuch'ye, Russia, and helping Croatia secure and destroy almost 1,000 shoulderfired anti-aircraft missiles coveted by terrorists and insurgents. Working with the departments of Energy and State, the people, expertise and know-how of DTRA/SCC-WMD are ready and able to tackle this threat.

As the President has stated, "Nuclear materials that could be sold or stolen and fashioned into a nuclear weapon exist in dozens of nations. Just the smallest amount of plutonium – about the size of an apple – could kill and injure hundreds of thousands of innocent people. Terrorist networks such as al-Qaeda have tried to acquire the material for a nuclear weapon, and if they ever succeeded, they would likely use it. Were they to do so, it would be a catastrophe for the world, causing extraordinary loss of life, and striking a major blow to global peace and stability." ■

President Barack Obama being briefed before a meeting during the Nuclear Security Summit.





His first run-in on the Hill was with Henry Kissinger. He once considered becoming a veterinarian. There's a running joke that he's the only man in history to get the President arrested on foreign soil. Now he's working to counter WMD threats of the 21st Century. When *the shield* sat down with DTRA/SCC-WMD Director Ken Myers to ask a few questions, we learned quite a bit more about the man overseeing the agency, his background, his education and how a graduate school thesis on counterproliferation marked the beginning of a two decade long career that would lead him from the former Soviet Union to the halls of Congress, to this organization.

INTERVIEW



Let's start back in school, where a lot of people start heading down one path or another. What were you studying, and where did you see yourself going?

I got what was called a Liberal Arts and Sciences degree at Virginia Tech, and got what was basically three majors in one: history, political science and international studies. Which meant I was qualified to do absolutely nothing in this world! (laughing) Zero! So I went to grad school at Catholic University, studying International Security Politics in the International Politics program there, and my master's thesis was on a brand new program that was being implemented by the Department of Defense called the Nunn-Lugar Cooperative Threat Reduction Program.

I think there were a couple of turning points in college that made me choose this path... one was the fall of the Soviet Union, and the visuals of the fall of the Berlin Wall and the Persian Gulf War. My roommate and I watched a lot of the press conferences to learn – not just the military hardware, but to really learn about what was going on, and not just the U.S. press conferences, but the Iraqi press conferences, where they were clearly being lied to, at complete odds with reality!

You spent some time in the former Soviet Union working for a U.S. law firm. How was that experience, and what lessons did you take away from your time over there?

My first job out of graduate school, I worked for a law firm in town that represented a number of the major U.S. firms that were doing business under the Nunn-Lugar Program, and at that time a lot of the major U.S. companies were looking for a U.S. government program as kind of their intro to help defer or defray some of the potential risks and costs they might incur as they entered the former Soviet markets.

I got out of grad school the first week of May, and I was on a plane to Ukraine and Moscow three weeks later to set up the firm's offices there – this was an absolutely fantastic opportunity and I probably learned more in that several-month period than I have at any other time in my life. I had international experience, but not in business – my international experience was sports – but this was new for me. You show up in the country with nothing! You have to find an office, find a location, find the furniture, find the computers – you start from scratch. I had a contact, and I had a driver – that's all I had.

But the reason why it was such a great experience was because you start from zero and build it, and that was a huge challenge – one I did not appreciate until my flight landed at Boryspil Airport in Kiev.



Senator Dick Lugar, Ken Myers II, Ken Myers III, Jim Reed, Mark Lipper and then Senator Barack Obama (just off left side of frame) discussing an upcoming visit to Perm as part of the Nunn-Lugar program.

The flight is taxiing up to the terminal, half the glass is missing from the windows in the airport, bands of wild dogs are sniffing at this huge pile of luggage in the middle of the tarmac. As I was flying over there I thought I was being really smart about this, because I had a list of what I needed to do first, second, third and fourth... that sheet lasted approximately 25 minutes once the plane landed. You learn that all the planning in the world is great – gotta do it – but you have to use some common sense.

And the best lesson learned from that experience?

People and relationships are important. When you have nothing, nothing on which to base anything you're doing, other than a plan in your head, you have to rely on the advice you're getting from people that don't know you from Adam! You have to build a relationship, you have to garner trust, and how do you do that? So for me, it was A.) figure out what the questions are, B.) who has the answers, and C.) how do I get them to spend enough time with me so I can A.) ask the questions and then B.) get the answer and then C.) I'll go carry that out? Keep in mind this is post-Soviet Ukraine, post-Soviet Russia; money does the talking, where if you go in with a \$100 bill you get the answer – but I wasn't allowed to play that game. Period. Not only was it against the law, but the company said 'verboten!' You do that and you're gone! But building relationships, that's how I got it done.

How did you go from the law firm to working for Indiana Senator Richard Lugar?

The opportunity presented itself where Senator Lugar needed someone to come and take care of the Nunn-Lugar portfolio for him, and I had just done my master's thesis on Nunn-Lugar, I had just spent time working over there with the contractors carrying out Nunn-Lugar, and at that time, the number of people in Washington who understood the program, we were probably in the single digits, so I was very lucky – I walked in at the right time, on the right opportunity, and never looked back. I was with him for 15 years, started off with a single portfolio, and every step of the way took on more and more responsibility, and ended up at the Foreign Relations Committee.



Vice President Al Gore, Senator Joe Biden, Ken Myers III, and Senator Dick Lugar after the final vote at the Chemical and Biological Weapons Convention (1998).

CTR, START, SSCI, NATO, SORT, the U.S.-India Peaceful Atomic Energy Cooperation Act - what role were you generally playing, and what are the most important things you learned during your time working for Senator Lugar?

I was point man for Senator Lugar on all those issues. There's nothing more important to a member of Congress than a program with his name on it ... but Nunn-Lugar was important to him not just for that reason, but because of the important role it plays in U.S. relations, not just with the former Soviet Union, but

elsewhere as well.

The real turning point for my understanding and appreciation and ability, considering all these other programs, treaties, authorizations and the like, was the Chemical Weapons Convention. It was a very hard fought, contentious debate on the Hill, over a 12-18 month period. Senator Lugar was looking like one of the few Republicans that would support it,

President Clinton was locked in a re-election campaign with Senator Dole, so it was a very partisan time, and I realized that foreign policy was more than just an intellectual debate. It's where the rubber meets the road, it has lot to do with policy and policy development, but at the end of the day you

can have the greatest policy out there but if you don't have effective implementation - whether that was with dealing with other members of Congress, dealing with the press, engaging think tanks, engaging an administration - you're not going to succeed. The most brilliant people on earth aren't necessarily the most successful ones, so you've got to put together a complete package, a complete strategy. It was clear we had the best arguments, but we didn't have all the votes, because the argument is part of the issue, it's not all of the issue.

those are two or three completely different things! People have to understand what the facts are, and what your opinions are. Despite some enourmous challenges, Senator Lugar secured a majority of the Republican votes. And there was no secret, no silver bullet, it was just careful, painstaking, day after day work. I learned a lot about myself, and I learned a lot about how good policy is not only formulated, but how you get it to work.

Senator Lugar would get these questions



I came in here knowing the operations side the best. I knew the on-site work, I knew the CTR work, I knew some of our nuclear security work. Not so much the combat support - although I knew a lot about it, I didn't know the details.

The "WHIZ! BANG! WOW! I-didn't-realize-that!" has really come on the R&D side of the

house, the modeling, the simulation, the reachback, the cooperation we have with the Defense Intelligence Agency, the intelligence community, that for me was the real eye-opener. Not to say it's any more or less impressive than the operations side of the house, but I already knew the operations



Ken Myers III, Senator Dick Lugar, and Ken Myers II

whenever we traveled... but the thing I learned from him is that to be a true diplomat or a true statesman or a true leader, you have to tell it in a very straightforward, very honest, very open way. You lay out the pros, you lay out the cons, and then tell them what you think - and sometimes side of the house, because I've been traveling with DTRA/SCC-WMD elements for 15 years, actually with some of its legacy units BEFORE it became DTRA/SCC-WMD [back in 1998], on Nunn-Lugar trips. I know the interpreters here on a first-name basis, we travelled with each other for years and years and years, I know a lot of the folks that work those missions for years and years and years.

The R&D side of the house, I've had to work hard at it because that's not what I knew. But I do work hard at it and try to learn it – and this is without ever having taken a physics class... and let's just say I took biology more than once. So that's what's in my brain as [R&D Associate Director] Doug Bruder and his staff come in and brief me. I have to work to absorb what they're telling me, but that's the fun part, learning.

When you walk out of here each night, is there anything that frustrates you or you wish you could re-do?

I don't want any do-overs, I really don't. There's not one thing that has occurred in which I could have done differently. And that's not because I necessarily got it perfect but because I did it with DTRA and SCC-WMD's interest, and I think I did it with the best analysis and use of the recommendations and information I had. I don't want to suggest I've batted a thousand, I haven't, but I've felt good about the decisions I've made and the steps I've made, and the reason I feel this way is I have confidence in the people who have made recommendations to me. I try to talk out my decisions, my logic in front of those people, so they can correct me if I've gotten something wrong, if I got something wrong I want to know it, and I have confidence in that process and I have confidence in them. We've had a lot of great successes, I'm really happy.

The most interesting part of this, believe it or not – aside from meeting everyone and working on these programs – is going back and testifying in front of Congress. I was probably a little more nervous than I thought I was going to be, because now I'm sitting on the OTHER side of that table. But I'll tell you about the thing that I am so happy occurred that day was when the Chairwoman asked me, "Is there anything else you want to bring up?" And I'm sitting there, a lot of different things were going through my head, but I said to myself, 'No, you keep this simple, you keep this straightforward, you tell her why you exist.' And we exist to support the warfighter, this is what we do, and this is why we take such pride in it.

So to flip your question, "When you walk out the door each evening, what are you most proud of?" I think back to 'What steps did I take today to safeguard the American warfighter or the American people, and what steps did I take to help eliminate threats to the warfighter and the American people?' And I can honestly say, day-to-day, week-toweek, month-to-month, there hasn't been a night where I haven't walked out of here and said, 'You know what? This workforce, this agency, this center did a great job today.'

You worked with then-Senator Obama on the Lugar-Obama nonproliferation initiative, and President Obama is now just a few links above you in your chain of command. What can you share with us regarding the President's interest and concerns about WMD?

I think that as both Senator and now Commander in Chief, President Obama has been consistent in making WMD-issues a high priority – from his first day of running for public office his commitment has been constant and long-standing.

How does the Director of DTRA/SCC-WMD relax at home?

Usually when I step out the truck at home, I'm accosted by a seven year-old blonde whose brother isn't too far behind. I don't know if I can actually tell you how I unwind because my life changes as soon as my feet hit the ground, and it's not because of where I am but it's because of who is around me... I can't tell you how that metamorphosis occurs because I don't know, I just know that at some point I stop being a DTRA/ SCC-WMD employee and end up being dad. And that's a WHOLE different set of challenges, and a lot of fun. ■







When I was in high school my father was in the business... he didn't come home and talk about it over dinner, but I knew what my dad did. [Years before] my dad took me into work with him on a Saturday when I was six years old - he was working for the Center for Strategic International Studies – and like any typical six year old I couldn't sit still. I was out in the hallway, running around, and I was sprinting down the hallway and turned left around a corner, and I don't know what happened next, but I ended up flat on my back, and I'm looking up at perhaps the scariest man I had ever seen in my life; it was Henry Kissinger. He started talking to me - you know that voice - and you swear that God is talking to you... and my father heard all this commotion, and comes out and says, 'Dr. Kissinger, I'm very, very sorry - have you met my son?' Dr. Kissinger leans down to shake my hand - I'm still flat on my back – thankfully, I had enough common sense to reach up and shake his hand and he pulled me right up, and he said to me – I'll never forget this – 'Someday when you're older, maybe you can work here.'

aptain Tim McMahon had spent the majority of his naval career as a helicopter pilot, but on this day he was sitting at a desk somewhere inside a military facility in the heartland of the United States. He had been a base commander in Iraq, and now the Joint Chiefs were asking him to help protect this plot of land surrounded by hotels and fast food joints. Tens of thousands of people drove by every single day, and just like in Iraq, it would be easy for a terrorist to blend into the crowd. Unlike Iraq, though, Captain McMahon had advance notice that a small group of men were going to pay this base a "visit" this week.

The visitors had been planning for the past few months. Well-financed and well-trained, these were not lowly pawns that strapped on a backpack bomb in hopes of killing a few Americans and making headlines for a day; they were educated professionals that thought things through, looking for systematic weaknesses that could be exploited for catastrophic results. In all his years of flying Sea Hawks, Captain McMahon never got sick of the view from high up in the air. But today, even sitting down, the 'big picture' could be pretty scary.

He knew at least seven men had flown into the area the day before, and even if only half of them made it on base, they would still be considered a terrorist's dream team. There were two engineers that had earned their degrees at American schools, and had intimate knowledge of how buildings go up – and how they come down. If

Khobar Towers, a U.S. military housing complex in Saudi Arabia, after the June 25, 1996, terrorist attack that killed 19 Americans and injured hundreds. they didn't already have schematics of the electrical, water and heating and air conditioning systems – a perfect place to introduce chemical or biological weapons – they would probably have them in the next 24 hours. The IT specialist – one of the youngest, and one of the few who had facial hair – would already have a plan on how to conduct a cyber attack immediately before or during an assault, adding to the chaos; it would be like a punch in the stomach while someone had a nose bleed.

Two of the men possessed extensive operational knowledge necessary to overcome U.S. security measures – the know-how needed to launch a successful attack on hardened military posts. The shorter one had experience operating in some of the toughest places on Earth: Pakistan, Uzbekistan, Georgia – and Iraq. Give him a pair of binoculars and he could tell whether or not a particular guard was looking at an ID long enough to determine if it was real. Calm, patient, and with an eye for detail, if there was a way to get a big bomb on base, he would probably find it.

Captain McMahon was certain of a few things about these men: for the most part they operated independently; each man was moving about in his own vehicle. At least three of them were now in possession of military IDs. Most were cleanshaven, they all spoke fluent English, possessed multiple passports, and could quickly blend in with the multi-racial population of any big city. They had a schedule, could easily jump to a contingency plan – and through their connections, had been given a copy of a government vulnerability assessment identifying the base's Achilles' heel. The only thing that Captain McMahon had working in his favor...

...was that these men worked for him.

DTRA/SCC-WMD's five Joint Staff Integrated Vulnerability Assessment teams travel the world over, looking at military and DoD facilities. Made up of experienced military and civilian experts in a number of fields, their job is to poke, prod, observe, inquire, and assess the vulnerability of every place they go. Created in the aftermath of a horrendous terrorist attack, JSIVA teams have a complex job, but a simple goal: help make each installation

ASSAFEASPOSSIBLE. BY DAN GAFFNEY

he origin of the JSIVA can be traced back to June 25, 1996, when terrorists drove a truck with the equivalent of 20,000 pounds of TNT into a U.S. military housing complex in Saudi Arabia - Khobar Towers. The explosion killed 19 Americans and injured hundreds. Within a week, Secretary of Defense William Perry appointed retired Army Gen. Wayne Downing to head a task force looking into the attack. Led by the former commander of U.S. Special Operations Command, the Downing Commission took a long, hard look at everything from the 1983 attack on the Marine Corps barracks in Beirut to the post-Cold War security environment. Based upon recommendations that came out of the task force's report - specifically, the findings on force protection and physical security - the Chairman of the Joint Chiefs of Staff directed this agency to establish the program. DTRA/SCC-WMD's five JSIVA teams now conduct about 100 assessments every year, and they are likely the most intense, invasive and comprehensive look that a commander ever gets regarding his force protection strengths and weaknesses.

Captain Tim McMahon's JSIVA team operates just like the other four teams: they have about 20 installations on their to-do list, and with each boots-on-the-ground assessment taking a week (or two) to complete, they spend about half the year on the road, and the other half back at base prepping for future assessments and writing up findings and recommendations of completed assessments. And they are very careful to use the word "assessment" in everything they do.

"It's not an inspection," says McMahon, a Navy officer who spent most of his career flying Sea Hawk helicopters off of aircraft carriers. "The difference is, with an inspection you generally get a grade of pass or fail. With an assessment, you're looking for vulnerabilities – if they exist – and then you try to teach or mentor them to fix the problems, and then you make recommendations." Prior to coming to DTRA/SCC-WMD, McMahon was the base commander Al Asad Air Base in Iraq, so he knows better than anyone the challenges and responsibilities of force protection. Almost as a bonus, that base got a JSIVA right before he got there; it helped him validate some things they were already doing – and fix other issues that needed fixing.

The other members of JSIVA 4 – for that matter, all of the teams – have an equally impressive resume. Made up of retired military, service members and highly specialized civilians, they are all well-experienced in their particular fields, and they really have "been there,



done that." Terrorist operations, security operations, structural engineering, infrastructure, emergency management, information operations – if a JSIVA team is going to do a force protection equivalent of a full body MRI, they need be good at what they do. Brian Queen is a perfect example.

"I started out in the security forces, 20 years in the Air Force, so having worked the gates, having done patrol work, having worked in the training section, conducted investigations, it all helps out in the investigations, understanding the procedures and the things security forces should understand," says Queen, whose resume also includes counterintelligence, coordinating with local law enforcement, and

working with treaty organizations in Russia and chemical weapons inspectors under the Chemical Weapons Convention. "Whether it's Army, Air Force, Marines, or civilians... the principles are still the same."

As a security operations specialist, Queen and the terrorist operations specialist meet with the installation antiterrorism officer right away. They stress that this is not an inspection, but an assessment, and that stretching the truth doesn't help anyone – it simply hides vulnerabilities that need to be addressed. "Okay, you're saying you're

doing this on paper, now, are you actually doing this for real? Can you meet what it is you actually have in your plans? Do you have enough bodies, do you have coordination, and if you don't have it organic, are you using the resources outside the installation to meet those requirements, and is everything in place to actually do that?" Queen stresses that they are there to help, and that by exposing vulnerabilities, a JSIVA can help a base commander implement changes – or provide him the justification for additional resources. And these reports go to the Joint Staff, which has a little more pull in providing those vulnerability-reducing resources.

One of the most challenging things that base commanders face is

structural; adding additional security forces or changing procedures is much easier than trying to relocate, say, a four-story, 100,000 square foot building that was built shortly after the Battle of Inchon. And as we've seen in Oklahoma City, Khobar Towers, the 1998 embassy bombings in Tanzania and Kenya, and plenty of attempted attacks, terrorists think that bigger is better when it comes to bombs, targets, and body counts.

"Standoff is another thing that we never designed into our facilities when they were originally designed, often a generation ago," says Bill Hudson, a structural engineer and JSIVA 4 deputy team chief. Standoff refers to the distance needed to limit or comThe Khobar Towers attack should be seen as a watershed event pointing the way to a radically new mindset and dramatic changes in the way we protect our forces."

William J. Perry,
Secretary of Defense,
September, 1996

pletely negate the effects of an explosion, and it's something Hudson is quite familiar with. A professional engineer for the past quarter century, Hudson previously designed heavy industrial facilities – petrochemical plants, refining, pulp and paper – and he picked up some blast experience while working for NASA. He says one of the best ways to understand building design and standoff is to compare Oklahoma City to Khobar Towers.

"Khobar Towers was designed to the British standard, and the British have been dealing with bombings for much longer than we have... the number of fatalities there and the size of the bomb really don't match – the bomb was huge but the number of fatalities was at least

somewhat related to the design of the building," says Hudson. "The opposing example, the bad example, was Oklahoma City, and how, with a much smaller weapon, the number of fatalities and injuries was catastrophic, and much of that was related to the design of the building." The Oklahoma City bomb was also much closer to the building, whereas the much more powerful explosion at Khobar Towers was further away. For existing buildings, Hudson may recommend changes like upgrading windows – flying glass caused a lot of the injuries at Khobar Towers – but increasing standoff is also a huge

factor. If there is a way to keep cars and trucks far enough away from a building, he says, an explosion's shockwave will be too weak to hurt the people inside.

Even if every recommendation was implemented, though, base commanders still need to be prepared for a worst-case scenario – something the emergency management specialist knows all too well. "Unfortunately, throughout my career I was involved in several major incidents, most notable the Mellberg shooting at Fairchild Air Force

(*left*) **JSIVA 4** during a recent mission in Iraq. (*below*) **When Navy Lt. Cmdr. Max Sisson** looks at an installation's infrastructure, he looks at everything, including cooling systems.



Base. I was the emergency manager on duty, I was the boss," says Bob Patrick, a retired Air Force emergency manager. Dean Mellberg, recommended for discharge, walked into the base hospital on June 20, 1994, with an AK-47 and killed five people and wounded 22 before he was fatally shot by a military police officer. Patrick knows that you might not be able to prevent some bad things from happening, but you can be prepared to react to them.

"Part of what we look at is whether or not they have done a capability analysis – the risk management module, threat and hazard assessment, then they look at the vulnerabilities of the installation, based upon those hazards and threats... the last step is to collect a menu of capabilities the installation has to respond to those hazards and threats," says Patrick, who looks at fire and emergency services, hazmat capabilities, security forces – and mutual aid



Security Operations Specialist Dan Coday pays close attention to see if the guards are paying close attention during a base's morning rush when thousands of troops and DoD civilians pass through the first layer of security.

COMMUNICATIONS/IT

With so much of our day-to-day business depending on computers, not to mention our emergency response systems, communications and back-up systems, it's like the central nervous system of the base. A JSIVA can determine if you're safe and secure... or if an open nerve is leaving you vulnerable.

OUTSIDE HAZARDS

If your neighbor has a pool, it might be reason to celebrate. But if he filled it with gasoline, you would probably be concerned. Just because something is not on the base doesn't mean you can ignore it.

INFRASTRUCTURE

Electricity, waterlines, steam pipes, sewer lines, HVAC, fresh air intakes, and back-up systems: having them fail on a normal day is bad enough, so the JSIVA team makes sure everything can run when it's needed most.

STRUCTURES

On some bases, everything is built like a fortress. On others, tents outnumber actual buildings. Either way, JSIVA teams look at their weaknesses and figure out how to make them safer.

POLICE & FIRE

When things go bad, they get the call... but are they properly equipped? Properly trained? Properly staffed? Properly located? And can they get a hold of everyone on base when things go wrong?

GATE SECURITY

Security specialists look at the physical structures, the roads in and out, how delivery vehicles are searched, and how they're operated – easy access will make a terrorist's job that much easier.



agreements. A base commander might have limited resources in one particular area, but a unit staying on his base – or the civilian communities just outside the gates – might have everything they need. As part of his assessment, Patrick tries to determine what is on a base's emergency response menu, and what assistance a base could reasonably get from its friends and neighbors, the "things an incident commander can draw upon and ask for. Whether or not they receive them [is another question]; sometimes other agencies are fighting for the same capabilities, especially in a large scale disaster."

An installation commander receives a brief on strengths, weaknesses and recommendations on the last day of the JSIVA, which is always followed up several weeks later by a much longer, much more detailed report that also goes up to the Joint Staff. Recommendations can include everything from simple - but effective - procedural changes and small structural fixes, up to large, longterm modifications that might require new buildings, additional personnel - and the resources to fund it. Once vulnerabilities are identified, a JSIVA can bolster an installation commander's argument for making changes, changing plans, or even requesting funding from the Combatant Commander Initiative Fund, which can be used for force protection measures.

And unlike an inspection, which is often a culmination of efforts, a JSIVA is often the start of a conversation. Team members are contacted days, weeks or months after they're gone, with a request to review a new plan or procedure, provide their thoughts on structural, equipment or infrastructure changes, or to come back and assess the changes made. Sometimes it's the base commander or force protection officer calling back to say they've implemented recommendations A and B, but also made their own change with X and Y; that type of information is valuable to JSIVA team members - when their knowledge base expands, they can make better recommendations on future missions, which means better protection for our military. In that respect, says Hudson, it's the most satisfying job he's ever had. "We get to go to places all over the world, and we interact with the young men and women of the military, and they're great people. No matter where you go you can always find people with great dedication and great patriotic spirit and they love our country; I see them, I see how hard they work, I see how they sacrifice, and that inspires me to do my job better."

TerroristOperations

(or 'Don't worry, that guy lurking in the shadows belongs to us')

For Master Sgt. A.J. Root, force protection is a personal matter – on Oct. 23, 1983, he was a young Marine stationed in Kuwait when a terrorist drove a truck bomb into the Marine barracks in Beirut, killing 241 Marines, sailors and soldiers. Now a Green Beret (Army Special Forces), he's a JSIVA terrorist operations specialist. While the rest of JSIVA 4 is meeting with the base personnel to see the facilities, review plans or discuss strengths and weaknesses, Root swaps his Army uniform for civilian clothing... and disappears. His job is to think, research, target and plan like a terrorist – and then show what kind of damage a terrorist could do on that base. Technically, it's called the "illustrative target," but to the base commander, Root says it's a huge eye-opener:

The rules are fairly strict on me, basically I have to find an easy way to get onto the installation, and an easy target to hit. I'm not allowed to cut any locks, or crawl under or over any fences, or produce any fake ID cards or anything like that, and that more closely simulates what a terrorist is going to do, because they're looking for the easy target. There are a lot of targets out there... if a target's too hard, they're going to take the path of least resistance, so that's what I'm looking for.

I try to do the majority of my open source research before I ever get to an installation: I know I'm going to this base and that's all I

know about it, any other insider information, I close my mind off to that, and I start looking at it the same way a terrorist would, I Google it, find out what it is, what their mission is, what their history is. Hopefully there's not too much information on their website, sometimes there is, sometimes there isn't... then I start looking at imagery, I go to Google maps, Bing, Google Earth Pro, things like that, and start looking for what would appear to be attractive targets, just through he imagery and through the information I've been able to gleam about the post, and news articles and things like that.

So when I get there, I'm already familiar with the post, I already know where all the gates are at, I already know what the gates look like from above, then once you get on the ground, you start confirming things, because some of these pictures are old, and maybe they've rebuilt some of the gates, things like that – and that's exactly the same cycle the terrorists, the bad guys go through.

It's not a competitive thing, it's not like that, we're here to asses the installation and help them become better, and if they're already doing a good job stopping people from getting on, great!

The benefit of having Special Forces guys and Navy SEALs do the illustrative target is that we've been planning and doing reconnaissance and developing packets in order to do assaults for our whole careers... we've already spent years trying to understand our enemy in the way that they think and what we need to do to counter them... when I brief the illustrative target to an installation, you can see the light bulbs come on and you see the realization come over people's faces because you have the credentials of being U.S. Army Special Forces or a Navy SEAL, so they tend to listen a bit more.

[In the past] force pro, or ATFP (antiterrorism force protection), was nowhere near where it is now – and it's at the level it is now at most posts because of this whole JSIVA program... the force as a whole is exponentially more safe than is was before.

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GUIDED BY HIS GRANDFATHER'S JOURNAL,

A GRANDSON EMBARKS ON A

JOURNEY OF HIS OWN.

through a soldier's eyes

The convergence of history, geography,

and family service provided an unparalleled opportunity to explore the legacy of chemical warfare during World War I. Today however, the pristine and immaculate American Military Cemeteries in the Meuse-Argonne and at St. Mihiel, as well as the verdant wheat fields surrounding the final resting places of our American military dead in Europe, do not adequately reflect the horrors of that war 91 years ago.

Using my grandfather's diary of his exploits with Echo Company, 1st Engineers (today – the 1st Engineer Battalion), 1st Infantry Division, the rare book *A History of the First Engineers*, and coincidentally a book called *American Armies and Battlefields in Europe* which a young George C. Marshall helped edit, enabled me to plan a battlefield tour roughly in reverse order tracing some of the tumultuous events of the year 1918.

BY ARMY COL. JEFFREY P. LEE



"The world must be made safe for democracy... It is a fearful thing to lead this great peaceful people into war, into the most terrible and disastrous of all wars, civilization itself seeming to be in the balance. But the right is more precious than peace, and we shall fight for the things which we have always carried nearest our hearts." – Woodrow Wilson (1917)

My grandfather survived

World War I; however, his regiment suffered 817 total casualties and 88 killed in action. Non-fatal casualties were evacuated to field hospitals and the rear to recuperate, if possible. A third of these included 294 casualties as a result of the historical idiom "Gassed In Action" or "G.I.A." Chemical warfare certainly had a severe impact on operations, but advances in mask design and training even in 1918 provided a modicum of protection.

My own battlefield tour began in Germany, where the American Army and my grandfather served as an army of occupation immediately after the war. The tour ended in Cantigny, France, where the Allied Expeditionary Force was tested in combat for the first time in May 1918. Along the way, I visited small towns, monuments and plaques honoring American sacrifice. In September 1918, the Americans broke the German salient at St. Mihiel which they had held for four years of bitter trench warfare including gas attacks by both sides. The salient had threatened the entire region between Verdun and Nancy and interrupted the main railroad line from Paris to the east. Then the entire weight of American forces was shifted to the Meuse-Argonne offensive which began on September 26 and ended on November 11, 1918, when the armistice was signed. Nearly 1,500 Americans from all units were casualties as a result of chemical warfare during that offensive alone. The largest American Military Cemetery is not from WWII nor found in Normandy, as popular culture might lead us to believe, but at the Meuse-Argonne American Cemetery and Memorial in France where 14,246 of our WWI military dead are buried.

Why study this history? Aside from personal interest, World War I marked the first use of gas or chemical warfare in modern times and on a wide and unprecedented scale. Some 89,000 soldiers from all nations died from gas exposure and another 1.24 million were afflicted as non-fatal casualties. This represents only about two to four percent of the total war casualties – a staggering figure of over 9.7 million military alone who died during the conflict, but the deadly legacy of chemical weapons and their threat still haunt us today. DTRA/SCC-WMD plays a critical and vital role in eliminating, protecting against, responding to, and recovering from this threat.



Excerpt from the diary of Russell M. Lee: "One of the things drummed into our minds by our French and British instructors was gas. In fact so much so, that we all had the impression—one whiff—and you were dead...".

Great progress has been made under the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (CWC) toward the elimination of this threat. 188 nation states are signatories of the CWC. Seven nation states (an unknown State Party, Albania, India, Iraq, Libya, the Russian Federation, and the United States of America) have all pledged the destruction of some declared 71,194 metric tons of chemical weapons, including some 8.67 million munitions items. The largest declared stockpiles are found in Russia and the

DID YOU KNOW?

The Hague Declaration of 1899 and the Hague Convention of 1907 forbade the use of "poison or poisonous weapons" in warfare, yet more than 124,000 tons of gas were produced by the end of World War I.

USA, and seem to be on track for verifiable destruction by 2012 however, there remains today a genuine concern about non-state actor or terrorist use of chemical weapons. One cannot discount the less likely possibility of State use of chemical weapons either.

It is ironic that during my own career, it would not be until 1989 as a young Captain that I would assist with the removal of American chemical munitions from Europe by upgrading a railway depot in Miesau, Germany. As the DTRA Chair at the George C. Marshall Center for European Security Studies, located in Garmisch, Germany, it is my mission to educate hundreds of future leaders from Europe, Eurasia and around the globe on WMD threats and programs to counter those threats. I attempt to foster an international network to influence WMD threat reduction by supporting and coordinating the Marshall Center's vigorous outreach and alumni support programs. To date, the Marshall Center proudly acknowledges nearly 7,000 alumni.

As I completed my battlefield tour, and referencing the historical notes I had taken, I was struck by the magnitude of the death and destruction caused by the Great War. The term 'weapons of mass destruction' had not even been coined yet in 1918, but I took

some solace in the work being done by DTRA to combat these weapons. ■



"I know we have more to do in trying to stem the proliferation of biological and chemical weapons, and to defeat the forces of terrorism around the world. No free country is immune from them... but we can do this and we must." – President Bill Clinton (1995)

SIGHTINGS

ollowing the devastating earthquake that struck Haiti on January 12, DTRA's Open Skies Team fired up the engines of an Open Skies OC-135 surveillance plane, and soared southbound to the crowded airspace above Haiti. With less than a day's notice, the team was tasked with remapping the Caribbean country by air to assess ground conditions, including the land, and sea transport facilities, hospitals and electrical networks that had been damaged by the earthquake. Using optical panoramic and framing cameras, infrared imaging and synthetic aperture radar (SAR), the Open Skies team crisscrossed the heavily-trafficked skies above Haiti, capturing detailed ground footage of the scale and impact of the damage.

This is not the first time an Open Skies team has responded to a short-notice request for aerial imagery following a natural disaster. Open Skies teams have supported a variety of humanitarian and environmental missions around the world, including Hurricanes Rita and Katrina which

struck the U.S. Gulf Coast in 2005.

'This type of mission is very different from what we do in the treaty world, which focuses on maintaining long-term diplomacy through transparency. The mission timeframe for OS in Haiti is much more compressed, bringing with it an immediate sense of satisfaction. The feeling that we're able to contribute to this effort right here, right now is enormously gratifying." - Army Lt. Col. Mary Bell

SIONHAITI

Since 1992, the Open Skies program has served as one of the most wide-ranging international efforts to promote openness and transparency of military forces and activities. In part-

nership with 34 state parties, DTRA/SCC-WMD uses the Open Skies program to prevent conflicts and manage crisises through reciprocal, unarmed observation flights over participating parties.

NEWS, NOTES AND EVENTS FROM DTRA/SCC-WMD

Inside DTRA/SCC-WMD





Leon Smith Room Dedicated at DNWS

Traditionally the only way to view the DTRA/SCC-WMD nuclear weapons displays was to obtain a Secret/Restricted Data clearance and visit the Defense Nuclear Weapons School's (DNWS) classified Weapons Display Area at Kirtland Air Force Base in Albuquerque, N.M. But the Defense Nuclear Weapons School made history on March 11 when they dedicated the Leon D. Smith Room, a one-of-a-kind nuclear weapons museum in honor of Manhattan Project veteran and respected Sandia National Laboratories (SNL) scientist, Leon Smith.

Smith, a U.S. Army Air Corps 2nd Lt., was assigned as a weaponeer in the 509th Composite Group which was formed to carry out the atomic missions against Hiroshima and Nagasaki, Japan. Smith was the back-up weaponeer for the Hiroshima mission, having lost a coin toss to U.S. Army Air Corps 2nd Lt. Morris Jeppson. As Jeppson flew to Hiroshima, Smith manned the back-up B-29 staged on Iwo Jima in case the Enola Gay was forced to abort the mission.

After leaving the U.S. Army in 1946, Smith joined Z-Division of the Los Alamos Group and was sent to the Bikini Atoll in support of Operation Crossroads, the United States' first postwar nuclear test. Following his work with Crossroads, Smith specialized in the design of arming, fusing, and firing subsystems with Z-Division of the Los Alamos Group, later to become SNL. Mr. Smith pioneered SNL's initiative to develop environmental sensing devices and permissive action link (PAL) components. The PALs played an invaluable role in the Nation's

commitment to nuclear weapons safety and security.

Smith's unique experience as a veteran of the Manhattan Project continues to constitute an irreplaceable resource unique to the DNWS's curriculum. For over a decade, Smith has served as a distinguished guest lecturer at the DNWS, offering firsthand historical accounts of the U.S. nuclear enterprise.

In the dedication ceremony for the Leon D. Smith Room, Smith was presented with the Defense Threat Reduction Agency Director's Public Service Award in recognition of his many years of service to the Nation.

To schedule tours of the Leon D. Smith room, please contact the DNWS Registrars Office at (505) 846-5666.



2009 CFC Campaign Last year's Combined Federal Campaign effort in DTRA/ SCC-WMD set a few records for the agency and garnered a few

awards for the effort put forth. More than \$321,000 was raised, far above

the goal, and more than the record-breaking effort in 2008.

Almost half of the workforce contributed, and the average gift of \$654 was the highest it has ever been.

Campaign Manager Patsy Locke and the CFC Team, working under the campaign chair, Army Maj. Gen. Randy Manner, and vice chair, Army Col. Carl Reid, organized a number of fundraisers, including a silent auction, Fall Festival and the DTRA's Got Talent show.

The agency earned the following awards for its 2009 CFC campaign: Summit Award (increased average gift); Chairman's Award and Campaign Leadership Award (for the total amount donated); and 2nd place in the DOD Communications Contest for best fundraising event in a midsize organization.



FALL 2010

DTRA/SCC-WMD Revs up for Motorcycle Safety Day

It was a wild day at Fort Belvoir on May 11 when SCC-WMD Deputy Director Air Force Maj. Gen. John M. Howlett kicked off the first Motorcycle Safety Day with motorcycle enthusiasts from DTRA/SCC-WMD. Dressed in jeans and leather jackets, participants had a small motorcycle rally on the sidewalk just outside the agency front doors to discuss motorcycle safety, sign up riding mentors, and encourage current and potential riders to take either a beginner's or experienced rider's safety

course. The program held its first two courses that week. "The safety of our employees is important to both Director Myers and me, especially when out on the road on a motorcycle," said Howlett, a long-time rider. "Owning and operating a motorcycle is a serious responsibility, and one that should not be taken lightly."



Managed by the Environment, Safety and Occupational Health Office, the DTRA/SCC-WMD motorcycle safety program teaches motorcycle riding skills in a controlled environment, partnering less experienced riders with seasoned rider mentors. The two-pronged training approach advocates safe riding practices for both current and prospective riders.

Bataan Memorial Death March Team Honors WWII Heroes

BY MAJ. STEPHEN ALLYN

A DTRA/SCC-WMD team took fourth place in their division at the 2010 Bataan Memorial Death March at White Sands Missile Range, N.M., beating 14 other Military coed heavy teams.

Members of "Twisted Blister" - team captain Army Maj.



Stephen Allyn, (OP-OP), Army Maj. Jeff Bacon, (OP-CW), Air Force Maj. Erik Grant, (OP-CW), Air Force Lt. Col. Laura Foglesong, (OP-SS), and Army Staff Sgt. Erich Fortenberry, (OP-SS) – each carried a 35-pound pack over 26.2 miles of rough, sandy terrain, finishing in seven hours. They placed 23rd out of 114 total heavy teams, and had a faster time than 70 other allmale and ROTC teams.

One of the toughest warriors was Foglesong. Had she entered as an individual, she would have gone on to a sixth-place finish. Fortenberry also stepped up to meet the challenge with only two weeks notice, further proof of the caliber of our non-comis-

sioned officers. The race honors the original Bataan veterans and remem-

bers how much they endured – responsible for the defense of the islands of Luzon, Corregidor and the harbor defense forts of the Philippines, they fought in a malaria-infested region, surviving on half or quarter rations, little or no medical help, outdated equipment and virtually no air power.

On April 9, 1942, tens of thousands of American and Filipino troops surrendered to Japanese forces and were marched for days in the scorching heat through the Philippine jungles. Thousands died. Survivors faced the hardships of a POW camp. Others were wounded or killed when unmarked enemy ships transporting POWs to Japan were sunk by U.S. forces.

Congratulations to the DTRA/SCC-WMD team for their outstanding performance and for helping us honor those that fought and died for our nation.

Local Hero Saves Child's Life

BY PATRICIA CHAVEZ

When you hear of a military service member being a hero, you usually picture a soldier committing an act of heroism during war or in the line of duty. This is not the case with Navy Ensign Tanner Feistner. He saved a drowning child's life. He is a hero.

It was a typical hot summer day at Kirtland Air Force Base in Albuquerque when Feistner decided to take his family to the pool to cool off. When the pool attendant pointed out a child face down in the water, Feistner reacted quickly.

"I pulled him out of the water and he was limp. He was not breathing – his skin was grey, his lips were blue and his eyes were rolled back in his head. I thought the worst," said Feistner, who immediately began administering cardiopulmonary resuscitation.

"During the first five chest compressions, nothing but water was coming out of his mouth," said Feistner. "I just kept doing CPR, hoping he would start breathing. Then a gentleman next to me said he's breathing, he's breathing."

Feistner laid him on his side as the child still had fluid in his chest. The child's family rushed to his side and held him until the paramedics arrived. The paramedics told Feistner that the child would have died if he hadn't administered CPR. The boy was admitted to the hospital and released later that evening.

"I'm just glad he is ok," said Feister. Feistner is a nuclear warhead program specialist with the DTRA/SCC-WMD Nuclear Support Logistics Division. "Feistner's superiors and coworkers con-



sider his motivation, outstanding work ethic and extensive skills a true asset to DTRA/SCC-WMD," said Albuquerque's Senior Enlisted Leader, Air Force Senior Master Sgt. Paula Haynesworth. "His quick action saved a child's life. He is our local hero."

DTRA/SCC-WMD defends Russia on Kennedy Center stage

It's not everyday that DTRA/SCC-WMD employees find themselves on the frontlines of a Russian battle that ended two centuries ago. But on March 6 and 7, David Rivera II, William O'Donnell, Navy Capt. Andy Docherty, Marine Corps Capt. Steven Lucas, and Navy Cmdr. Daniel Moritsch all marched dutifully across the stage of the Kennedy Center, as they portrayed Russian soldiers in the monumental production of Prokofiev's War and Peace, performed by the Mariinsky Opera and Orchestra from St. Petersburg, Russia.

Rivera who has been performing with

the Washington National Opera Company since 1996 as both a singer and a supernumerary was asked by the casting director for his assistance in recruiting some of the 75 local performers needed as supernumeraries. At Rivera's request, the opera company accepted his DTRA/ SCC-WMD co-workers without tryouts and thus, began an intense schedule of evening rehearsals with a cast of 331 Russian soloists, choral singers and orchestra members, imported scenery, costumes, workers, and a turntable dome from St. Petersburg. Preparation for the two fourhour long performances constituted one of the most complex logistical tasks in the Kennedy Center's history.

Of his performance, O'Donnell said, "the process for executing the opera director's artistic vision is not unlike the work we do at DTRA/SCC-WMD. Our job was to allow the director to maneuver us into formations to accomplish his goals. Similar to DTRA/SCC-WMD, we trust that the director has the vision for the organization and we each have our roles in making those tactical dayto-day decisions that accomplish those goals."

COURTESY OF DAVID RIVERA II



<u>FALL 2010</u>

Some steps you should take before traveling abroad:

- Ensure that you have received all necessary vaccinations.
- Check to see if your medical insurance provider will cover you abroad.
- If not sufficiently covered, purchase supplemental travel insurance.
- Arrange access to cash most foreign providers require cash payments.
- Have an advocate with you any time you receive medical care.
- Contact the U.S. Embassy for recommendations of providers or hospitals.
- In emergencies, go quickly to the largest medical facility in the area.
- If you have a medical condition wear medical alert tags.
- Avoid injections, dental procedures and skin piercing while abroad.
- If you need regular injections, bring your own needles and syringes.
- Carry a letter from your doctor explaining any special health needs.
- If injected medications are advised, ask if there is an oral alternative.
- If injections are needed, ask for individually wrapped, disposable needles.
- If an injection is mandatory, ask if there is a fee you can pay instead.



Pre-travel Medical Screening

Every day, DTRA/SCC-WMD military personal and civilians are assigned to remote areas of the world to fulfill the agency's important missions. With each foreign assignment, employees need to visit the occupational health division for a pre-travel medical screening. Patients will be examined for pre-existing medical issues to determine how they will adapt to various travel conditions including long airplane flights, changing altitude levels and foreign foods and water. They will also be administered appropriate vaccines to protect them from illnesses prevalent in various parts of the world.

Pre-travel medical screening is an important step for maintaining personal health and completing the assigned mission. Falling ill in a foreign country can leave a team with insufficient personnel to complete their assignment and require expensive medical evacuation at the cost of taxpayers.



Giving the Gift of Life

Since World War II, blood transfusions have become an integral part of military medical practice, providing America's Armed Forces with life-saving medical treatments, including organ transplants, bone marrow transplants, cancer treatments and complicated surgical operations. Critical to these procedures are the millions of donors each year who participate in blood drives to support military hospitals across the country.

Now, DTRA/SCC-WMD employees – Armed Forces, active and reservists, civilians and their families – are joining the effort to give America's sick and injured troops and their families a second chance at life by participating in a series of military sponsored blood drives at the agency headquarters in Fort Belvoir. Their donations benefit the Armed Services Blood Program, a joint operation among military services that plays a key role in collecting, processing, storing, transfusing and distributing cost effective blood products for service members and their families in both peace and war.

To learn more about the program and how to help visit www.militaryblood.dod.mil

Inside DTRA/SCC-WMD

1. Cultural performance at Asian-American Pacific Heritage Month observance

2. Air Force Tech. Sgt. Nica Smith receives Joint Service Achievement medal presented by Army Col. Joseph C. Ammon

3. Air Force Col. Teresa Pitts being pinned by her husband and son during her promotion ceremony

4. Employees participate in annual Food Drive









FALL 2010

Inphotos DTRA/SCC-WMD







5. Military personnel prepare for physical training exercise

6. Civilian Juanita Gaines takes part in Motorcycle Safety Day

7. Commander's Cup softball team defends an undefeated record

Staying Fit

Across the Agency, DTRA/SCC-WMD employees, civilian and military, are lacing up their sneakers to participate in sports activities and fitness programs as part of a healthy and active lifestyle.



Running Club

DTRA/SCC-WMD employees hit the ground running this summer, as the agency launched its new running club. The club is an informal group of people who may be interested in running for any reason. From the novice to the seasoned marathoner, the club encourages interested participants to get outside and join their fellow co-workers in a running program to improve both body and mind. Visit http://dtra1/SiteDirectory/Business/BP/RC to self register, create a personal running record, and track your mileage on a daily basis.

Lose to Win

The second phase of the "Lose to Win" competition attracted nearly 200 volunteers this spring to participate in the fun and friendly game of weight loss and improved heath. Teams like "Exceeding Treaty Limits," and "Women w/Massive Determination (WMD)" worked together to achieve their health and fitness goals through mutually agreed-upon team activities that ranged from hiking to stair climbing to sharing healthy lunches.

Almost 1,000 pounds were lost by the 161 participants of LTW Phase II. Winning first place by losing six percent total team weight was Team CXW, led by Navy Cmdr. Jeffrey Debolt at Eglin AFB, Fla.; three teams tied for second place by losing four percent: Team Schnitzel Guts, DTRA/SCC-WMD Europe led by Air Force Master Sgt. William Duchanse; Team Possums, DTRA/SCC-WMD NCR led by Air Force Maj. Margie Gabriel; and Team Chubbie Chilis, DTRA/SCC-WMD Albuquerqe led by Air Force Senior Master Sgt. Paula Haynesworth.

Commander's Cup

DTRA/SCC-WMD rallied the troops this year, holding first place in the Fort Belvoir Commander's Cup competition. They participated in a series of athletic competitions ranging from racquetball to long-distance running and together, set record victories, defended championship titles and raised the bar of excellence for all competitors.

The Fort Belvoir Commander's Cup competition is held each year to encourage unit personnel, civilians and contractors to work together outside the office. The cup is awarded to the team that sits atop the standings after the intramural season ends.

The 2010 cup will be awarded by the Base Commander, Army Col. John J. Strycula. For full results visit http://eis/sites/ComCup/default.aspx

HONOR ROLL

MILITARY CATEGORIES AND WINNERS

Field Grade Officer of the Year 2009 Lieutenant Colonel Craig Unrath, USA

Company Grade Officer of the Year 2009 Captain Joseph Pulliam, USAF

Senior Enlisted Member of the Year 2009 Chief Petty Officer Scott McGrath, USN

Junior Enlisted Member of the Year 2009 Staff Sergeant Agne Mileviciute, USAF

CIVILIAN CATEGORIES AND WINNERS

High-Level Civilian of the Year 2009 Karen Cwiekalo

Mid-Level Civilian of the Year 2009 Carl Beck Jacqueline Griego

Junior-Level Civilian of the Year 2009 Robert Hampton

DIRECTOR'S ANNUAL TEAM AWARDS (SMALL TEAM)

Strategic Offensive Arms Elimination Super Solids Program William Moon Lt Col Steve Gauthier LTC John Bulmer MAJ Dale Taylor

Deployment Readiness Cell Team

MAJ Kelly Macdonald

Jeff Sawyer John Dooley Rose Waters-Lindo Robert Clark William Barfield

National Technical Nuclear Forensics Team

COL Craig Ammon Art Beasley Nate Charles LTC Jeff Prough Les Kahane CDR John Klein LTC Chris Lehner Chemical and Biological Strategic Communication and Outreach Team Carl Brown Marilyn Phipps

Small Arms and Light Weapons Branch Team

Larry Schultz John Schmitt Brett Wise Chanda Brown Billy Johnson Ben Cacioppo MAJ Patrick Chavez

START Follow-on

Negotiating Team Carol Bennett TSgt Richard Bennett PO1 Bernadette Cherry John Connell Lt Col Richard Goodman Maj David Johnson Ramaz Kvavilashvili MAJ Eric Leyde Philip Smith

Smart Threads Integrated Radiological Sensors Joint Capability Technical Management Team CDR Lisa Kennemur

MAJ John Carter Maj Kyle Reybitz MAJ Chad Schools MAJ Marc Franciszkowicz

DIRECTOR'S ANNUAL TEAM AWARDS (LARGE TEAM)

Business Enterprise Contingency Team

Ken Harsha Karen Cwiekalo Willie Brown John Jacocks James Morgan Jake Gibson Katherine Luhman Jeffrey Vittone **Grayling Batchelor** Carla May James Holland William Scott Estell Watson Michael Wilson LTC Andrew Kim Dan Vola Hank Harriel Floyd Boyer Karen Kelley Kathleen Burke Julie Dicerbo Dan Kelch Marshall Fairchild Vic Johnson Jerri Calhoun Katherine Barnoski Elaine Sedeora Genene King Dorothy Russell Pam Veney Scott Vitarelli

Defense Acquisition Workforce Development Fund Team

Teresa Knight Patricia Murray Christopher Rhodes Karen Cwiekalo Rose Elkins Mirna Flowers Victor Johnson Maria Lenore Terry Pessaro Lee Ann Poe Mark Schroedl Vallinayagam Shanmugasundaram Wanda Smith Donna Vaughn Robert Wooding Georgina Boyce Sandra Courtney Judy Mason Nancy Nachreiner Howard Staik Dallas Newsome Jerlean Ross Anna Crocket-Aiken Vicki Cook Gina Lynch Madlein Neuleib Ruth WilliamsHunt Renee Anderson Yanoula Burleigh Donna Sullivan Sherrin Christensen

Defense Threat

Reduction University LTC Michael Anderson ENS Cazrlos Argueta TSgt Brian Barela SFC John Bivens Steve Bradford LCDR Michael Conner LCDR Thomas Cotton lim Davis SSG Paul Dixson Dennis Dunn PO1 Jason Evanson Capt Jason Fincher TSgt Kevin Fowlkes Paul Frazier Maj Timothy Frederick Lt Kevin Gamble CWO4 Jason Gere Steve Harper Timothy Hoffmann MAJ W. David Jones MSgt Mark Kalina Antonie Lewin SSgt Frank Lopez COL Mark Mattox LTC John McClory William McKenzie

PO1 Leonel Menchaca Mai Larry Miyamoto Maj Shaye Molendyke MSgt Magdalena Ortega-Sauer SSgt Ralph Padilla Col Steven Payne Christopher Pink SFC Mike Post Linda Qassim Maj Matthew Rardon TSgt Luis Ramirez Roberto Ramirez Eugene Richards Jr. 1LT Kevin Riley TSgt Shakir Robinson Joyce Rowell Frederick Scudierv MAJ John Shannon Capt Harry Stockton MAJ Hector Tovar SSgt Robert Turner Mark Van Huss TSgt Kenny Walters Jessie Watkins SSgt Jeremy Wooten MSgt Michael Wright

Fiscal Year 2011 President's Budget Submission

Donna Vaughn Terry Pessaro Kim English Lynne Maszczak Rob Wooding Lea Ann Poe Mitzi Mayes Ricardo Estrada Terrvetta McDonald Rose Elkins Katura Reese Stefan Grabas Dallas Newsome Evan McNeill Jackie Willoughby Anna Crockett-Aiken Jeannie Borden Fiona Berman Barbara Zoscak Carmen Waters Sherrin Christensen Donna Sullivan Laura Lynn Ganzler-Was Marina Galindo Lydia Crawford Diane Evans

Nuclear Surety Inspection Team

John Stocker III Col Christopher Coffelt David McDarby CAPT Shannon Kawane John Curry Joe Fitzgerald Maj Polly Brown Capt Adolfo Meana Capt Joseph Pulliam Capt Robert Groceman Lt Col Mark Meyer CWO2 Carson Shoemake Lt Sammie Green SMSgt Thomas Austin Capt Ben Johanningsmeier Mike Hoffman Carl Beck Lt Col(S) John Willoughby

Nuclear Weapon Accident Incident Exercise 2009 Team

Incident Exercise 2009 lea Lt Col Jacqueline Randolph David Cherry Jeffrey Danshaw Patricia Kaczynski Michael Estep Michael Andrews Ronald Lovas Betty Burke-Fox Sharon Goodman TSgt Anthony Reeves Jeffrey Woodlock MSG John Mory George Gillette Joseph Urgese

Votkinsk Closeout Team

Lt Col Paul Copeland LTC Norman Fuss CDR John Sullivan LTC Jon Vernau Lt Col Brian Noe Maj Eric Mottice Lt Col Kelly Easler Maj Brian Miller Maj Margie Gabriel Maj Gary Reidenbach Maj Joseph Kays Maior Dawn Straight Brenda Hardbower Donna Dillon SFC Trent Myer Mark Beddoes Phil Smith Robert Habashi Maj Mark Edinger Stephen Pierce Eric Claud Lucy Jackson Willie Brown

Military Evaluations

Process Action Team Floyd Boyer Phil Ellis Tracey Denmark Kimm Rowe Bernadette Lemare Sandra Harris COL Carlton Reid SGM Ethel Moore-Jenkins CMSgt Arthur Croteau MSgt Jack Shinholser MSgt Shawn Chapman CSM Patrick Alston Col Stanley Contrades SMSgt Paula Haynesworth Andy Teague Karen Kelley

Below: Attorney General Robert F. Kennedy and Presidential Adviser Army Gen. Maxwell D. Taylor observing the detonation of a Davy Crockett W54 warhead, *Little Feller I*, at a Nevada Test Site (July 17, 1962).



Right: The military's smallest nuclear weapon was fired from a tripod, had a maximum range of a few miles, and had just a fraction of the power of either of the bombs dropped at the end of World War II.



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