

Combating WMD

JOURNAL

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**Exercise "Poets Corner" a Multinational
Effort to Prevent CBRNE Terrorism**

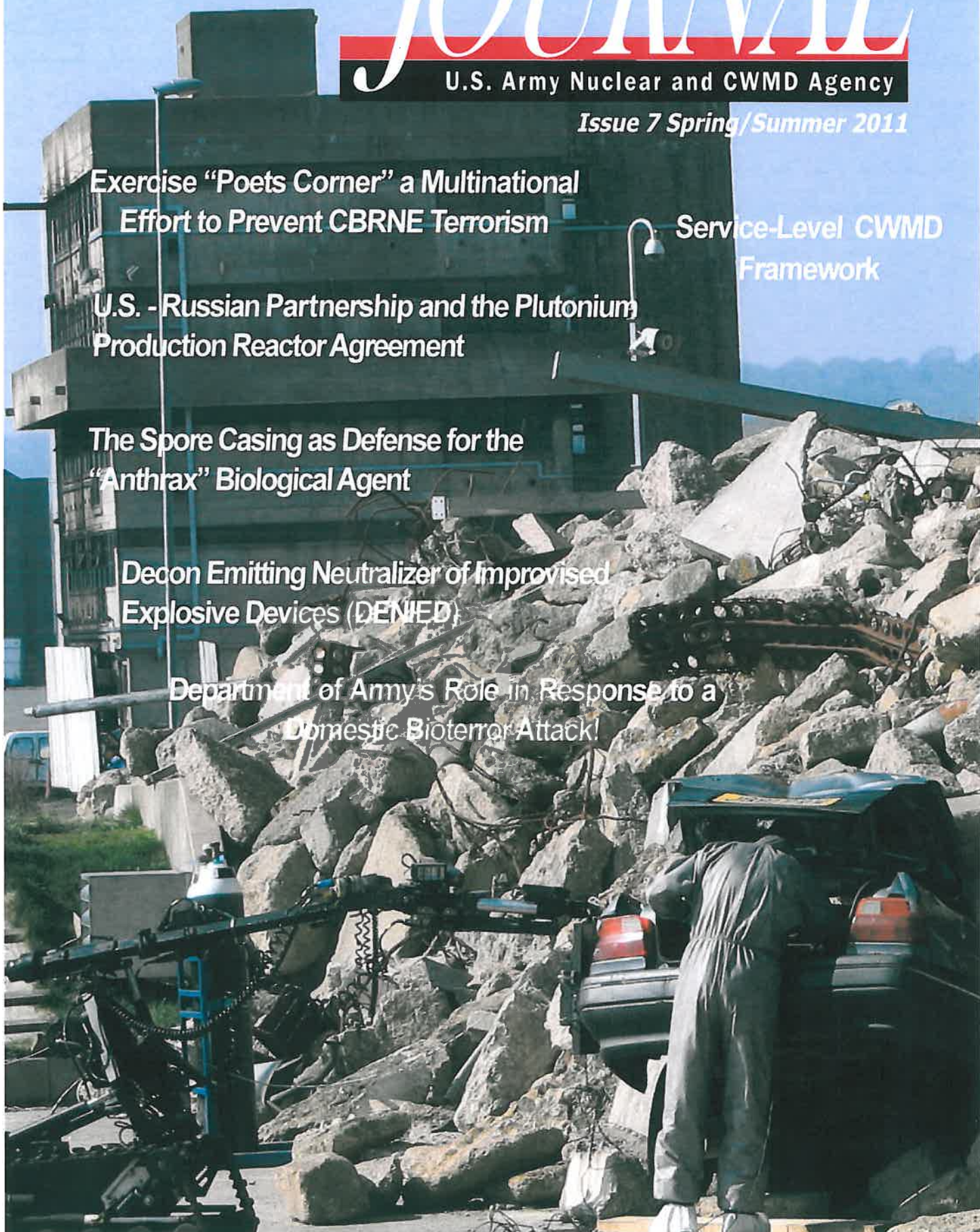
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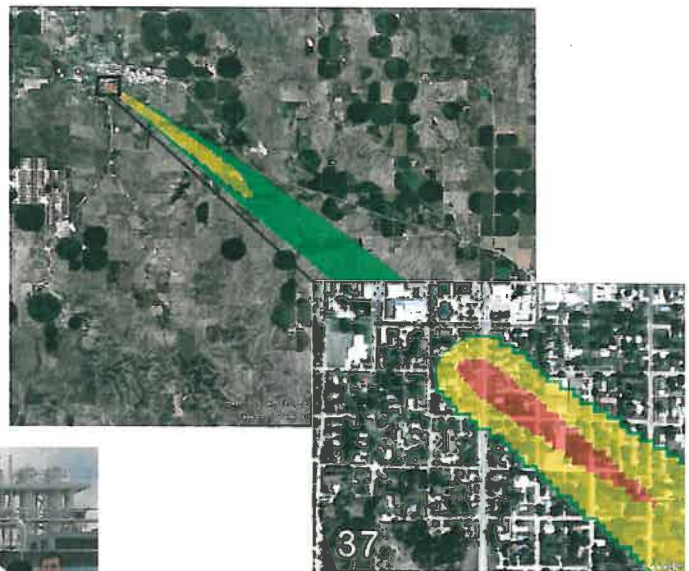
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Front Cover: Royal Logistic Corps (UK) EOD Tech positions his x-ray on a RDD in the trunk of a car during CAPEX 2011 Morton-on-Marsh, UK. EOD would later render safe the RDD with a disruptor in order to allow a police forensic team to collect evidence. Photo courtesy of LTC Michael Quinn

U.S. - Russian Partnership and the Plutonium Production Reactor Agreement

MAJ Kevin J. Owens

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Overview

Dr. Martin Luther King, Jr. once said, "We may have all come on different ships, but we're in the same boat now." This statement astutely represents the current conditions between the U.S. and Russia, as well as each country's nuclear weapons program. One significant and cooperative measure being executed between the United States and Russia is the monitoring of each country's plutonium production facilities.

The PPRA is now in its thirteenth year and continues to be a vital component for monitoring plutonium production facilities in the United States and Russia. It is a bilateral agreement that applies to 14 plutonium reactors in the United States and 13 Russian plutonium reactors in existence at the time the agreement was signed that requires the cessation of plutonium production for use in nuclear weapons. This is achieved through monitoring to ensure that shutdown plutonium production reactors in both countries do not resume operations. A list of the reactors and locations are cited in Table 1. *These three recently shut down Russian reactors will be transitioned to the established PPRA monitoring regime to ensure they remain permanently shutdown.

The United States and Russia are permitted to conduct monitoring visits once a year at the other's shutdown reactors. During these visits, personnel visually inspect and observe placement of seals on plutonium oxide storage containers to ensure material is not used in weap-



ons. The United States also has the right to monitor two of Russia's plutonium storage facilities in Sever'sk and Zheleznogorsk, twice a year.

U.S.-Russia cooperation on nuclear nonproliferation and continued monitoring of weapons grade plutonium sends a positive signal to each country and to the international community. Since the end of the Cold War, the United States and Russia have worked toward a stronger partnership in the monitoring of each other's plutonium reactors. Developing strong partnerships and gaining an understanding

duction complex have been instrumental in the success of the PPRA.

At the time of the signing of the 1997 Plutonium Production Reactor Agreement (PPRA), twenty-seven reactors in various stages of shutdown, dismantlement, or operation existed in the United States and Russia. These plutonium reactors and their supporting facilities produced large amounts of weapons grade plutonium for use in nuclear weapons. All those reactors are now shutdown with the announcement made at the April 2010 Nuclear Security Summit that Russia's last plutonium producing reactor was shut down.

Agents of the PPRA

Department of Energy's (DOE) National Nuclear Security Administration (NNSA) serves as the United States' Executive Agent for the PPRA. DOE works in cooperation with Department of State and the Depart-



The U.S. and Russian teams take a group photo after monitoring K Reactor at the Savannah River Site

of each other's nuclear material pro- ment of Defense's Defense Threat

Russian Federation (13)	Reactor Status	United States of America (14)	Reactor Status
Ozersk (5)		Hanford (9)	
A Reactor	Shutdown	B Reactor	Shutdown
IR-AI Reactor	Shutdown	C Reactor	Shutdown
AV-1 Reactor	Shutdown	D Reactor	Shutdown
AV-2 Reactor	Shutdown	DR Reactor	Shutdown
AV-3 Reactor	Shutdown	F Reactor	Shutdown
		H Reactor	Shutdown
Seversk (5)		KE Reactor	Shutdown
I-1 Reactor	Shutdown	KW Reactor	Shutdown
I-2 Reactor	Shutdown	N Reactor	Shutdown
ADE-3 Reactor	Shutdown		
ADE-4 Reactor	Shutdown	Savannah River (5)	
ADE-5 Reactor	Shutdown	K Reactor	Shutdown
		L Reactor	Shutdown
Zheleznogorsk (3)		P Reactor	Shutdown
AD Reactor	Shutdown	R Reactor	Shutdown
ADE-1 Reactor	Shutdown	C Reactor	Shutdown
ADE-2 Reactor	Shutdown		

Table 1: List of shutdown and current operational plutonium production reactors

Reduction Agency (DTRA) to share responsibility for PPRA monitoring. As an executive agent, NNSA ensures that weapons-usable plutonium in Russia (estimated to be at least nine metric tons) is placed in secure storage and remains accounted for until transferred to a disposition process.

Key contributors to the PPRA effort are also joint military service members. The U.S. Army assigns Nuclear Research and Operation Officers (Functional Area 52 Officers (FA-52)) to DTRA in support of the PPRA mission. These FA-52 officers offer a unique background with specialized training in developing national and military strategy, generating plans and policy recommendations, and providing interagency leadership in nuclear related combating weapons of mass destruction mission areas.

Also in support of the PPRA are subject matter experts (SMEs) from the United States, mainly from DOE's Pacific Northwest National Laboratory and the Savannah River Site. These SMEs are the backbone to the program because they have the operational knowledge and experience working with nuclear reactors and plutonium storage. DOE also hosts visits to the Hanford and

Savannah River Sites, and to ensure an efficient visit, DTRA's personnel escort the Russian team members while they are in the United States.

Monitoring at the Savannah River Site

Since the inception of the PPRA, relationships have been a key element in the success of the program. For example, during the June 2010 monitoring visit at the Savannah River Site (SRS) in South Carolina, the U.S. and Russian teams worked very well with each other and demonstrated a common passion for the work. Everyone involved in the visit diligently conducted the monitoring for each facility. This type of continuous working relationship among the team members, developed through previous PPRA monitoring visits in the United States and Russia, is essential for sustaining an effective program.

The SRS visit began with a reception for the Russian team, followed by a day of rest to recover from the flight. "The mission is straightforward and we know what we need to do," explained Oleg Komkov, Russian Federation's Team Chief, who has been associated with the delegation since 2000. The next day, Russian and U.S. teams met informally to discuss the agenda

for the week ahead. While on site, the two teams visited four reactors and specifically identified locations within the facilities that were identified as disabled. After monitoring the shutdown reactors, the Russian team developed their report and conducted an outbrief to discuss the visit and plans for the next monitoring visit.

After the monitoring visit at SRS, both teams proceeded to monitor the shutdown reactors at Hanford. Since the majority of the U.S. team members were not fluent in Russian, interpreters were used to communicate during the monitoring visit and away from the site. The facility SMEs (mainly from NNSA and SRS's Management and Operations Contractor, Savannah River Nuclear Solutions) provided the site-specific knowledge needed to facilitate the monitoring visit and were prepared to answer questions. It was apparent that the teams had done this before and were knowledgeable about the facilities.

DTRA's Deputy Team Chief MAJ Rich Nameth said, "I have gotten to know these guys and we work well together. It took a little while, but they are more comfortable with me now." This was MAJ Nameth's last monitoring visit because he was



The U.S. and Russian teams monitor facilities at SRS during the PPRA visit.

preparing to transition into a new FA-52 assignment in Florida. It was also, therefore, important for MAJ Nameth during this visit to introduce new members to the Russians for continuity of future missions.

When asked about the relationships he has developed over the past ten years with NNSA, DOS, and DTRA, Mr. Komkov said, "It helps, of course, having personnel that are familiar with the program and process. This includes having the right technical representative, interpreters, and personnel to logically plan for the event." When asked about the significance of the event, Mr. Komkov said, "Our mission is important to verifying the stopping of plutonium production facilities for nuclear weapons." MAJ Nameth also noted that "this was one of the smoothest visits we have had and the Russians really enjoyed their visit."

Off-duty time was filled with activities that allowed the teams an informal way of getting to know each other better. The teams toured the Augusta Canal and also attended an Augusta Green Jackets baseball game. "Trying to explain baseball is more difficult than I thought," said DTRA Team Chief, LTC Jeffery Weston. This was a first time for the Russians to see baseball being played in the United States.

Recent United States - Russian Developments

As the program continues, it will be important to maintain the established relationships and to develop the skills and experience of new PPRA team members. Since the United States and the Russian Federation are expected to continue the monitoring visits, it will be equally important for both to continue a positive working relationship. Working together and understanding each other's nuclear program will allow them to build even stronger partnerships in the future.

A significant and positive development that recently occurred in Russia was the shutdown of the ADE-2 reactor. Russia announced on April 15, 2010, the formal shutdown of the reactor in the Siberian city of Zheleznogorsk, which is 2,500 miles east of Moscow. The production complex was founded in 1950 on the orders of then Soviet General Secretary Joseph Stalin. During a 47-nation nuclear summit, hosted by President Barack Obama in April 2010, Russian President Dmitry Medvedev pledged to close the reactor.

Prior to the summit on April 8, 2010, President Obama and President Medvedev signed the New Strategic Arms Reduction Treaty (New START). New START is another significant example of the cooperative effort between the United States and Russia. The signed treaty was approved on September 16, 2010, by the U.S. Senate Committee on Foreign Relations and the full Senate approved it on December 22, 2010. Following the Foreign Relations Committee's approval, Senate Majority Leader Harry Reid said, "The New START Treaty that the President signed with Russia in April re-establishes U.S. leadership on global non proliferation of nuclear weapons, reduces Russia's nuclear arsenal, and takes concrete steps to secure a nuclear-free world without sacrificing America's security. I am pleased that the Senate Foreign



The group enjoys a cruise in the evening on the Augusta Canal.



President Barack Obama hosts the 47-nation summit in Washington.

Relations Committee passed this historic agreement with strong bipartisan support today . . . [and] I look forward to bringing this treaty to the floor."

Conclusion

The PPRA is a non-proliferation agreement between the United States and Russia. It fosters a cooperative effort for the cessation of plutonium production for use in nuclear weapons, and is reliant on a strong partnership and mutual understanding of both countries' nuclear weapons production complex. Although small in size, the U.S. and Russian teams of 21 personnel at the Savannah River Site during the week of June 7-11, 2010, made a positive impact in continuing this agreement for now and for the future. Partnerships and relationship are not built overnight and will require an effort from both countries.

"The past is prophetic in that it asserts loudly that nuclear wars are poor chisels for carving out peaceful tomorrows. One day we must come to see that peace is not merely a distant goal that we seek, but a means by which we arrive at that goal. We must pursue peaceful ends through peaceful means." (Martin Luther King Jr.)

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