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Special Report

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Recent Developments in the Newly Independent States

Turkmenistan Signs IAEA Additional Protocol

On May 17, 2005, in Vienna, Turkmenistan's Minister of Foreign Affairs Rashid Muradov and International Atomic Energy Agency (IAEA) Director General Mohamad ElBaradei signed an agreement between Turkmenistan and the IAEA for the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and an Additional Protocol to this agreement. Turkmenistan ratified the NPT in September 1994. According to the Turkmen Ministry of Foreign Affairs press release, ElBaradei promised continued IAEA cooperation with Turkmenistan, including conducting special consultations, training courses, and seminars for relevant Turkmen officials.[1,2,3]

Turkmenistan is the last Newly Independent State (NIS) to sign a comprehensive safeguards agreement and its additional protocol with the IAEA. Turkmenistan does not have the industrial capability to produce nuclear or nuclear dual-use commodities. The country did not host nuclear tests in Soviet times, although at least one underground nuclear explosion was conducted in 1972 to seal a gushing gas well in Mary Oblast. [*Editor's Note: The Soviet Union carried out 124 "peaceful nuclear explosions" (PNEs)—with 81 on Russian territory and the rest in other Soviet republics—over 23 years during the Cold War. Twenty-six percent of the 124 PNEs were used to open up new natural gas fields. Another 25 percent of the PNEs were done to create new gas reservoirs or to seal off gas wells*.][4] An abandoned uranium mine reportedly exists in northwest Turkmenistan, near Kizil-Kaya.[5]

Editor's Note: The IAEA comprehensive safeguards agreement serves to verify that states' declared nuclear materials and activities are not being diverted for nuclear explosive purposes. The agreement is based on nuclear material accountancy, complemented by containment and surveillance techniques, such as tamper-proof seals and cameras that the IAEA installs at relevant facilities. The Additional Protocol, based on a model text adopted by the IAEA in 1997, grants the IAEA expanded inspection rights and requires additional reporting by states regarding their peaceful nuclear activities. Expanded rights of access to sites and information related to all parts of the nuclear fuel cycle allow the IAEA to determine that there are no undeclared nuclear materials in the signatory state. For more information on the Additional Protocol see: <http://www.armscontrol.org/factsheets/IAEAProtocol.asp>.

Strengthened Safeguards System: States in the Former Soviet Union with Additional Protocols

State	IAEA Board Approval	Date Signed	In Force
Armenia	Sept 23, 1997	Sept 29, 1997	June 28, 2004
Azerbaijan	June 7, 2000	July 5, 2000	Nov 29, 2000
Estonia	Mar 21, 2000	Apr 13, 2000	—
Georgia	Sept 23, 1997	Sept 29, 1997	June 3, 2003
Kazakhstan	June 18, 2003	Feb 6, 2004	—
Latvia	Dec 7, 2000	July 12, 2001	July 12, 2001
Lithuania	Dec 8, 1997	Mar 11, 1998	July 5, 2000
Russia	Mar 21, 2000	Mar 22, 2000	—
Tajikistan	June 12, 2002	July 7, 2003	Dec 14, 2004
Turkmenistan	Mar 1, 2005	May 17, 2005	—
Ukraine	June 7, 2000	Aug 15, 2000	—
Uzbekistan	Sept 14, 1998	Sept 22, 1998	Dec 21, 1998

Sources: [1] "MAGATE i Turkmenistan podpisali v Vene dvustoronneye soglasheniye o primenenii garantiy" [The IAEA and Turkmenistan signed an agreement on the application of safeguards in Vienna], Turkmenistan.ru electronic newspaper, May 23, 2005, <http://www.turkmenistan.ru/index.php?page_id=3&lang_id=ru&elem_id=6640&type=event>. [2] "News: IAEA, Turkmenistan Sign NPT Application Agreement," News Central Asia news agency, May 23, 2005, <http://www.newscentralasia.com/modules.php?name=News&file=article&sid=1277>.
[3] "Podpisaniye soglasheniya mezhdu Turkmenistanom i MAGATE" [Signing of the agreement between Turkmenistan and the IAEA], Islamic Republic of Iran Broadcasting website, May 25, 2005, <www.irib.ir/worldservice/russianradio/HTML/Crida.htm/17.htm>. >. [4] Vladislav Larin and Eugeny Tar, "Soviet PNEs: A Legacy of Contamination," *Bulletin of the Atomic Scientists* online edition, May-June 1999,

<http://www.thebulletin.org/article.php?art_ofn=mj99larin>. [5] CNS, "Turkmenistan: Overview," NIS Nuclear and Missile Database, Nuclear Threat Initiative website, <http://www.nti.org/db/nisprofs/turkmen/overview.htm>.

Kazakhstan Hosts Seminar on Search for and Security of Radioactive Sources; Inventory of Radiation Sources to Be Held in Kazakhstan

On May 16-20, 2005, the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA), in cooperation with the U.S. Sandia, Argonne, and Oak Ridge National Laboratories as well as Canberra Packard Central Europe, organized a training seminar entitled "Search and Security of Orphan Radioactive Sources," at the Institute of Nuclear Physics (INP) in Almaty, Kazakhstan.[1,2] [*Editor's Notes: "Orphan radioactive sources," are radioactive materials intended for use in industry, research, or medicine that have been abandoned by their owners and are outside regulatory control, thereby posing potential public health dangers. Orphan sources may also be vulnerable to acquisition by terrorist organizations that might seek to use them in radiological dispersion devices or "dirty bombs." Canberra Packard Central Europe is an Austrian company engaged in distributing, installing, and servicing radiation measuring equipment with medical, environmental, and industrial applications in the countries of Central and Eastern Europe.*][3]

Twenty-six Kazakhstani participants representing the INP, the Institute of Atomic Energy, Institute of Radiation Safety and Ecology, the MAEK-Kazatomprom company, and the Ulba Metallurgical Plant attended the event. In addition to presentations by the U.S. and Austrian experts on orphan source search techniques, the training included practical search exercises. The participants were tasked to find radioactive sources hidden at the INP site, using the special radiation detection equipment brought by the U.S. side. Upon completion of the training, the equipment was donated to Kazakhstani facilities.[1,2,4]

Following the training, on May 23, 2005, Timur Zhantikin, chairman of the Kazakhstani Atomic Energy Committee (KAEC), announced that the Ministry of Health and the KAEC would start this summer a nationwide inventory of radioactive sources used at the country's industrial enterprises and institutions. According to Zhantikin, the inventory aims to check the current state of sources and their operational and storage conditions, and will include the search for orphan sources. In addition, along with the inventory of radiation sources, two projects will be launched to clean up two radioactive source burial sites—at the former Irtysh Chemical Plant in Ust-Kamenogorsk, eastern Kazakhstan, and at the Mangystau Atomic Energy Combine located in Aktau, western Kazakhstan.[5]

As reported by Zhantikin, based on Soviet-era data, about 100,000 radiation sources were in use in Kazakhstan in 1992. However, as a result of economic decline and the transition to a market economy, which followed the breakup of the Soviet Union, no tracking of radioactive sources has been conducted since then in Kazakhstan. In the Soviet period, the Ministry of Internal Affairs and the Sanitary Epidemiological Service (SES) of the Kazakh Soviet Socialist Republic were charged with the tracking of radioactive sources. However, the radiation source database of the Ministry of Internal Affairs was lost, and the KAEC had to restore the information using the SES database and the data of the Ministry of Emergency Situations of Kazakhstan. The country's national register of radioactive sources currently includes information about 40,000 pieces of equipment and devices using radioactive materials that are in use at the present time. The database does not include insignificant radiation sources, such as smoke detectors, that were included in the Soviet-period database. However, the committee is still unaware of the whereabouts of almost 20,000 radiation sources thought to still be within the country. Zhantikin pointed out that the United States is assisting in training teams of specialists to conduct a search for orphan radioactive sources.[5] According to an NNSA representative, a search program is being drafted jointly by Kazakhstani and U.S. government agencies.[4]

Sources: [1] "Amerikanskiye spetsialisty provodyat trening dlya kazakhstanskikh yadershchikov" [U.S. experts conduct a training for Kazakhstani nuclear specialists], Kazakhstan today news agency, May 17, 2005, Gazeta.kz, <http://www.gazeta.kz/art.asp?aid=59589>. [2] "Search and Secure Training," Nuclear Technology Safety Center website, <http://www.ntsc.kz/News/May2005_1.htm>. [3] "History," Canberra Packard Central Europe website, <http://www.cpce.net/>. [4] "RK i SShA gotovyat programmu po poisku beskhoznykh istochnikov izlucheniya" [Kazakhstan and the United States are drafting a search program for orphan ionizing radiation sources], Kazakhstan today news agency, May 20, 2005, in Gazeta.kz, <http://www.gazeta.kz/art.asp?aid=59793>. [5] "V Kazakhstane budet provedena inventarizatsiya istochnikov ioniziruyushchego izlucheniya" [An inventory check of ionizing radiations sources will be conducted in Kazakhstan], Kazakhstan today news agency, May 23, 2005, in Gazeta.kz, <http://www.gazeta.kz/art.asp?aid=59869>.

Belarus Destroys MANPADS in Cooperation with OSCE

The Belarusian military has destroyed the first 14 of 29 shoulder-fired anti-aircraft missiles (known as man-portable air defense systems, or MANPADS) slated for destruction within the framework of the Organization for Security and Cooperation in Europe (OSCE) Document on Small Arms and Light Weapons (SALW), which was adopted on November 24, 2000. The objective of the SALW Document is to prevent the illegal trafficking of SALW by introducing and enforcing national control measures, promoting cooperation, and exchanging information between law enforcement and customs agencies at the international, regional, and national levels. International observers from Spain, Switzerland, and the United Kingdom visited an artillery range located 100 kilometers (km) from Minsk on May 25, 2005, to see the Strela-2M systems destroyed.[1,2]

In October 2003, Belarus became the first OSCE member state to request assistance for the destruction of SALW, including MANPADS, and for improving SALW stockpile security and management. The destruction of Belarusian MANPADS follows the February 24, 2005, bilateral agreement between Russia and the United States calling for increased cooperation on the control of MANPADS, which could be used by criminals, terrorists, and non-state actors to threaten global aviation.[1,2]

For more information on efforts to stop the spread of MANPADS within the former Soviet Union and globally, see "NIS Regional Organizations and Export Control in 2003," *NIS Export Control Observer*, No. 12, December 2003/January 2004, pp. 8-10, and "United States and Russia Sign Agreement on MANPADS," *NIS Export Control Observer*, No. 25, March 2005, pp. 4-5, <http://cns.miis.edu/nis-excon>.

Sources: [1] "Belarus destroys shoulder fired anti-aircraft missiles in co-operation with OSCE," OSCE press release, May 25, 2005, OSCE website, <http://www.osce.org>. [2] "OSCE Document on Small Arms and Light Weapons (SALW Document)," Ministry of Defense of the Republic of Belarus website, <http://www.mod.mil.by/iso_eng.html>.

Russian Border Guards Withdraw from Tajik-Afghan Border

On June 14, 2005, Russian border guards transferred their last border outpost on the Tajik-Afghan border—the 13th border outpost of the Pyanj border guard unit—to the Committee for State Border Protection of Tajikistan, thus ending their 13-year presence at the border.[1,2,3,4,5] [*Editor's Note: The official designations of the Russian border guard units deployed on the Tajik state border prior to their withdrawal were "Ishkashim," "Khorog," "Kalai Khumb," "Moskovskiy," "Murgab," and "Pyanj" border guard units. These titles correspond to the names of the Tajik settlements, near which they were deployed.*]

Following the breakup of the Soviet Union in late 1991, a devastating civil war began in Tajikistan, aggravated by the continuing internal conflict in Afghanistan. In Tajikistan, the former Soviet-Afghan border was then guarded by the Dushanbe operational group of the Central Asian Border Guard District.[6] On August 24, 1992, taking into account the worsening situation on the border and following negotiations with the Tajik leadership, Russian president Boris Yeltsin issued Edict No. 921 putting former Soviet border guard forces in Tajikistan under Russia's jurisdiction.[7] On October 19, 1992, the Central Asian Border Guard District was transformed into the Group of Border Guard Forces of the Russian Federation in the Republic of Tajikistan.[6,8] On May 25, 1993, Russia and Tajikistan signed a 10-year *Agreement on the Legal Status of the Border Guard Forces of the Russian Federation Stationed on the Territory of the Republic of Tajikistan*.[9,10] One of the provisions of the agreement stipulated that Russia would gradually transfer certain sections of the Tajik state border to Tajikistan's own border troops as they were formed.[11]

In accordance with this provision, in September 1998, the Russian Kalai Khumb border guard unit transferred a 73-km section of the Tajik-Afghan border to Tajik border guards. In December 2002, in accordance with the Russian-Tajik agreement signed on October 17, 2002, in Yerevan, Armenia, the Tajik side assumed control over the 511-km-long Tajik-Chinese border, guarded by the Murgab border guard unit.[8,9,11,12]

On October 16, 2004, during Russian president Vladimir Putin's visit to Tajikistan, the two sides signed an *Agreement on Procedures of Transfer under the Protection of the Republic of Tajikistan of the Section of*

the State Border of the Republic of Tajikistan with the Transitional Islamic State of Afghanistan Guarded by Russian Border Guards and Border Military Forces and on Procedures of Transfer of Property Used by the Federal Security Service. In accordance with this agreement, in November-December 2004, Tajik border guards assumed control over the 881-km Pamir section of the Tajik-Afghan border, guarded by the Ishkashim (569 km), Khorog (212 km), and Kalai Khumb (100 km) border guard units, along with the Lyaur field training facility.[11,13]

On March 23-26, 2005, a training center owned by Russia's Federal Security Service (FSB) Border Guard Directorate in Tajikistan, located in the western suburb of the Tajik capital Dushanbe, was handed over to the Committee for State Border Protection of Tajikistan. The center, established in 1930, trains border guard personnel, including service dog trainers, medical staff, snipers, and military mining specialists. Russian instructors will continue to train Tajik border guards at the center.[11,14,15,16] [*Editor's Note: On March 11, 2003, the Federal Border Guard Service of the Russian Federation was transformed into the Border Guard Service of the Russian Federation and subordinated to the FSB*.]

In April-May 2005, Russian border guards transferred 232 km of the Tajik-Afghan border guarded by the Moskovskiy border guard unit, and on June 14, 2005, the Tajik side assumed full control over the Tajik-Afghan border when the transfer of the 247-km long section of the border guarded by the Pyanj border guard unit was completed.[11]

It should be noted that the Russian border guard units on the Tajik-Afghan border were mainly staffed by Tajik nationals. Indeed, as stated by Aleksandr Kondratyev, head of the press service of the FSB Border Guard Directorate in Tajikistan, of more than 10,000 officers and soldiers that comprised the Russian border guard forces, 60 percent were Tajiks, including 99 percent of conscript soldiers and 70 percent of contract soldiers.[10] In a May 26, 2004, interview to Russian daily *Komsomolskaya pravda*, FSB first deputy director—head of the Russian Border Guard Service Vladimir Pronichev—stated that since 1992 more than 40,000 Tajik nationals had undergone military service in the Russian border guard units and that locals comprise 80 percent of the border guard personnel.[17] This means that the withdrawal mainly concerns Russian officers, while the private corps will continue to serve under the Tajik authority.

Saydamir Zukhurov, who was appointed chairman of the Committee for State Border Protection of Tajikistan on January 10, 2005, indicated that at present the Tajik border guard personnel is equal to about 15,000 officers and soldiers. According to Zukhurov, Tajikistan has hundreds of local border guard officers who were trained at Russian military institutions, and more than 200 people currently study at Russian, Ukrainian, and Kazakhstani border guard institutions. In addition, an advanced border guard school was established in Tajikistan in 1999, and more than 200 officers have graduated from this school since then.[11]

Nevertheless, NIS and international experts voice concerns over possible negative implications of Russia's withdrawal from the Tajik-Afghan border. The biggest concern is the threat of increased drug trafficking from Afghanistan and the fear that Tajik border guards will not be as effective as their Russian-led counterparts in preventing drug contraband. Experts warn that Tajik border guards will receive much lower salaries than they used to while serving under Russian authority. This could increase the possibility of border guards being bribed by drug traffickers.[3,8,10]

Russian and Tajik officials, however, appear to be optimistic in this regard. They maintain that Russia and Tajikistan will continue their cooperation in securing the Tajik-Afghan border. The second agreement signed on October 16, 2004—*Agreement between the Russian Federation and the Republic of Tajikistan on Border Issues Cooperation*—provides for the creation of the [Russian] FSB Operational Border Guard Group. The group will be tasked with rendering assistance to Tajik border guards in securing the border, including promoting the implementation of bilateral agreements on border issues, improving coordination between the border guard agencies of the two countries, maintaining interaction with non-CIS countries, exchanging information, developing suggestions on border control issues and relevant legislation, training local border guard personnel, organizing joint border operations, and assisting with logistics and maintenance of military equipment.[18] In practical terms, this means that three to five Russian border guard officers will serve as advisors in each Tajik border guard unit, while six advisors will work in the

border guard training center to instruct Tajik border guard personnel.[1,4,5,11] In addition, the former Russian 201st motorized infantry division is being transformed into the Russian Ministry of Defense 4th military base and will be stationed in Tajikistan on a permanent basis.[19] Russian officials also noted that Russia is taking measures to strengthen the Russian-Kazakhstani border and improve coordination with Kazakhstani counterparts. They indicated that part of the border guard forces withdrawn from Tajikistan will be deployed on the Russian-Kazakhstani border.[4,5,18,20]

Sources: [1] "Tadzhiksko-afganskuyu granitsu okhranyayut tadzhikskiye pogranichniki" [Tajik border guards protect the Tajik-Afghan border], RIA Novosti, June 14, 2005, <http://www.rian.ru/defense_safety/20050614/40518361.html>. [2] "Okhrana tadzhiksko-afganskoy granitsy pereshla k voyennosluzhashchim Komiteta po okhrane gosudarstvennoy granitsy Tadzhikistana" [The protection of the Tajik-Afghan border transferred to soldiers of the Committee for State Border Protection of Tajikistan], Radio Free Europe/ Radio Liberty, Russian Service, June 14, 2005, <http://www.svoboda.org/ll/polit/0605/ll.061405-7.asp>. [3] Ivan Kudryavtsev, "'Zelenyye furazhki' pomenyali grazhdanstvo" ['Green caps' changed citizenship], Vesti television channel (Russia) website, June 20, 2005, <http://www.vesti.ru/comments.html?id=35685>. [4] "Rossiya perestala okhranyat tadzhikskuyu granitsu" [Russia ceased to guard the Tajik border], BBC Russian Service, June 14, 2005, <http://news.bbc.co.uk/hi/russian/news/newsid_4091000/4091622.stm>. [5] "Rossiyskiye pogranichniki polnostyu peredali tadzhikskim kollegam kontrol nad gosudarstvennoy granitsey Tadzhikistana" [Russian border guards transferred to their Tajik counterparts full control over Tajikistan's state border], *Trud* online edition, June 14, 2006, <http://info.trud.ru/shortnews.php?id=2642>. [6] Igor Kirillov, "Boyevoy forpost Sodruzhestva" [Military outpost of the Commonwealth], *Granitsa Rossii*, October 23, 2002, pp. 8-9; in Integrum Techno, <http://www.integrum.com>. [7] Edict of the President of the Russian Federation No. 921 of August 24, 1992, "O perekhode pogranichnykh voysk, nakhodyashchikhsya na territorii Respubliki Tadzhikistan, pod yurisdiktsiyu Rossiyskoy Federatsii" [On the transfer of the border guard troops deployed on the territory of the Republic of Tajikistan under the jurisdiction of the Russian Federation], The legislation in Russia website, <http://law.optima.ru/view.html?0=31353&1=1>. [8] Iolanta Kachayeva, "Smena karaula" [Guard mount], *Trud* online edition, No. 73, April 21, 2004, <http://www.trud.ru/Arhiv/2004/04/21/200404210730203.htm>. [9] Igor Plugatarev, "Rossiyskikh pogranichnikov vydvoryayut s Pyandzha" [Russian border guards are deported from the Pyanj river], *Nezavisimoye voyennoye obozreniye* [Independent Military Review, analytical supplement to *Nezavisimaya gazeta*] online edition, No. 34 (349), September 26, 2005, <http://nvo.ng.ru/forces/2003-09-26/1_tadjikistan.html>. [10] Artem Fradchuk, "Granitsa ishchet sponsora" [The border looks for a sponsor], Central Asian online journal *Oasis*, No. 7, June 2005, <http://www.ca-oasis.info/oasis/?jrn=8&id=49>. [11] Igor Plugatarev, "Okhrana rubezha po Pyandzhu ne oslabnet" [The protection of the border on the Pyanj river will not weaken], *Nezavisimoye voyennoye obozreniye* [Independent Military Review, analytical supplement to *Nezavisimaya gazeta*] online edition, No. 20 (429), June 3, 2005, <http://nvo.ng.ru/forces/2005-06-03/1_ohrana.html>. [12] "Soglasheniye mezhdu Rossiyskoy Federatsiyey i Respublikoy Tadzhikistan o poryadke peredachi Respublike Tadzhikistan uchastka gosudarstvennoy granitsy Respubliki Tadzhikistan s Kitayskoy Narodnoy Respublikoy, okhranyayemogo Pogranichnoy sluzhboy Rossiyskoy Federatsii, i imuchshestva, ispolzuyemogo Pogranichnoy sluzhboy Rossiyskoy Federatsii" [Agreement between the Russian Federation and the Republic of Tajikistan on Procedures of Transfer to the Republic of Tajikistan of the Section of the State Border of the Republic of Tajikistan with the People's Republic of China Guarded by the Border Guard Service of the Russian Federation and the property used by the Border Guard Service of the Russian Federation], Web Portal for the Legal Support of Entrepreneurial Activities (Moscow), <http://www.businesspravo.ru/Docum/DocumShow_DocumID_92182.html>. 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[16] Galina Gridneva, Valeriy Zhukov, "Uchebnyy tsentr Pogranichnogo upravleniya FSB RF v okrestnostyakh Dushanbe pereshel pod yurisdiktsiyu Tadzhikistana" [A training center of Russia's FSB Border Guard Directorate located in the suburbs of Dushanbe was transferred under Tajikistan's jurisdiction], ITAR-TASS, March 26, 2005; in Integrum Techno, <http://www.integrum.com>. [17] Yelena Ovcharenko, "Yest takaya professiya – okhranyat granitsu Rossii!" [There is such an occupation—to guard Russia's border!], *Komsomolskaya Pravda* online edition, May 26, 2004, <http://www.kp.ru/daily/23284/29176/>. [18] "Soglasheniye mezhdu Rossiyskoy Federatsiyey i Respublikoy Tadzhikistan o sotdrudnichestve po pogranichnym voprosam (Dushanbe, 16 oktyabrya 2004 g.)" [Agreement between the Russian Federation and the Republic of Tajikistan on cooperation on border issues (Dushanbe, October 16, 2004), Government of the Russian Federation website, <http://npa-gov.garweb.ru:8080/public/default.asp?no=1056664>. [19] Natalya Serova, "Tsena tadzhikskoy druzhby" [Price of the Tajik friendship], Politkom.ru, June 4, 2004, <http://www.politcom.ru/2004/gvozd388.php>. [20] "S uchastka na pamirskom napravlenii nachnut tadzhikskiye pogranichniki nesti sluzhbu na granitse s Afganistaniom" [Tajik border guards will start their service on the border with Afghanistan from the section on the Pamir direction], RIA Novosti, October 22, 2004, <http://rian.ru/defense_safety/20041022/714081.html>.

International Export Control and WMD Security Assistance Programs

Export Control and Border Security Meeting in Vienna

By John Feeney, U.S. State Department Office of Export Control Cooperation

During June 1-2, 2005, the U.S. State Department held its second annual Export Control and Related Border Security Assistance (EXBS) program meeting in Vienna, Austria, to discuss current activities and future EXBS program plans. The meeting, chaired by the director of the Office of Export Control Cooperation in the Nonproliferation Bureau (NP/ECC) Paul van Son, brought together about 30 U.S. Government officials involved in the implementation of the State Department's EXBS program. Participants included representatives from the State Department NP/ECC, the Office of Assistance to Europe and Eurasia in the European Bureau (EUR/ACE), and other U.S. Government agencies engaged in EXBS implementation and related export control and border security programs. The latter organizations included the departments of Energy, Commerce, Defense, Homeland Security (Customs and Border Protection, Immigration and Customs Enforcement, and the U.S. Coast Guard). Also attending were EXBS program advisors stationed at more than 20 U.S. embassies where the United States has programs under way to to enhance host country export control capabilities.

The agenda reviewed the ongoing expansion of EXBS assistance activities to new countries, provided an update on the Department of Homeland Security "border protection" initiatives, and included overviews of export control activities conducted by the departments of Commerce and Energy, and the U.S. Coast Guard. Significant discussion focused on coordination with non-EXBS export control assistance programs, such as those being carried out by the Department of Defense and by multilateral organizations. In the latter connection, representatives concerned with export control and border control issues from the IAEA, the OSCE, and the Wassenaar Arrangement addressed the meeting and described their organizations' assistance and outreach activities in these areas.

Turkmen Officials Attend Training in Germany

On April 25-29, 2005, six Turkmen border guard and customs officials participated in a week-long training course at the Weil am Rhein border crossing on the German-French-Swiss border, south Germany. The training was organized by the OSCE Center in Ashgabad (Turkmenistan's capital) with the support of the Turkmen Cabinet of Ministers as well as German Ministry of Finance and Federal Customs Administration.

Turkmen officials and their German counterparts exchanged experience in border security and border management and discussed international commitments, covenants and regulations in the field. Guests from Turkmenistan also learned about the latest techniques to prevent and investigate drug trafficking and illegal cross-border money transfers. The training course included visits to a regional German-French customs center in Kell, the customs administration in Lörrach, and a customs criminal investigation office in Freiburg. Turkmen officials were familiarized with border and customs control procedures at the Weil am Rhein border crossing, which clears 3000 trucks a day on average.[1,2]

Sources: [1] "OSCE Centre organizes training for Turkmen border and customs officials," OSCE Center in Ashgabad press release, May 3, 2005, OSCE website, <http://www.osce.org/item/14098.html>. [2] CNS communication with an OSCE Center in Ashgabad official, June 28, 2005.

New Combined Customs Control and Border Checkpoint Facility Opens with U.S. EXBS Assistance in Armenia

On May 18, 2005, at the ceremony inaugurating the opening of the combined customs control office and border checkpoint at the Bagratashen border crossing on the Armenian-Georgian border, the U.S. Ambassador to Armenia, John M. Evans, officially transferred the newly built facility to his Armenian counterpart, Deputy Foreign Minister Aram Kirakossian.[1,2,3] [*Editor's Note: The Bagratashen border crossing is located 227 km north of the Armenian capital Yerevan. It is the busiest border crossing on the Armenian-Georgian border because of the existence of open-air markets on both sides of the border—on the Armenian side, in the village of Bagratashen, and on the Georgian side, in the village of Sadakhlo.*

Every day, thousands of shuttle traders converge at these outside markets to trade consumer goods. Since the early 1990s the Bagratashen and Sadakhlo markets have been playing important roles in facilitating regional trade.][2,4]

The U.S. government provided $200,000 for the construction of the Bagratashen border checkpoint and customs control office through the EXBS program.[1,2,3] The two-story building, which will house both the customs officials and border guards, is equipped with computers and modern surveillance systems to monitor the movement of goods and people across the border. In addition, the U.S. side will install radiation detection and monitoring equipment at the Bagratashen border checkpoint.[1] The Armenian officials expressed hope that the opening of the new customs control office and border checkpoint at Bagratashen, which is the main border crossing on the Armenian-Georgian border, will substantially improve the monitoring and regulation of the cross-border trade.[2] In his speech at the opening ceremony, Ambassador Evans also noted that the United States is currently assisting the Armenian government with modernizing and upgrading the Meghri border checkpoint on the Armenian-Iranian border.[2]

In a related development, on May 13, 2005, in his opening remarks at the counterterrorism seminar organized at the National Assembly of Armenia (Armenian Parliament), Ambassador Evans praised U.S.-Armenian cooperation in counterterrorism and nonproliferation of weapons of mass destruction (WMD) and noted that the United States intends to expand cooperation in the sphere of defense.[5] In this regard, Ambassador Evans noted the visit by a group of experts from the U.S. European Command [EUCOM] to assess Armenian forces, which occurred in early May 2005.[4]

Editor's Note: EUCOM is a regional combatant command of the U.S. armed forces responsible for all of Europe, most of Africa, and parts of the Middle East. For more information, see official website at <http://www.eucom.mil/english/index.asp>.

Sources: [1] "Export Control and Related Border Security," U.S. Embassy in Armenia Public Affairs Office news release, May 18, 2005, <http://www.usa.am/news/2005/may/news051805.html>. [2] Shakeh Avoyan, "U.S. funds key Armenian border checkpoint," Radio Free Europe/Radio Liberty, Armenian Service, May 18, 2005, <http://www.armenialiberty.org/armeniareport/report/en/2005/05/C0B7EA8C-D2EC-4153-8992-577046B64953.ASP>. [3] "SShA obustraivayut armyano-gruzinskuyu i armyano-iranskuyu granitsy" [The United States are strengthening the Armenian-Georgian and Armenian-Iranian borders], Regnum news agency, May 18, 2005, <http://www.regnum.ru/news/456134.html>. [4] Armine Avetyan, "Bagratashen-Sadakhlo. If They Don't Interfere We'll Live More Peacefully," Hetq Online [an on-line magazine of the Armenian NGO – the Association of Investigative Journalists], February 9, 2005, <http://www.hetq.am/eng/society/0502-sadakhlo.html>. [5] Mediamax news agency (Yerevan, Armenia), May 13, 2005; in "Envoy Says US to Expand Military Cooperation With Armenia," FBIS Document CEP20050513013017.

Germany Donates Equipment to Tajik Border Guards

According to a press release issued on May 19, 2005 by the press center of the Committee for State Border Protection of Tajikistan, the German government donated $55,000 worth of equipment to the Tajik border guards to strengthen the border with Afghanistan. Deputy head of the Tajik Committee for State Border Protection Sabzy Sarkorov indicated that the equipment will be deployed at Tajik border guard outposts located along the sections of the Tajik-Afghan border, which, until June 2005, were protected by the Russian "Ishkashim," "Khorog," "Kalai Khumb," "Moskovskiy," and "Pyanj" border guard units. The Russian border troops transferred their responsibilities for this 1,344-km stretch of the Tajik-Afghan border in late 2004 and spring-summer of 2005.

Editor's Note: For more information on the withdrawal of Russian border units from the Tajik-Afghan border see article "Russian Border Guards Withdraw from Tajik-Afghan Border" in this issue of the NIS Export Control Observer.

Source: Galina Gridneva and Valeriy Zhukov, "Pravitelstvo Germanii predostavilo Tadzhikistanu pomoshch v ukreplenii granitsy s Afganistanom na summu 55 tysyach dollarov" [German government provided Tajikistan with $55,000 worth of assistance for strengthening the border with Afghanistan], ITAR-TASS, May 19, 2005; in Integrum Techno, <http://www.integrum.com>.

United States to Improve Security of High-Risk Radioactive Sources in Ukraine

On May 26, 2005, U.S. Secretary of Energy Samuel Bodman and Ukrainian Minister for Emergencies David Zhvaniya signed an Implementing Arrangement to improve the security of high-risk radioactive materials in Ukraine. Under the arrangement, the Office of Global Radiological Threat Reduction (in the

U.S. DOE's NNSA) will assist Ukraine's Ministry of Emergencies in upgrading security at six facilities that store radioactive waste, namely the Radon Special Combines at Kiev, Lviv, Odessa, Donetsk, Dnipropetrovsk, and Kharkiv.[1,2] The radioactive materials they store "are no longer considered useful for production, but could be used in building a radiological dispersal device such as a 'dirty bomb.'"[3] The installation of physical security upgrades is likely to take three to five years; concrete projects are currently under development.[2]

Editor's Note: The Radon facilities specialize in the disposal of radioactive waste from medical, scientific, and technical facilities, but they do not handle nuclear power plant waste.[4]

Sources: [1] "U.S., Ukraine Agree on Working to Improve Nuclear Security," U.S. Department of State's Bureau of International Information Programs website, May 27, 2005, <http://usinfo.state.gov/is/Archive/2005/May/31-683642.html >. [2] E-mail correspondence with U.S. Department of Energy's National Nuclear Security Administration official, June 23, 2005. [3] "United States and Ukraine Sign Agreement to Improve Security of Ukraine's Radioactive Materials", U.S. Department of Energy press release, May 26, 2005, <http://www.doe.gov/engine/content.do?PUBLIC_ID=17975&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE>. [4] Lyudmila Kalugina, "Radon. Kak on yest," *Delovoy Ural*, November 20, 1998, pp. 1-2; in Yadernyye Materialy, No. 38, December 14, 1998.

Embargoes and Sanctions Regimes

U.S. Department of Commerce Releases Major Cases List

On May 6, 2005, the Office of Export Enforcement (OEE) at the U.S. Department of Commerce Bureau of Industry and Security (BIS) released the Major Cases List, which is composed of summaries of significant trafficking cases. Thematically divided into three categories—WMD and Missile Proliferation, Terrorism/State Sponsors of Terrorism, and Unauthorized Military/Other Dual-Use—the list includes events as of May 2005.[1] This is the first attempt by BIS to consolidate various reports on export enforcement investigations into one document available to the public. Depending on the progress in ongoing investigations, frequency and gravity of export control violations, and other pertinent developments, BIS intends to update the list as necessary.

The table below represents an abridged and rearranged version of the list, available in its entirety on the BIS website at <http://www.bxa.doc.gov/ComplianceAndEnforcement/MajorCases050505.pdf>.

Readers will notice that some of the cases described below were analyzed at length in past issues of the *NIS Export Control Observer*. For the most recent example, see: Stephanie Lieggi, "The Case of Asher Karni and Humayun Khan" in the special report: "The Globalization of Nuclear Smuggling: Methods Used by Two Pakistan-Based Networks," *NIS Export Control Observer*, No. 27, May 2005, pp. 19-24, <http://cns.miis.edu/nis-excon>.

Source: [1] CNS phone conversation with the BIS official, June 1, 2005.

Major Cases List

Date	Violator	Type of controlled equipment or technology	Recipient	Type of violations and punitive action
WMD AND MISSILE PROLIFERATION				
04.08.05	Humayun Khan (Pakistan) and Asher Karni (South Africa)	Triggered spark gaps [could be used as nuclear detonators]	Pakistan and India	Karni is awaiting sentencing; Khan is indicted for conspiring to violate and for violating U.S. export restrictions.

September 2003	Omega Engineering (Stamford, Connecticut) and CFO Ralph Michel	Unspecified laboratory equipment	Pakistan	Omega Engineering was sentenced to pay a $313,000 criminal fine, while Michel was sentenced to five months' imprisonment and five months' home confinement. In addition, Omega had to pay a $187,000 administrative penalty. Both Omega and Michel are denied export privileges for five years.
06.06.04	BNC Corp. (San Rafael, California)	Pulse generators	India	BNC is sentenced to five years probation and a $300,000 criminal fine. Two former BNC employees—Richard Hamilton and Vincent Delfino—were convicted in December 2003 and each was sentenced to two years probation, a $1,000 fine, and 100 hours of community service. Both Hamilton and Delfino are prohibited from engaging in export transactions. In addition, BNC had to pay a $55,000 administrative penalty and its export privileges are suspended for five years.
03.21.05	Metric Equipment Sales	Digital oscilloscopes	Israel	Metric was sentenced to pay a $50,000 criminal fine and a $150,000 administrative penalty. Its export privileges are suspended for five years.
02.02.05	Muhammad Farajbakhsh, Hamid Fatholoomy and their companies Diamond Technology and Akeed Trading, respectively (both based in United Arab Emirates)	Computer goods, satellite communi-cations equipment and other goods	Iran	Farajbakhsh, Fatholoomy, Diamond Technology, and Akeed Trading are indicted on charges of illegal exports of controlled goods to Iran via the United Arab Emirates (UAE).
10.06.04	Ting-Ih Hsu (naturalized U.S. citizen), president of Azure Systems Inc., and Hai Lin Nee (PRC) an Azure Systems employee	Low-noise amplifier chips	China	Hsu and Nee were sentenced to three years' probation for making false statements in connection with illegal export of controlled goods.

11.13.03	Elatec Technology Corporation, its president, William Kovacs and his associate, Stephen Midgley	Industrial furnace	China	Elatec and Kovacs were indicted on charges of conspiracy, aiding and abetting, and illegal exports. Elatec filed an export license application for this transaction before, and it was denied by the BIS. Prosecution of this case is pending. Midgley pled guilty on 01.10.05 to lying in export documents and was sentenced to one year probation and 120 hours of community service and given a $1,500 fine. Kovacs had to pay a $5,000 administrative penalty, of which $4,000 were suspended.
February 2005	Vladimir Alexanyan and Valtex International Corporation	Satellite/ missile insulation blankets	China	Alexanyan pled guilty on behalf of himself and Valtex for violating U.S. export control regulations. Criminal sentencing in this case is pending. Valtex filed an export license application for this transaction before, and it was denied by the BIS. The goods were seized before their shipment abroad. Alexanyan and Valtex paid $88,000 and $77,000 in administrative penalties, respectively. Both Valtex and Alexanyan lost export privileges to China for five years.
03.10.04	Thomas Campbell Butler, MD, professor at Texas Tech University	30 vials of bubonic plague	Tanzania	Butler was sentenced to two years of imprisonment and three years of supervised release and given fines and restitution totaling $300,000 for export violations, false statements, theft, embezzlement, fraud, and mail and wire fraud. Butler falsely reported to the FBI in January 2004 that the vials of plague were missing, while in reality he had sent them to Tanzania in September 2003 without the required licenses.
November 2003-November 2004	Seven current and former officials of Maine Biological Laboratories	Unspecified number of virus toxins	Syria	Seven officials pled guilty for various charges, including conspiracy, illegal exports, smuggling, false statements, and aiding and abetting unlicensed exports of controlled articles. Two officials were sentenced to probation, while remaining defendants await sentencing.
December 2003	Reliance Steel and Aluminum Company	Aluminum alloy rods	China, Taiwan, Malaysia, Singapore	Reliance paid a $95,850 penalty.

November 2003	Future Metals Inc. (Tamarac, Florida)	Aluminum bars and stainless steel sheets and tubes	India	Future Metals paid a $180,000 administrative penalty.
June 2004	Kennametal, Inc.	Nickel powder	India, Israel, and other destinations	Kennametal paid a $262,500 administrative penalty.
November 2002	Sigma Aldrich Business Holdings, Inc. and affiliated entities	Biological toxins	Unspecified various destinations	Sigma Aldrich and affiliated entities paid a $1.7 million administrative penalty.
February 2004	Morton International, Inc. and affiliates Morton International S.A.S. and Rohm and Haas (Japan)	Thiodiglycol and organo-inorganic compounds	Mexico, Singapore, Taiwan, Israel, Poland, Tunisia, India	Morton International and its affiliates paid a $647,500 administrative penalty. Morton International is charged with exporting and attempting to export thiodiglycol to Mexico between 1999 and 2001 without the required export license, and for exporting organo-inorganic compounds to Singapore and Taiwan. Morton affiliates, Morton International S.A.S., and Rohm and Haas re-exported organo-inorganic compounds to Israel, Poland, Tunisia, Taiwan, and India between 1997 and 2000.
April 2004	Molecular Probes, Inc.	Conotoxin and tetrodotoxin	Unspecified various destinations	Molecular Probes paid a $266,750 administrative penalty.
June 2004	Saint Gobain Performance Plastics Corporation	Teflon-coated pumps and valves	Israel and Taiwan	Saint Gobain paid a $697,000 administrative penalty.
TERRORISM/STATE SPONSORS OF TERRORISM				
May 2004	Naji Abi Khalil and his associate Tomer Grinberg	Night vision equipment	Foreign terrorist organization Hezbollah (Beirut, Lebanon)	Khalil was attempting to ship night vision units to Hezbollah via Greece. Khalil was indicted for allegedly providing material support to a foreign terrorist organization. Khalil has been in federal custody since his arrest. Grinberg, an employee of Tober Group Inc., a Brooklyn, New York, freight forwarder, was indicted for conspiring to export controlled items. Grinberg is free on bond. Prosecution of both defendants is ongoing.

04.13.05	Infocom Corporation and its principals, Bayan, Ghassan, Basman, Hazim and Ihasan Elashi	Computers and computer equipment	Libya, Syria and a Specially Designated Terrorist (high-ranking Hamas member)	The Elashi brothers and Infocom were convicted for dealing with funds of a Specially Designated Terrorist. Sentencing in the current cases is pending. In the previous trial, in July 2004, the Elashis and Infocom were convicted for conspiring to export controlled goods to Syria and Libya. In 2002, one of the Infocom principals was convicted for violating BIS Temporary Denial Order (TDO) and was sentenced to 48 months' imprisonment.
03.01.05	Juan Sevilla, sales director of United Calibration Corporation (Huntington Beach, California)	Machinery and related software for measuring the tensile strength of steel	Iran	Sevilla was indicted in Chicago for attempting to illegally export controlled equipment to Iran in violation of U.S. trade embargo. His prosecution is pending.
02.17.05	Ali Ashgar Manzarpour (Brighton, United Kingdom)	An experimental, single-engine aircraft and electrical components	Iran	Manzarpour was arrested in Warsaw by Polish law enforcement authorities at the request of the United States. A federal indictment unsealed on 02.25.05 charged Manzarpour with attempted export of controlled equipment and goods to Iran in violation of a U.S. trade embargo. Prosecution is pending. Manzarpour was previously convicted and imprisoned in the U.K. for attempting to export U.S.-origin maraging steel to Iran.
02.07.05	Erik Kyriacou (Long Island, New York)	Night vision lenses	Iran	Kyriacou pled guilty to a four-count indictment charging him with attempting to export controlled items to Iran illegally. Kyriacou stole lenses from NBC News in New York and proceeded to sell them on the Internet to undercover agents posing as international arms brokers. Kyriacou agreed to sell the lenses to impostors knowing that they would be shipped to Iran in violation of the U.S. trade embargo. Sentencing in this case is pending.

12.07.04	Ebara International Corporation (Sparks, Nevada) and Everett Hylton (Ebara's founder and former CFO)	Cryogenic submersible pumps	Iran	Ebara agreed to pay a $6.3 million criminal fine and serve three years' corporate probation. In addition, Ebara paid a $121,000 administrative penalty and the BIS imposed on it a three-year suspended denial of export privileges. Hylton agreed to a $10,000 criminal fine and three years of probation. In addition, Hylton agreed to a $99,000 civil penalty and a three-year suspended denial of export privileges.
01.20.05	Nozzle Manufacturing Company (Swedesboro, New Jersey)	Oil burning nozzles	Iran	Nozzle Manufacturing was sentenced to pay a $10,000 criminal fine and $400 to the court. In addition, Nozzle Manufacturing had to pay $20,000 in administrative penalties. The company was dissolved after sentencing.
08.11.04	Khalid Mahmood, doing business as Sharp Line Trading (registered in Dubai, UAE) and Mohammad Ali Sherbaf, principal officer of Sepahan Lifter Company (Iran)	Forklift radiators	Iran	Mahmood and Sherbaf were indicted for alleged export violations. Sherbaf, on behalf of Sepahan, attempted to purchase controlled items from a U.S. supplier through Mahmood and Sharp Line Trading in violation of a U.S. embargo. Mahmood attempted to conceal the final destination of controlled goods. Prosecution in this case is pending.
12.03.04	Tesmec S.P.A. (Italy)	Trencher	Libya	Tesmec pled guilty for attempted export of a controlled item and was ordered to pay a criminal fine of $85,000.
December 2003	Mahmood Haghsheno Kashani	Replacement parts for a multiple gas analyzer	Iran	Kashani attempted to export controlled goods from the U.S. to Iran via Germany without the required license. Kashani misrepresented to a U.S. supplier that the controlled items were destined for Saudi Arabia instead of Iran. Denial of export privileges for five years was imposed on Kashani.
UNAUTHORIZED MILITARY/OTHER DUAL-USE ITEMS				
09.30.04	Ning Wen, Hailin Lin, Jian Guo Qu, and Ruo Ling Wang	$500,000 worth of controlled electronic components	China	The four individuals were arrested for conspiring to export controlled items to China illegally. Prosecution is pending. TDOs were issued against Ning Wen, Hailin Lin, Wen Enterprises, and Beijing Rich Linscience Electronics.

07.29.04	Seven unidentified individuals and their companies—Universal Technologies, Inc. and Manten Electronics, Inc.	Unspecified sensitive national-security-controlled items	China	Seven individuals were indicted for illegally exporting millions of dollars worth of controlled items to state-sponsored institutes in China. The controlled items can be potentially used in a variety of defense weapons systems, including radar, electronic warfare, and communications systems. Prosecution is pending.
06.03.04	Philip Cheng, Martin Shih, and Night Vision Technology (San Jose, California)	Military and commercial-grade night vision technology	China	Cheng, Shih, and Night Vision were indicted for illegally brokering the sale of controlled technology to China. The defendants entered into contract with the Chinese military to produce night vision equipment in China.
05.18.04	John Chu (Pasadena, California) and Zhu Zhaoxin (Shenzhen, China)	Satellite and radar technology, traveling wave tubes with satellite and radar applications	China	Chu and Zhaoxin were indicted for allegedly conspiring to purchase controlled equipment for illegal export to China. The defendants allegedly negotiated with undercover federal agents to purchase a variety of sensitive goods for export to China. Prosecution is pending.
04.26.04	Suntek Microwave, Inc. (Newark, California) and its former president Charlie Kuan	Detector log video amplifiers (DLVA)	China	Suntek and Kuan pled guilty for failing to obtain export licenses required for shipping controlled items to Chengdu Jeway Microwave Telecommunications, a state-controlled company in China. Suntek was also charged with failing to obtain export licenses required under the "deemed export" provisions for Chinese nationals employed at Suntek and trained in DLVA manufacturing technology controlled by U.S. export control regulations. Suntek agreed to pay a $339,000 criminal fine. Kuan pled guilty and is awaiting sentencing. In addition, Suntek and Kuan agreed to pay $275,000 and $187,000 in administrative penalties, which were suspended. BIS issued orders suspending export privileges of Kuan and Suntek for 20 years.

February 2005	Stoelting Company (Wood Dale, Illinois) and its president LaVern Miller	Polygraph machines	China	Stoelting Company and Miller were sentenced for illegal export of items controlled for human rights reasons. Stoelting Company received two and one-half years' corporate probation and agreed to pay a $20,000 criminal fine. Miller was sentenced to two and one-half years' probation, including six months of electronically monitored home confinement and 500 hours of community service and given a criminal fine of $18,000. In June 2004, Stoelting Company and Miller each agreed to pay $44,000 in administrative penalties. In addition, a five-year suspended denial of export privileges was imposed on Stoelting Company.
01.29.04	Yaudat Mustafa Talyi, president of International Business Services, Ltd.	Oil field equipment and unspecified industrial goods	Libya	Talyi pled guilty to two counts of violating TDO placed against him and his company by the BIS for past involvement in a conspiracy to transship aforementioned articles to Libya through the Netherlands and with the assistance of a UAE-based firm. This time around, Talyi violated TDO by attempting to smuggle oil field spare parts to the UAE in a shipment of a relative's personal effects and by eliciting help from a U.S.-based business acquaintance, who filled out and attempted to export an oil field products order to the UAE on Talyi's behalf. Both shipments were seized, while on 04.28.04, Talyi was sentenced to five months' imprisonment, five months' home confinement, and 12 months' supervised release and given a $25,000 criminal fine. On 12.20.04, BIS imposed a 20-year denial of export privileges on Talyi and ordered him to pay an additional $121,000 administrative fine.
December 2004	Spector International, doing business as Norsal Export	Microwave amplifiers with potential radar applications	China	Spector International pled guilty for providing false information on Shipper's Export Declarations regarding unlicensed exports of controlled items to China. In February 2005, Norsal was sentenced to pay a $57,000 criminal fine.

January 2004	Emcore Corporation	Metal Organic Vapor Disposition (MOCVD) tools	China, Taiwan	Emcore was ordered to pay a $400,000 administrative penalty for unlicensed exports of controlled items to China in 2000-2003 and to Taiwan in 1998-2003. In addition, BIS alleges that Emcore illegally serviced the exported tools abroad, failed to file the Shipper's Export Declarations, and failed to retain certain export control documents.
April 2004	New Focus, Inc.	Deemed exports: technology transfers to foreign nationals; shipments of amplifiers	China, Chile, Czech Republic, Iran, Singapore	New Focus paid a $200,000 administrative penalty for failing to obtain export licenses required for transferring technology to two Iranian nationals and one Chinese national, who were exposed to controlled manufacturing technology. New Focus also failed to obtain export licenses for shipping controlled items to the Czech Republic, Chile, and Singapore.
November 2004	Fujitsu Network Communications, Inc.	Deemed exports: transfers of commercial digital fiber-optic transmission and broadband switching technology to foreign nationals	China, Ukraine	Fujitsu paid a $125,000 administrative penalty for failing to obtain export licenses required for transferring controlled technology and know-how to Chinese and Ukrainian nationals.
September, 2004	Lattice Semiconductor Corporation	Extended-range programmable logic devices and technical data; deemed export of controlled technology	China	Lattice paid a $560,000 administrative penalty for unlicensed exports of controlled equipment and technical data. In addition, Lattice failed to obtain the export license required for transferring controlled technology to a Chinese national.
April 2004	Roper Scientific, Inc.	Night vision cameras	Various destinations —including South Korea, Japan, and Italy	Roper paid a $422,000 administrative penalty for unlicensed exports of controlled articles. Roper also made false statements on a Shipper's Export Declaration and failed to retain certain export control documents.
December 2003	Sun Microsystems, Inc.	High performance computers	China, Egypt	Sun paid a $269,000 administrative penalty for unlicensed exports of controlled items to foreign military end users.
February 2005	Bass Pro., Inc.	Gun sights	Various unspecified destinations	Bass Pro., Inc., was ordered to pay a $510,000 penalty for unlicensed exports of items controlled for human rights and anti-terrorism reasons.

Illicit Trafficking in the NIS

Incidents with Radioactive Sources in Russia

In late April 2005, the Yamalo-Nenets Autonomous Okrug Environmental Prosecutor's Office opened a criminal case against the Nadymstroygaz joint stock company located in Nadym, the Yamalo-Nenets Autonomous Okrug, in accordance with Article 220 of the Russian Criminal Code, "Illegal Handling of Nuclear Materials or Radioactive Substances," following the discovery of 10 radiation sources at the facility's premises.

The discovery was the result of a survey of the district industrial facilities for their environmental safety conducted at the behest of Russia's General Prosecutor's Office in the Ural Federal District.[1,2,3] Ten containers reportedly filled with unspecified types of radium, cesium, and plutonium, which belong to Yamal GIS joint stock company based in Salekhard, were discovered in an open area in violation of the safe storage requirements, which requires their storage in a secure facility. The Environmental Prosecutor's Office and Nadym civil defense and emergency service took measures to transfer the radioactive sources to a properly secured storage facility.[1,2,3]

In a related development, in mid-May 2005, a 46-year-old resident of Tver Oblast (Russia) attempted to sell a radioactive metal item for 500 rubles ($17 as of May 2005) to a scrap metal collection point in Zelenograd, located 40 km northwest of Moscow. Radiation at 10 centimeters (cm) from the 35-kilogram cylinder-shaped container, 20 cm in diameter and 20 cm in height, was 810 microroentgens per hour (microR/hr). [*Editor's Note: A reading of 810 microR/hr is significantly greater than a typical background level, which is about 50 microR/hr.*] The local police, FSB, and the prosecutor's office were called to the site. During the interrogation, the suspect claimed that he had found the item in the vicinity of the Mendeleyevo settlement. Specialists from the Moscow branch of Radon, a Russian state enterprise responsible for the disposal of radioactive waste, seized the item for disposal.[4,5,6]

Sources: [1] "Prirodookhrannaya prokuratura Yamala proverila obyekty okruga na ekologicheskuyu bezopasnost" [Yamal's environmental prosecutor's office checked the status of environmental safety at the Okrug facilities], Yamalo-Nenets Autonomous Okrug on-line newspaper Yamal-Inform, May 14, 2005, <http://www.yanao.ru/4/2005/05/14/4986/>. [2] "Vozbuzhdeno ugolovnoye delo po faktu obnaruzheniya radioactivnykh veshchestv na territorii bazy Nadymstroygaz" [A criminal case has been opened following the discovery of radioactive substances at the site of Nadymstroygaz], Interfax-Ural, May 13, 2005, <http://www.interfax.ru/r/B/ural/160.html?menu=33&id_issue=11283659>. [3] Aleksandr Perestoronin, "Na Yamale obnaruzheny 10 radioaktivnykh konteynerov" [10 radioactive containers found in Yamal], RIA Novosti, May 18, 2005, <http://www.rian.ru/incidents/20050518/40374258.html>. [4] "V Zelenorgade obnaruzhen istochnik ioniziruyushchego izlucheniya," [An ionizing radiation source found in Zelenograd], Interfax, May 19, 2005; in Gazeta.ru, <http://www.gazeta.ru/lenta/2005/05/19/news_288050.shtml>. [5] "Zhitel Zelenograda sdal v punkt priyema metallov radioaktivnyy predmet" [A resident of Zelenograd brought a radioactive item to a scrap metal collection point], RIA Novosti, May 19, 2005, <http://www.rian.ru/defense_safety/investigations/20050519/40380143.html>. [6] "Radioaktivnyye metally valyayutsya na obochinakh" [Radioactive metals lie around roadsides], *Moskovskiy komsomolets* online edition, May 20, 2005, <http://www.mk.ru/numbers/1640/article54143.htm>.

"Dirty Bomb" Rockets Again Reported for Sale in Transnistria

On May 8, 2005, the London *Times* reported that an arms dealer in Bender, Transnistria, had offered to sell three Alazan rockets equipped with radioactive warheads to a *Times* reporter posing as a representative of an Algerian militant group.[1] [*Editor's Note: The Alazan was originally designed by Soviet scientists as a weather control rocket to prevent hail. After the weather control experiment failed, the rocket was used for military purposes. It has a maximum length of 1.4 meters and range of 10 km.*][2,3]

Transnistria, also known as Dniester or Transdniester, declared its independence from Moldova in 1991, but it has not been recognized as an independent country by its neighbors. [*Editor's Note: For an overview of the origins of the Transnistrian conflict, see the 1994 OSCE background paper available at <http://www.state.gov/documents/organization/13611.pdf>.*] Lacking an established border, the region does not have effective border controls and has been a haven for smuggling and illegal arms sales. The largest source of revenue for Transnistria elites (based in the region's principal city, Tiraspol) is reportedly the production of armaments and illegal weapons trafficking.[4] Some studies recount that criminal organizations and even secret services from various countries are involved in the arms traffic in

Transnistria. These armaments include not just pistols and guns but also automatic rifles, plastic explosive, and Stinger missiles.[5]

The possibility that Alazan rockets may have been modified to carry radioactive materials was first suggested in 2001, when the Institute for Policy Studies in Chisinau, Moldova, obtained documents allegedly written by Colonel V. Kireyev, a civil defense commander in Transnistria, indicating his concern about radiation given off by weapons in storage in Transnistria. The *Washington Post*, which was given access to the Kireyev documents in 2003, cited them as describing 38 "isotopic radioactive warheads of missiles of the Alazan type," including 24 warheads that were attached to rockets.[6] Conventional Alazan rockets have been used in conflict zones in the former Soviet Union for years, from Nagorno-Karabakh to Chechnya. However, the Institute for Policy Studies' documents appear to be the only documents suggesting that Alazan warheads have been converted to disperse radiological materials.

In a May 2005 interview, however, William Hill, the head of the Moldovan mission of the OSCE, questioned the London *Times* report, noting that earlier probes by the OSCE and various countries into similar reports had not resulted in the confirmation or denial of the existence of such rockets.[7]

In the most recent incident involving the London *Times* reporter, the would-be arms smuggler offered to allow an individual with a Geiger counter to check the weapon to verify that it contained radioactive material (which the smuggler identified as strontium-90 and cesium-137). However, the *Times* withdrew from the deal rather than make a substantial payment to the smuggler.[1] On June 12, the Moldovan general prosecutor opened a criminal case to investigate the allegations made in the *Times* article. However, according to Russian military forces in Transnistria (who have remained in the region as peacekeepers and to guard a former Soviet arms depot), there are no Alazan rockets remaining in Russian depots in the territory. Transnistria's deputy minister of security, Major General Oleg Gudymo, said that the *Times* article was a "canard, designed to blacken the name of Transnistria and the peaceful role of Russia and Ukraine."[8] Nevertheless, officials in Transnistria installed new radiation detection equipment on the region's borders, reportedly in order to help clear the region of the "unfounded accusations on the part of Chisinau."[9] [*Editor's Note: Given the small size and presumably rapid deployability of the Alazan, its range of 10 km is more than enough to attack large urban targets from close in, without the prospect of detection. However, assuming that the rockets contain or had contained radioactive material, effectively dispersing such material could be very technically challenging.*]

In a related development, just two weeks before the *Times* article, the Russian journal *Politicheskiy zhurnal* published an interview with Mikhail Bergman, former commandant of Russian military forces in Tiraspol, who said that in the mid-1990s, the Russian 14th Army discovered that two tactical weapons with "nuclear explosion imitators" as well as "nuclear suitcase" weapons had disappeared from storage areas in the region. According to Bergman, the nuclear explosion imitators create powerful explosions and a mushroom cloud, but no radiation is released.[10] The Moldovan Foreign Ministry, in response, requested that the Russian Foreign Ministry investigate Bergman's claims.[11]

Editor's Note: Recently, Moldova and Ukraine have jointly requested that the European Union (EU) create a monitoring system on Ukraine's border with Transnistria, including a computer network, surveillance video cameras, and night vision equipment. An EU delegation is expected to go to Ukraine in late June 2005 to begin work on a framework for such a program.[12] At the same time, Ukraine has initiated a new process to settle the status of Transnistria. Under the Ukrainian plan, Transnistria would eventually be granted a special status within Moldova, Russian peacekeepers would be replaced by an OSCE-led force, and military factories in Transnistria would be placed under international monitoring.[13] On May 16-17, 2005, officials from Transnistria, Moldova, Ukraine, Russia, and the OSCE met in Vinnytsya, Ukraine, to discuss the Ukrainian initiative. In a sign of progress, Tiraspol's representatives agreed to Moldovan requests that future settlement talks include officials from the EU and the United States.[14]

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Summaries from the NIS Press

Missing Russian Nuclear Scientist Returns Home

In late May 2005, Russian media reported that a Russian nuclear physicist, who mysteriously disappeared more than a year and a half ago, came back to his hometown of Zheleznogorsk, Krasnoyarsk Oblast, on May 21, 2005. On October 17, 2003, then-44-year-old Sergey Podoynitsyn, deputy head of the central laboratory at the Zheleznogorsk Mining and Chemical Combine (GKhK), reportedly went by taxi to Krasnoyarsk to buy a car, carrying $9,000 in cash, and went missing. According to press reports, Podoynitsyn had been working at the combine for about 20 years and had first-degree access to top secret documents. He was engaged in the work related to the production of artificial emeralds and super pure aluminum and, more importantly, to spent fuel and weapons-grade plutonium.[1,2,34,5,6]

Following Podoynitsyn's disappearance, the Zheleznogorsk prosecutor's office opened a criminal case in accordance with Article 105, Part 1, of the Russian Criminal Code—"Murder"—suggesting he was robbed and murdered. The case caused considerable speculation. The most popular allegations were that Podoynitsyn had been kidnapped by U.S. intelligence agents seeking to obtain Russian nuclear secrets or that he had fled to the United States. However, the town and combine officials called such speculation "nonsense," stating that the combine was of little interest to U.S. intelligence since it was often visited by U.S. expert teams and that Podoynitsyn had frequent contacts with U.S. specialists and was going to attend a scientific conference in Philadelphia in early November, 2003.[1,2,3,6]

The circumstances of Podoynitsyn's reappearance are still unclear. Krasnoyarsk Oblast prosecutors declined to give any details, citing the continuing investigation of the incident. *Kommersant*, quoting the scientist's relatives, reported that on the day of his return, May 21, 2005, he had first called his wife and the Federal Security Service to tell them he was alive.[1] However, it is unknown how Podoynitsyn managed to enter the city through the Zheleznogorsk checkpoint without his passport and special pass. Some reports suggest he was driven home by one of his friends, while others claim that he was taken in by FSB operatives.[1,2,3,6] According to *Moskovskiy komsomolets*, Podoynitsyn called his friend from the checkpoint, who alerted the GKhK management. Upon arrival at the checkpoint, they identified the man as Podoynitsyn and took him home.[7] Podoynitsyn himself claims to remember little about where he was, and shows signs of partial amnesia and nervous breakdown. He is also believed to have been sick with tick-borne encephalitis.[1,2,4,6,7,8] He told his family that he had worked for a while at construction sites in Irkutsk, Kemerovo, and Novosibirsk but could not recall how he ended up there.[5] Some press reports indicate that Podoynitsyn returned to Zheleznogorsk after a fellow worker saw his picture on a "wanted" police poster.[6,8] According to GKhK spokeswoman Yelena Golovinkina, Podoynitsyn requires serious medical treatment, and there is a possibility that the scientist will return to work at the combine afterwards.

A new investigation had been opened in accordance with Article 126 of the Russian Criminal Code—"Kidnapping."[6,7]

A somewhat similar case occurred in Krasnoyarsk Oblast in 2002, when on August 18, 2002, scientist Sergey Bakhvalov went missing. In this case, however, the scientist's body, reportedly defaced and dismembered, was found dead 10 days later. His murderers have not been found.[4,7,9]

Editor's Note: The town of Zheleznogorsk (formerly Krasnoyarsk-26), located about 70 km northeast of Krasnoyarsk, was established in 1950 to produce plutonium for nuclear weapons. The town's population is approximately 100,000. About 8,000 people continue to work at the GKhK. Of those, approximately 4,000 work on weapons programs. In 1998, Zheleznogorsk was chosen as one of 10 Russian nuclear cities to take part in the U.S. Department of Energy's Nuclear Cities Initiative program. Three graphite-moderated underground reactors were used during the Soviet era to produce plutonium at the GKhK. Two were shut down, one in June 1992 and the second in September of that year. The last remaining reactor is mainly used as a source of heat and electricity for the town, but also continues to produce weapons plutonium. A U.S. sponsored program is under way to shut the reactor and build fossil fuel plants in the area to provide an alternative source of energy.[10]

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Workshops and Conferences

Export Control Seminars Held in Kazakhstan

On May 18-19, 2005, the U.S. DOE and the U.S. Pacific Northwest National Laboratory (PNNL) in cooperation with KAEC and the Nuclear Technology Safety Center (NTSC) organized a seminar entitled "Industry Outreach and Export Control of Nuclear Transfers in Kazakhstan," at the Stepnogorsk Mining and Chemical Combine in Stepnogorsk, northern Kazakhstan. Thirty-eight participants representing Kazakhstan (KAEC, NTSC, Stepnogorsk Combine, Ministry of Industry and Trade, Customs Control Committee, Kazatomprom national atomic company, Ulba Metallurgical Plant, Vostok-Isotop [Ust-Kamenogorsk, East Kazakhstan-based company responsible for the disposal of radioactive waste], Institute of Atomic Energy, and Institute of Industrial Biotechnologies), Russia (Obninsk-based Institute of Physics and Power Engineering, IPPE), and the United States (DOE, PNNL) attended the seminar, which aimed to explain the importance of internal compliance programs to representatives of industrial enterprises working in uranium production. Specifically, the seminar was intended to help the Stepnogorsk Mining and Chemical Combine, which is now increasing its uranium output for export but lacks trained export control personnel, to develop its own internal compliance program.[1]

On May 23-27, 2005, a Nuclear and Dual-Use Commodity Identification Instructor Training seminar was held in Almaty. The seminar was jointly organized by the DOE, PNNL, Los Alamos National Laboratory, KAEC, NTSC, and the U.S. Embassy in Kazakhstan. The Kazakhstani attendees included officials from the Customs Control Committee, Border Guard Service, Kazatomprom, and the National Nuclear Center and

its Institute of Atomic Energy. Representatives from Uzbekistan's Institute of Nuclear Physics and Atomic Inspection also took part in the seminar. The seminar, aimed at preparing the specialists who will participate in developing and teaching commodity identification training modules to export control enforcement officials, included practical exercises on detection and identification of dual-use commodities and improving presentation skills while delivering relevant technical content to enforcement audiences.[2,3]

Editor's Note: The construction of the Stepnogorsk Mining and Chemical Combine, previously the Tselinnyy Mining and Chemical Combine, known as "Mailbox 5175," started in May 1956 following the discovery of large uranium, uranium-molybdenum, and uranium phosphate ore deposits in northern Kazakhstan. In 1960, authorities chose the present-day site of Stepnogorsk as the combine's headquarters. Small towns, such as Zavodskoy, Zhangiztobe, Zaozernyy, and Krasnogorsk were founded near Stepnogorsk to house the combine's Hydro-Metallurgical Plant, Repair Plant, Mining Equipment Plant, and other necessary components. During the Soviet era, the Tselinnyy Mining and Chemical Combine, along with the Navoi Mining and Metallurgy Combine in Uzbekistan and the Prikaspiyskiy Mining and Metallurgical Combine, was at the core of the USSR's uranium production industry. Following Kazakhstani independence, the government of Kazakhstan continued to operate the Tselinnyy Combine, selling uranium oxide ("yellowcake" or U3O8) to Energy Resources of Australia (ERA), Cameco, and Uranerz Exploration & Mining (UEM). Output from the combine gradually declined during the 1990s for three reasons: low-grade ore from the combine's underground mines, the cost of transporting ore from other sources to the combine, and the lack of reinvestment. In 1996, the Kazakhstani government contracted World Wide Minerals Ltd. of Canada to manage the facility. By spring 1997, World Wide Minerals ceased production at the facility because the Kazakhstani government would not issue export licenses for the uranium. The Kazakhstani State Property Committee cancelled the contract with World Wide Minerals and transferred the Tselinnyy Combine to state-owned Kazatomprom on August 1, 1997. In 1999, the government of Kazakhstan put the then-bankrupt combine up for sale. On April 16, 1999, Sabton Limited, a Cyprus-registered subsidiary of the Israeli-owned Africa Israel Investment Ltd., bought the combine for 36 million tenge ($317,000 as of April 16, 1999) and renamed it to KazSabton. However, the new owner failed to implement its long-term investment plan and pay back wages and debts. In September 2004, Sabton Limited transferred the combine to Kazatomprom's trust management. The facility's current name is the Stepnogorsk Mining and Chemical Combine.[4,5]

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International MPC&A Conference Held in Russia

On May 16-20, 2005, the IPPE at Obninsk, Kaluga Oblast, Russia, hosted the Third International Conference on Accounting, Control, and Physical Protection of Nuclear Materials. Previous conferences on this subject were held at the Institute in 1997 and 2000. The event was jointly organized by Russia's Federal Atomic Energy Agency (Rosatom), the U.S. Department of Energy (DOE), the International Science and Technology Center (ISTC), and a number of nongovernmental organizations, including the U.S. Institute of Nuclear Materials Management and the Russian Nuclear Society. More than 300 specialists attended the conference, representing Russian state agencies and Rosatom facilities as well as about 80 foreign experts from Austria, Azerbaijan, Belarus, Canada, Georgia, Kazakhstan, Lithuania, Sweden, Ukraine, the United Kingdom, the United States, the Joint Research Center of the European Commission, and the ISTC.[1,2]

Conference plenary sessions addressed general and specific issues related to nuclear material safety, as well as national systems for materials protection, control, and accounting (MPC&A). More than 170

presentations made during the conference dealt with MPC&A accomplishments in the NIS, as well as ways to improve existing systems and secure their sustainability, including the introduction of new technologies and adequate personnel training. The conference included a technical exhibition, which demonstrated MPC&A equipment developed by 20 Russian, foreign, and joint venture companies.[1,2]

A number of projects to enhance the security of nuclear materials in Russia that were initiated in the 1990s under the U.S.-Russian MPC&A program, funded by the DOE, will be completed by 2008. Afterwards, Russia will have to assume responsibility for the maintenance of a growing proportion of its MPC&A system. Therefore, conference participants suggested that the DOE and Rosatom devote the next MPC&A conference, scheduled for 2008, to reviewing program achievements and plans for sustaining these accomplishments.[1]

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Special Report

Serious Gaps Emerging in Export Controls on Submarines

by James Clay Moltz, Deputy Director, Center for Nonproliferation Studies

Submarines have been exported widely since the early 1900s. Although states initially tried to ban these vessels in several international meetings, submarines eventually became accepted as legitimate military tools. Since the early 1990s, however, a new threat has emerged: growing exports of submarines capable of firing advanced cruise missiles, which are now widely available on the world market. Many of these missiles are capable of delivering WMD—biological, chemical, and nuclear—against sea- or land-based targets (including cities). Despite this emerging threat, existing multilateral export control regimes place very few restrictions on submarine transfers, largely because of their history as non-strategic defensive systems.

Exports today involve primarily conventionally powered vessels, which operate with diesel engines on the surface and electric batteries while submerged. [*Editor's Note: France, Germany, Russia, and Sweden are the major submarine exporters today.*] However, there are new technologies (so-called "air independent propulsion" or AIP) that allow some advanced submarines to operate external combustion engines (using compressed or liquid oxygen) or fuel cells, which can extend the submerged capability of the vessel from a few days (with old diesel/electric boats) to as much as several weeks (with AIP). This capability increases the stealth of the submarine and makes it a more dangerous weapon. At least one country (Russia) is also considering exporting or leasing nuclear-powered submarines, which can remain submerged for months at a time but typically involve much higher costs, as well as more serious fuel cycle and safety concerns. Unfortunately, the export of highly enriched uranium fuel (above 20 percent uranium-235) to operate such submarines is permitted under existing regimes, thus posing a serious proliferation threat, as well.

One problem with today's submarine exports is that many of them are going to regions where WMD are both present and spreading. Germany's export of three Dolphin-class submarines to Israel beginning in the late 1990s apparently resulted in their being loaded with nuclear-tipped cruise missiles, setting a highly worrisome precedent. France's exports in the past decade of Agosta-class submarines to Pakistan (replete with production technology) and France's planned submarine sale to India raise similar concerns, since both states have declared nuclear arsenals. Russian submarine exports to India and China, among other states, are also likely to increase their WMD delivery options, possibly fueling regional tensions. These trends are likely to worsen nuclear instability during a crisis, due to the difficulty of communicating with submerged submarines (whose commanders might be forced to launch on old or ambiguous orders if under attack).

In terms of export controls, national control lists frequently include submarines as items for review, but standards for export are flexible, given the absence of international guidelines. Since 1992, national declarations of submarine transfers have been required under the UN Arms Register's category for "warships," if the vessel displaces 750 metric tons or is equipped with missiles or torpedoes with a range of 25 km or more. While 750 metric tons does cover most of the submarines being exported, the category is vague and amorphous (listed under "warships") and the reporting has been spotty. In the nuclear area, the 1968 NPT treated nuclear propulsion as a permitted use of nuclear energy, thus allowing nuclear submarines to be exported. Ironically, none of the European states that insisted on this exception use it today. Yet, the loophole remains for others without a full nuclear fuel cycle (and interested in a nuclear weapon) to exploit—such as, perhaps, Brazil, Iran, or other states.

In 2003, states in the Wassenaar Arrangement adopted language lowering the threshold for reporting to 150 tons of displacement, or less, if the vessel carries missiles or torpedoes capable of being fired 25 km or more. More recently, the United States and other countries have called for the deletion of the 25-km requirement so that all submarines armed with missiles would have to be reported. Still, even these tougher reporting requirements do not actually limit or ban submarine transfers, even sales to states with WMD and known intentions of using submarines as delivery vehicles.

Gaps in the international export control regime regarding submarines pose the risk that additional countries may move WMD to sea, thus increasing threats to shipping, land-based targets, and local populations. New discussions will be needed to address this emerging WMD delivery threat and its links to cruise missile proliferation. Talks might involve states in the Wassenaar Arrangement, the Missile Technology Control Regime, the Nuclear Suppliers Group, or the smaller group of submarine-producing countries.

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