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Inside this Issue

Recent Developments in the NIS 2	Summaries from the NIS Press 15
– 2004 Updates and Changes in NIS Export Control Systems and Legislation	– Reports on Plutonium Found in Siberia Corrected
– Review of Uzbekistan’s New Export Control Law	– Restructuring Ukraine’s Arms Exports: An Expert’s Opinion
– Some Russian Export Control Personnel Reportedly Leaving Government	
International Supplier Regimes 6	International Developments 19
– 2004 Developments in International Supplier Regimes	– IAEA Investigates Undeclared Nuclear Activities in Egypt
– Rumyantsev: Russia Will Not Supply LEU Fuel and Additional Nuclear Reactors to India	– Successful Repatriation of Soviet-Origin HEU from the Czech Republic to Russia
	– South African Company Fined for Illegal Chemical Exports
	– Heads of FSB, FBI Sign Memorandum of Cooperation
	– U.S. Commerce Department Tightens Missile-Related Export Controls
International Assistance Programs 10	Workshops and Conferences 24
– United States and Kazakhstan Expand Proliferation Prevention Agreement to Cover Biological Weapons and Bioterrorism	– Annual Conference on Globalization of Export Controls Held in London
– U.S. Team Visits Tajikistan to Assess Radiological Security	– Internal Compliance Program Workshops Held in Russia
– WMD-Related Exercise Held in Uzbekistan	– Commodity Identification Training Workshop Held in Azerbaijan
	– Technical Discussions on Nuclear Suppliers Group Held in Kazakhstan
Illicit Trafficking in the NIS 12	
– Summary of NIS Illicit Trafficking Incidents in 2004	

Special Report

Interview with R. Carlos Sersale di Cerisano 26
<i>Former MTCR Chair comments on the regime’s recent outreach activities, intangible technology transfers and transshipment, impact of UN Security Council Resolution 1540, and the Hague Code of Conduct on missile proliferation.</i>

Recent Developments in the NIS

2004 Updates and Changes in NIS Export Control Systems and Legislation

The following article provides a summary by country of the main developments that occurred in the area of export control and related legislative initiatives in the Newly Independent States in 2004.

Armenia

On November 5, 2004, the Armenian government approved the order *On Licensing Exports and Imports of Sources of Ionizing Radiation and Radioactive Materials*. The government approval also specified the formats for licenses and license request application forms. The regulation was adopted to prevent the illegal transit of materials and equipment containing radioactive elements and to protect the population from the hazards of ionizing radiation.

Azerbaijan

On October 26, 2004, President of Azerbaijan Ilkham Aliyev signed an edict approving a new law, *On Control over Exports*. The law was drafted by the Cabinet of Ministers of Azerbaijan in 2002 and submitted to government agencies for review and comments. After interagency review, the amended draft was sent to the Bureau of Industry and Security (BIS) of the U.S. Department of Commerce for external review. Many of the BIS suggestions were incorporated into the final draft, which was then passed for review by the Milli Mejlis (Azerbaijani parliament). On December 29, 2004, President Aliyev issued another edict by which he tasked the Cabinet of Ministers to submit proposals within three months on adjusting existing legal norms to the new law.

Belarus

On May 4, 2004, the government of Belarus amended Decree No. 522 of April 24, 2002, *On Approval of the Regulations on Transit of Military Goods through the Territory of the Republic of Belarus*. The amendments were necessitated by the creation of the State Defense Industry Committee (SDIC) in December 2003. In accordance with the new decree, the SDIC has been added to the list of agencies that approve or deny permits required for the transit of military goods through Belarus.

On October 20, 2004, the House of Representatives of the National Assembly of Belarus ratified the *Agreement on a Common Order of Export Control by EURASEC Member States*, signed on October 28, 2003, in Moscow by the five Eurasian Economic Community (EURASEC) member countries—Belarus, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan. Belarus thus became the first EURASEC member to ratify the agreement.

Kazakhstan

On February 6, 2004, Kazakhstan and the International Atomic Energy Agency (IAEA) signed an Additional Protocol to the agreement between the Republic of Kazakhstan and the IAEA for the application of safeguards in connection with the Treaty on the Nonproliferation of Nuclear Weapons (NPT) signed in Almaty on July 26, 1994. As a legally binding document, the Additional Protocol grants the IAEA complementary inspection authority to verify that Kazakhstan's declared nuclear materials are not being diverted for nuclear weapons development.

On September 29, 2004, President of Kazakhstan Nursultan Nazarbayev signed Edict No. 1449, *On Measures for Further Improvement of the System of State Administration of the Republic of Kazakhstan*, which changed the organizational structure and responsibilities of key state agencies. In accordance with the edict, the Agency for Customs Control of Kazakhstan was transformed into a committee under the Ministry of Finance, thus losing its independent status.

Kyrgyzstan

On February 6, 2004, the Zhogorku Kenesh (Kyrgyz parliament) adopted the law *On Structure of the Government of the Kyrgyz Republic*, which introduced significant changes to the structure of the Kyrgyz government as well as the functions of ministries and their subsidiary agencies. A new Ministry of Economic Development, Industry, and Trade (MEDIT) replaced the disbanded Ministry of External Trade

and Industry as a state agency responsible for export control. Subsequently, on May 4, 2004, the government of the Kyrgyz Republic issued Decree No. 330, *On Measures Establishing a National System of Export Control in the Kyrgyz Republic*, by which it approved the statutes *On the Implementation of Export Control Procedures in the Kyrgyz Republic* and *On the Licensing Procedure for the Transit of Controlled Commodities through the Territory of the Kyrgyz Republic*, as well as a new statute, *On the Commission on Military-Technical Cooperation and Export Control (CMTCEC)* of the Kyrgyz Republic. The decree and the statutes designated the MEDIT as the government authority to implement export controls and to issue end-user import certificates as well as licenses for exports, imports, re-exports, and transit of controlled items. The CMTCEC was designated as the national coordinating authority for export controls.

On July 12, 2004, Kyrgyz President Askar Akayev signed the Customs Code of the Kyrgyz Republic and the law *On Bringing into Force the Customs Code of the Kyrgyz Republic*. The new customs code defines legal, economic, and organizational aspects of customs affairs and regulates procedures for the movement of goods and vehicles through Kyrgyzstan's borders. The code came into effect on January 1, 2005.

Russia

On February 4, 2004, Russian President Vladimir Putin signed Decree No. 141, *On Changes to the List of Nuclear Materials, Equipment, Special Non-Nuclear Materials, and Respective Technologies Subject to Export Control*, which introduced changes to the country's nuclear export control list. The modifications were made in order to bring the Russian list into conformity with changes made to the Zangger Committee's Trigger List in accordance with a decision adopted at the September 24, 2002, Zangger Committee meeting in Vienna.

As part of the restructuring of the Russian government launched in March 2004, Russia's export control authority was transferred from the Ministry of Economic Development and Trade (MEDT) to the Ministry of Defense. The Federal Technical and Export Control Service—a newly created body subordinated to the Ministry of Defense—replaced the MEDT Department of Export Control. In addition, the State Customs Committee was transformed into the Federal Customs Service and subordinated to the MEDT.

On May 5, 2004, President Vladimir Putin signed Edict No. 580, *On Approving a List of Dual-Use Commodities and Technologies That Can Be Used to Produce Weapons and Military Equipment and Are Subject to Export Control*. Along with approving the new list of controlled items drafted by the Russian government, the edict establishes that the Federal Customs Service may update codes of controlled commodities and technologies as necessary in coordination with the Ministry of Economic Development and Trade.

Ukraine

On March 31, 2004, the Cabinet of Ministers of Ukraine issued Directive No. 185, *On Measures to Promote Ukraine's Compliance with Provisions of the International Code of Conduct Against Ballistic Missile Proliferation*, also known as the Hague Code of Conduct, which was signed by Ukraine on November 25, 2002. The government empowered the National Space Agency of Ukraine (NSAU), Ministry of Internal Affairs, and Ministry of Defense to coordinate and oversee compliance with the code. NSAU was appointed a national point of contact on issues of compliance.

Uzbekistan

On August 26, 2004, the Oliy Majlis (parliament) of the Republic of Uzbekistan adopted the law *On Export Control*. The law was inspired by the export control practices and legislation of the European Union, Japan, Russia, and the United States. The law provides for the establishment of a licensing procedure for exports of items subject to export control, including goods, equipment, scientific and technical information, activities, services, and intellectual property, that can be used to produce weapons of mass destruction (WMD), their means of delivery, and other types of weapons and military hardware. The law also commits producers and exporters of such items to introduce internal compliance programs. The law *On Export Control* entered into force on September 17, 2004. For detailed information on the law's provisions, see "Review of Uzbekistan's New Export Control Law" in this issue of the *NIS Export Control Observer*.

Review of Uzbekistan's New Export Control Law

On September 17, 2004, the new law *On Export Control* that had been under discussion for several years entered into force in Uzbekistan.[1] Approved by the Oliy Majlis (parliament) on August 26, 2004, the law was prepared based on export control practices and legislation of the European Union, Japan, Russia, and the United States.[2,3]

Prior to the passage of the new law, Uzbekistan had many laws and regulations designed to control exports and imports, but none of them was written specifically to address nonproliferation-related export controls. Early legislation was clearly designed to regulate and protect domestic markets, with export licenses required for such items as cotton and carpets. Later regulations from 1994 and 1995 controlled military and nuclear items but contained very general lists.[4,5] The new law supersedes the previous regulations, including the provisions of the law *On Foreign Economic Activities* pertaining to export control.[1] The law *On Export Control* is rather short and concise—it has only 16 articles, most of which are general in nature.[6]

Article 1 states that the law aims to regulate relations in the sphere of export controls. The main goals of the law are to enhance the security of Uzbekistan and fulfill the country's international commitments in the field of nonproliferation of WMD and other types of weapons through the implementation of export controls.

Article 2 indicates that this law and other subordinate legislative acts comprise Uzbekistan's export control legislation. It also establishes the supremacy of international agreements signed by Uzbekistan over the national export control legislation of Uzbekistan.

Article 3 defines the concept of export control as a set of measures regulating the exports of controlled items from the territory of Uzbekistan by legal entities and individuals, as established by the existing export control legislation.

Article 4 of the law provides a general characterization of controlled items, which are referred to as "objects of export control." Controlled items are defined as goods, equipment, scientific and technical information, activities, services, and intellectual property that can make a substantial contribution, due to their inherent features and characteristics, to the creation of WMD, their means of delivery, and other types of weapons and military hardware. Control lists are to be "published in accordance with established procedures." The lists have not been published as of January 2005.

Article 5 lists the main principles upon which the implementation of export control is based: priority of Uzbekistan's security interests, good-faith implementation of the country's international commitments, and transparency and accessibility of export control-related information.

Article 6 lists export control implementation techniques: the establishment of a procedure for exporting controlled items, control over the procedure for exports of controlled items and their use, internal compliance, and international cooperation on export controls.

Article 7 defines the responsibilities of the Cabinet of Ministers of Uzbekistan for export control. According to the law, the Cabinet of Ministers ensures the implementation of state export control policy; establishes a procedure for exports of controlled items and their use; adopts control lists; establishes limitations and prohibitions on exports of controlled items in general, as well as in regard to certain foreign states, to ensure the security of Uzbekistan and implement the country's international obligations; determines a procedure for internal compliance; and carries out other duties in accordance with the legislation.

Unlike export control laws of other NIS countries, which state that "an authorized state body" is in charge of export control, Article 8 of the Uzbek law names the agency responsible for export control: the Agency on Foreign Economic Relations (AFER) of the Republic of Uzbekistan. The AFER issues licenses for exports of controlled items, coordinates export control activities of state agencies, informs legal entities and

individuals on the procedure for regulating controlled items and their use, requests documents and other information necessary to implement export control, issues an end-use certificates regarding the use of controlled items imported into Uzbekistan, develops suggestions on improving export control legislation, and carries out other duties in accordance with the legislation.

Article 9 states that control over exports and their use is carried out in accordance with a procedure established by the Cabinet of Ministers. The Cabinet of Ministers also determines when exports of controlled items require an end-use certificate from a foreign state and/or recipient legal entities and individuals of that state, ensuring that the exported items will not be used to create WMD, their means of delivery, and other types of weapons and military hardware. In cases determined by the legislation, the AFER may impose additional requirements when issuing licenses for exports of controlled items.

In accordance with Article 10, control over the procedure for exports of controlled items and their use involves customs control, commodity identification, written end-use certification, monitoring of exports of controlled items and their use, collection and verification of information on violations, and legal enforcement.

Article 11 focuses on the internal compliance programs (ICP) for legal entities engaged in exports of controlled items from Uzbekistan, or “internal control,” as it is referred to in the law. ICP are defined as a set of measures established by legal entities to comply with export control procedures. The article specifies that “ICP are mandatory for legal entities engaged in exports of controlled items, as well as for institutions engaged in scientific and/or production activities related to defense and security needs of the Republic of Uzbekistan.”

Article 12 defines the responsibilities of legal entities and individuals engaged in exports of controlled items and specifies that they are required to obtain a license for these items, provide documents and other information necessary to implement export controls when requested by the AFER and other state bodies, and notify the AFER if there is information about the possible use of exported items not included in the control lists for creating WMD, their means of delivery, and other types of weapons and military hardware. This is a “catch-all” provision of the type now being widely adopted by exporting states. Legal entities and individuals engaged in exports of controlled items are responsible for the accuracy of information they provide when applying for export licenses.

The final four articles of the law are very general. Article 13 states that “international cooperation in the sphere of export control is carried out based on the legislation and international agreements of the Republic of Uzbekistan.” Article 14 ensures that information submitted to state agencies will be used solely for the purpose of export control. Article 15 determines that disputes related to export control will be settled in accordance with a procedure established by the legislation. Article 16 deals with export control enforcement, stating that “export control violators are to be punished in accordance with established procedures.” However, the law does not contain a provision on relevant amendments to the Criminal Code or other enforcement legislation, which would provide for penalties for export control violations.

Uzbekistan’s new law *On Export Control* is a major step forward in establishing an effective national system of export control. However, the law has certain shortcomings in terms of comprehensiveness and clarity. Unlike the export control laws of other Central Asian states—Kazakhstan, Kyrgyzstan, and Tajikistan—it does not provide a list of definitions pertaining to export control activities, which may create ambiguity and allow for different interpretations. Although the law clearly states that the Cabinet of Ministers is the principal government agency in charge of conducting the country’s export control policy and developing export control lists, it does not say anything about the powers and responsibilities of the president. The document does not contain any provisions covering interagency coordination during the licensing review process—a procedure that is widely viewed as essential for effective licensing decision-making. Finally, the law does not contain any provisions for controlling transit and transshipment of controlled items—provisions from which Uzbekistan, given its geographic location, would definitely benefit.

Sources: [1] “V Uzbekistane poyavilsya zakon ob eksportnom kontrole” [The law on export control came to life in Uzbekistan], ITAR-TASS, September 17, 2004; in Integrum Techno, <<http://www.integrum.com>>. [2] “Informatsiya o pervom dne raboty

pyatnadsatoy sessii Oliy Mazhlisa Respubliki Uzbekistan vtorigo sozyva" [Information on the first day of work of the fifteenth session of the second Oliy Mazhlis of the Republic of Uzbekistan], UzA news agency, August 26, 2004, <<http://www.uza.uz/politics/?id1=1559>>. [3] Pulat Daniyarov, "Eksportnyy kontrol radi bezopasnosti" [Export control for the sake of security], *Narodnoye slovo*, August 14, 2004, No. 165; in "M. Umaraliyev (glava komiteta Parlamenta) – Zachem Uzbekistanu zakon 'Ob eksportnom kontrole'" [M. Umaraliyev (chairman of the Parliament committee): Why Uzbekistan needs the law *On Export Control*], Tsentrasia website, August 17, 2004, <<http://www.centrasia.ru/newsA.php4?st=1092720600>>. [4] NEC Team Accomplishments, Bureau of Export Administration NEC Cooperation Center website, <http://www.nectic.bxa.doc.gov/nec_frameset.html>. [5] "Uzbekistan: Export Control System," NIS Nuclear and Missile Database, Nuclear Threat Initiative website, <<http://nti.org/db/nisprofs/uzbekis/excon.htm>>. [6] Text of the Law of the Republic of Uzbekistan *On Export Control* provided by an Uzbek official.

Some Russian Export Control Personnel Reportedly Leaving Government

According to an article recently published by Global Security Newswire, some Russian export control officials have chosen to leave government service rather than work in the Ministry of Defense, which has assumed responsibility for regulating Russian exports of WMD-related technology. Igor Khripunov, associate director of the Center for International Trade and Security at the University of Georgia in charge of projects in the former Soviet Union, was quoted by Global Security Newswire as saying that the departure of trained personnel could create "gaps" and "loopholes" in Russia's export control system. Khripunov noted that some of the departing civilians were "allergic" to the military and were concerned about how association with the Ministry of Defense might affect their future employment opportunities.[1] In a separate interview with the *NIS Export Control Observer*, Khripunov added that export control is now a division of the service whose responsibility, among other functions, is to enforce secrecy regulations. According to Khripunov, there is an attempt by some in the Russian government to reverse the decision to subordinate export controls under the Ministry of Defense; most of the legal documents required to finalize the transition are still pending as of January 2005.[2]

Editor's Note: As part of the March 2004 government restructuring in which President Putin eliminated half of the country's cabinet-level ministries, Russia's export licensing authority was transferred from the Ministry of Economic Development and Trade to the Ministry of Defense.

Sources: [1] Mike Nartker, "Some Russian Export-Control Specialists Quitting, Expert Says," Global Security Newswire, December 6, 2004, Nuclear Threat Initiative website, <http://nti.org/d_newswire/issues/2004_12_6.html>. [2] CNS communication with Igor Khripunov, January 19, 2005.

International Supplier Regimes

2004 Developments in International Supplier Regimes

The article below summarizes the activities of the four major multilateral export control regimes—the Australia Group (AG), Missile Technology Control Regime (MTCR), Nuclear Suppliers Group (NSG), and Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies (WA)—in 2004.

Australia Group

During the plenary of the AG held in Paris on June 7-10, 2004, five new members—Estonia, Latvia, Lithuania, Malta, and Slovenia—joined the group, bringing the number of participating states to 38. The first three states became the only former Soviet republics that have joined the AG to date. The AG is an informal network of countries, which coordinate their national export control laws on dual-use items that could be used to create chemical or biological weapons (BW).

The AG plenary participants also expanded the AG List of Plant Pathogens for Export Controls by adding five plant pathogens (three bacteria, one virus, and one viroid). The updated list may be found at <http://www.australiagroup.net/en/control_list/plants.htm>. Participants also proposed consideration of further additions to the regime control lists, including airborne spraying and fogging systems capable of dispersing biological agents in aerosol form, and agreed to consider controls on brokers in order to curtail the proliferation activities of intermediaries and front companies. Participants also agreed on strategies to help non-AG-member supplier and transshipping countries, as well as other interested countries, to strengthen their national controls over the export of chemical and biological weapons-related goods (CBW). The next AG plenary meeting will be held in Australia in 2005.

Missile Technology Control Regime

On October 6-8, 2004, representatives from 34 member countries of the MTCR—an informal and voluntary association of countries that share the goals of nonproliferation of unmanned delivery systems capable of delivering weapons of mass destruction (WMD)—met in Seoul, South Korea, for the organization’s 19th annual plenary. The plenary participants expressed concern over missile proliferation in Northeast Asia, the Middle East, and South Asia, and reaffirmed their determination to continue discouraging missile programs and activities of proliferation concern. In response to increasingly sophisticated procurement attempts, the plenary recognized the need to consider intangible technology transfers; transit, transshipment, and brokering controls; and the need to curtail the activities of intermediaries and front companies. MTCR member countries welcomed the adoption of UN Security Council Resolution 1540 (UNSCR 1540), which requires all countries to establish and enforce effective export controls regulating the transfer of weapons of mass destruction, ballistic missiles, and related technologies. Non-MTCR countries were urged to follow MTCR guidelines and controls. The plenary also welcomed Bulgaria as a new member of the group. For additional information on the regime’s recent activities, see “Interview with R. Carlos Sersale di Cerisano” in this issue of the *NIS Export Control Observer*.

Nuclear Suppliers Group

The NSG, a multilateral export control regime that controls the transfers of sensitive nuclear items and technologies, held its 14th plenary meeting in Göteborg, Sweden, on May 27-28, 2004. During the plenary, the NSG members approved China, Estonia, Lithuania, and Malta as new participating governments in the group. Their participant status took effect by an exchange of notes on June 10, 2004.

In order to strengthen further the participating governments’ national export controls, the plenary decided to adopt the following measures:

- a “catch-all” mechanism in the NSG Guidelines to provide a national legal basis to control the export of nuclear-related items that are not on the control lists, when such items are or may be intended for use in connection with a nuclear weapons program;
- steps to strengthen the annual exchange of information;
- initiatives to reinforce the NSG contacts with non-partners through seminars and other joint activities with states outside of the NSG;
- actions to enhance the relationship between the NSG and the IAEA, including the provision of briefings to the IAEA director general.

The plenary participants welcomed Libya’s voluntary decision to eliminate its WMD programs and noted with deep concern the discovery of the covert international proliferation trafficking network led by Pakistani nuclear scientist A.Q. Khan. They also underscored the importance of Iran’s full compliance with its obligations under the NPT and called on Iran to implement proactively the IAEA Board of Governors resolutions. The plenary participants urged the Democratic People’s Republic of Korea to return to full compliance with its international nonproliferation obligations under the NPT, including its safeguards agreement with the IAEA, and expressed their support for the ongoing process of the six-party talks on the North Korean nuclear program involving that country and China, Japan, Russia, South Korea, and the United States.

The plenary called on all states to exercise extreme vigilance to ensure none of their exports contributes to nuclear weapons programs. The plenary also considered a range of other issues to strengthen further participating governments’ national export control systems. Among them were conditions for the supply of nuclear and dual-use items on the NSG control lists and suspension of the supply of nuclear items following decisions taken by the IAEA board of governors as to a state’s non-compliance with its NPT or safeguards obligations.

Wassenaar Arrangement

On October 19, 2004, the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies and the Japanese Permanent Mission to International Organizations in Vienna

hosted a day-long outreach seminar “The Wassenaar Arrangement: Responsibility, Transparency and Security.” This major outreach initiative was undertaken for the first time in the arrangement’s history. More than 130 leading export control specialists and representatives from more than 35 countries attended the event. Seminar participants represented more than 50 non-governmental organizations (NGOs), think tanks, academic institutes, and industry and the media, as well as a number of non-WA countries. The aim of the seminar was to raise awareness of the positive contribution that the WA makes to responsible transfers of conventional arms and dual-use goods and technologies. Presentations covered WA history; method of work; conclusions of the 2003 Assessment of its functioning, including its renewed focus on terrorism; current activities; and areas of ongoing negotiation. Other topics included the export control lists and how the lists are reviewed, arms brokering, and WA work on small arms and light weapons and on man-portable air defense systems (MANPADS). Participants from leading think tanks and NGOs also contributed their perspectives on arms export control issues and how the WA and civil society might enhance their cooperation.

On December 8-9, 2004, the WA 10th plenary meeting was held in Vienna. The meeting reviewed the accomplishments of 2004 and considered further export control measures. WA participating states reaffirmed their intention to intensify efforts to prevent the acquisition of conventional arms and dual-use goods and technologies by terrorist groups and organizations. In this context they also exchanged information on national measures taken in accordance with the 2003 decision to tighten controls on the exports of MANPADS and called again on other countries to apply similar principles in order to prevent proliferation of these dangerous weapons. The plenary welcomed the UN Security Council adoption of UNSCR 1540. Participating states noted that the resolution decides that all states shall establish, develop, and maintain appropriate and effective export and transshipment controls, which is also a primary objective of the WA.

In order to keep pace with advances in technology, market availability, and developments in international security, the plenary agreed to a number of amendments to the control lists, which will be published shortly. Particular attention has been given to items that might be used for terrorist purposes. In 2004, participating states worked actively to make the existing control text more easily understood and “user friendly” for commercial exporters and licensing authorities.

The plenary participants welcomed Slovenia as a new WA participating state and reiterated that the arrangement is open, on a global and non-discriminatory basis, to prospective adherents that comply with the agreed criteria and that pending membership applications will continue to be examined to determine their acceptance on a case-by-case basis. The plenary reiterated its intention to broaden WA outreach to countries not participating in the arrangement, other export control regimes, and international and regional organizations. The next regular WA plenary meeting will take place in Vienna in December 2005.

Rumyantsev: Russia Will Not Supply LEU Fuel and Additional Nuclear Reactors to India

On December 5, 2004, the final day of Russian president Vladimir Putin’s visit to India (December 3-5, 2004), India’s national daily *The Hindu* interviewed Aleksandr Rumyantsev, director of Russia’s Federal Atomic Energy Agency (FAEA), who was part of the official Russian delegation. In the interview, Rumyantsev stated that Russia would not expand its nuclear cooperation with India, as it is bound by NSG guidelines. First, Rumyantsev announced that Russia would not resume the supply of low-enriched uranium (LEU) nuclear fuel to India’s Tarapur nuclear power plant (NPP). In 2001, Russia provided 50 tons of LEU fuel to the two Tarapur nuclear reactors. According to Rumyantsev, that supply was provided for “safety” reasons and could not be considered part of any “usual cooperation.” “India at that time had no fuel. This was the extreme case. You know there was a very negative reaction from the NSG,” he said. Rumyantsev pointed out that the 2001 transfer was part of an understanding with the NSG that no fuel would be supplied again. Asked by the newspaper if he was aware that the Tarapur NPP was now encountering the same problem it faced in 2001, Rumyantsev replied, “Yes, I know. This is the pain of my soul. But what can we do?”[1]

Citing Russia’s NSG commitments again, Rumyantsev also refuted speculations that Russia would provide two additional 1,000-megawatt (MW) reactors for the Koodankulam NPP. At present, two Russian VVER-

1000 reactors, each with a capacity of 1,000 MW, are under construction at Koodankulam, and Russia had earlier lobbied India for selling two more reactors for the Koodankulam NPP.[1]

Asked about the NSG response to Russia's 2000 proposal to allow India to enter the group as a nuclear weapon state or an associate member, Rummyantsev answered that the NSG response was very negative. However, according to the Russian official, "this question will be solved—India will be a member of the nuclear club." In Rummyantsev's words, "it will be all right," if India brings all its nuclear facilities under the IAEA safeguards regime. "But, you know, India cannot show all facilities," he added.[1]

Reacting to Rummyantsev's revelations, Anil Kakodkar, chairman of India's Atomic Energy Commission, told *The Hindu* on December 6, 2004, "We are not vulnerable in our nuclear power program. Our domestic program based on self-reliance is robust." In response to a question on whether the Tarapur reactors depended only on LEU as fuel, Kakodkar said, "If we get low enriched uranium, it is the preferred option. If you don't get it, you have to find alternative solutions. We have kept an open approach. Let us see how things move." Asked whether the Tarapur NPP could be run on the mixed plutonium-oxide/uranium-oxide (MOX) fuel India has already developed, Kakodkar replied, "We have already proved the MOX fuel. We made MOX fuel bundles and we have sort of used them in Tarapur. But we have to check out the technology. We have to reengineer the reactor core to make use of the MOX. Of course, we can do that." He added that India plans to use the MOX fuel for the series of fast breeder reactors that the country intends to build. "So, we can take Tarapur in our stride," Kakodkar said.[2]

Asked if India would build its own reactors at the Koodankulam NPP following Russia's decision not to supply more reactors for the site, Kakodkar said that "it is good to have similar reactors at the same site. We can build our [indigenous] Pressurized Heavy Water Reactors at Koodankulam and also somewhere else." Kakodkar concluded by saying, "The point is that we have always looked upon external inputs to our nuclear power program as additionalities. But our domestic program is based on self-reliance. These two are separate things. We have a policy and we will stick to that policy." [2]

Editor's Notes: Since 1992, the NSG has required that a recipient country have a full-scope safeguards agreement with the IAEA in force as a condition of supply for items on the NSG Trigger List. Such agreements require the recipient to place all of its nuclear activities under IAEA inspection. India has refused to take this step and nuclear facilities associated with its nuclear weapons program, among others, are not under IAEA monitoring. There are two key exceptions to the full-scope safeguards condition of supply: 1) cases in which failure to provide the export produces an imminent hazard, known as the safety exception, and 2) cases in which contracts for exports existed before the relevant rule came into effect in 1992, also known as the "grandfather clause." Earlier, Russia claimed that LEU fuel supply to the Tarapur NPP was essential for safety purposes and was therefore permissible. The United States, however, contended that Russian supply of LEU fuel did not meet the standards of the NSG's safety exception. Separately, in a 1988 deal with India, the Soviet Union agreed to build two 1,000-MW light water reactors at Koodankulam, which are now under construction. Russia argued that because the two sides agreed to the arrangement before the NSG's 1992 revisions, making full-scope safeguards a condition of supply, the transaction could proceed under the NSG's grandfather clause. Although the NSG acquiesced in this project, it rejected Russia's subsequent claim that the 1988 understanding authorized Russia's sale of two additional reactors for this site. The United States and other NSG members argued that the additional Koodankulam projects did not fall under the grandfather clause.[3]

Sources: [1] Amit Baruah and R. Ramachandran, "Russian fuel for Tarapur ruled out," *The Hindu* online edition, December 6, 2004, <<http://www.hindu.com/2004/12/06/stories/2004120606610100.htm>>. [2] "Our nuclear power programme is not vulnerable: Kakodkar", *The Hindu*, December 7, 2004; in Nuclear Power Corporation of India Limited website, <http://www.npcil.org/news_18Jan05_02.asp>. [3] "NSG Seeks Agreement on Tightening Export Controls," *NIS Export Control Observer*, No. 13, February 2004, pp. 5-6, <<http://cns.miis.edu/nis-excon>>.

International Export Control and WMD Security Assistance Programs

United States and Kazakhstan Expand Proliferation Prevention Agreement to Cover Biological Weapons and Bioterrorism

On December 8, 2004, the United States and Kazakhstan signed an amendment to the *Agreement between the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan and the Department of Defense of the United States of America Concerning the Elimination of Infrastructure of Weapons of Mass Destruction*, which was signed on October 3, 1995. The amendment extends bilateral cooperation “to counter the threat of bioterrorism and prevent proliferation of biological weapons technology, pathogens, and expertise at their source.”[1] Under the terms of the amendment, BW proliferation prevention assistance will be provided to Kazakhstan through the Nunn-Lugar Cooperative Threat Reduction (CTR) Program with the purpose of achieving the following five key objectives:

- (1) preventing the proliferation of BW expertise through the cooperative biological research program;
- (2) securing dangerous pathogens and strains by strengthening biosafety and biosecurity at facilities;
- (3) consolidating dangerous pathogens at secure central repositories;
- (4) eliminating BW-related equipment and infrastructure; and
- (5) reinforcing Kazakhstan’s biological threat agent detection and response system to protect against bioterrorist attacks.[1]

The new initiatives introduced by the amendment include the construction of a diagnostic reference laboratory and disease surveillance system that will allow Kazakhstan to detect, diagnose, and respond to outbreaks of dangerous diseases that could occur naturally or result from a terrorist attack; launch of a joint study of dangerous pathogens with the aim of developing better medical countermeasures for protecting the populations of the United States and Kazakhstan from such deadly diseases; and the development and testing of new molecular diagnostics and therapies to cure diseases endemic to Central Asia.[1,2,3]

In his public comments, U.S. Senator Richard G. Lugar (R-Indiana) hailed the signing of the amendment and praised the U.S. Department of Defense, the Bush administration, and the government of Kazakhstan.[1,4] Senator Lugar also noted, “I congratulate President Nazarbayev and his government on having joined Georgia and Uzbekistan in partnership with the United States to work toward successfully eliminating the risk of biological weapons and preventing bioterrorism. This is a critical step forward in addressing the threat posed by the proliferation of weapons of mass destruction.”[1] In response, in his comments regarding the signing of the amendment, Kazakhstan’s ambassador to the United States, Kanat Saudabayev, noted, “Kazakhstan’s signing of the amendment is a testimony of the firm and consistent commitment of President Nursultan Nazarbayev and our people to the cause of nonproliferation. The people of Kazakhstan, who experienced firsthand the horrifying consequences of weapons of mass destruction, are determined to be at the forefront of the global fight against proliferation of these deadly weapons.”[5]

In August 2003, prior to the signing of the amendment, Senator Lugar visited Kazakhstan and met with Kazakh government officials. During their discussions, Senator Lugar emphasized the urgent need to establish cooperation in preventing BW proliferation and combating bioterrorism. In the course of his visit, Senator Lugar toured the M. Aikimbayev Kazakh Scientific Center for Quarantine and Zoonotic Diseases in Almaty, a former Soviet anti-plague institute specializing in epidemiological monitoring and control of especially dangerous diseases on the territory of the Republic of Kazakhstan.[1]

Sources: [1] “U.S. and Kazakhstan Sign Nunn-Lugar Agreement Amendment to Prevent Biological Weapons Proliferation,” Office of the U.S. Senator Richard G. Lugar (R-Indiana) press release, December 8, 2004, U.S. Senator for Indiana Richard G. Lugar (R) website, <<http://lugar.senate.gov/pressapp/record.cfm?id=229682>>. [2] “Kazakhstan i SShA rasshiryayut sotrudnichestvo v borbe s rasprostraneniye oruzhiya massovogo unichtozheniya” [Kazakhstan and the United States broaden cooperation in the struggle against the proliferation of weapons of mass destruction], Embassy of Kazakhstan in the United States of America press release, December 8, 2004. CNS communication with Roman Y. Vassilenko, First Press Secretary and Assistant to the Ambassador, January 18, 2005. [3] “Kazakhstan i SShA podpisali popravku k soglasheniyu o sotrudnichestve v sfere nerasprostraneniya oruzhiya massovogo unichtozheniya” [Kazakhstan and the United States signed an amendment to the agreement on cooperation in the sphere of nonproliferation of weapons of mass destruction], Kazakhstan today news agency, December 9, 2004; in *Gazeta.kz*, <<http://www.gazeta.kz/art.asp?aid=53501>>. [4] “Kazakhstan Signs Agreement to Prevent Spread of Bioweapons,” U.S. Department of

State, International Information Programs, Press Release, December 10, 2004, <<http://usinfo.state.gov/is/Archive/2004/Dec/10-99730.html>>. [5] "Kazakhstan, U.S. Expand Cooperation to Fight Proliferation of Weapons of Mass Destruction," *The Washington Post*, Special Advertising Section, December 16, 2004; in Diplomatic Traffic, <www.diplomatictraffic.com/kazakh_ad1-1.pdf>.

U.S. Team Visits Tajikistan to Assess Radiological Security

A delegation from the U.S. Department of Energy (DOE) visited Tajikistan in November 2004 to collaborate with Tajik officials from the Nuclear and Radiation Safety Office at the Academy of Sciences on improving radiological security in the country. The U.S. officials assessed a completed two-year project designed to enhance radiological security at Tajikistan's nuclear waste repository and signed contracts for two new projects to supplement previous security initiatives in the Dushanbe area. The projects are part of the Global Threat Reduction Initiative (GTRI), launched in May 2004.[1]

Editor's Note: The mission of the GTRI is to remove and/or secure high-risk nuclear and radiological materials and equipment around the world that pose a threat to the United States and to the international community. To carry out the GTRI, DOE's National Nuclear Security Administration seeks to consolidate and accelerate the DOE's nuclear materials removal efforts, and complete a comprehensive inventory of research reactors and vulnerable nuclear materials worldwide to rapidly identify and address any gaps in current security coverage and recovery or removal efforts.[2]

Sources: [1] "U.S. Department of Energy Delegation Furthers Collaboration with the Government of Tajikistan," U.S. Embassy in Tajikistan press release, November 19, 2004, <<http://dushanbe.usembassy.gov/www191104doe.html>>. [2] "Department Of Energy Launches New Global Threat Reduction Initiative," U.S. Department of Energy press release, May 26, 2004, <[http://www.energy.gov/engine/content.do?PUBLIC_ID=15956&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASES](http://www.energy.gov/engine/content.do?PUBLIC_ID=15956&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE)>.

WMD-Related Exercise Held in Uzbekistan

On October 30-November 5, 2004, a seven-day Uzbek-U.S. integrated exercise was held in Uzbekistan under the auspices of the U.S. Department of Defense (DOD) International Counterproliferation (ICP) program. The exercise was designed to improve coordinated interagency response to a simulated WMD incident by Uzbek government agencies responsible for emergency response to incidents involving WMD materials. It also served to integrate training and equipment provided to Uzbekistan under the ICP program. Seventy-five officers from Uzbekistan's General Prosecutor's Office, Ministries of Defense, Internal Affairs, Emergency Situations and Health, State Customs Committee, Committee on State Border Protection, and Institute of Nuclear Physics participated in the exercise.[1]

The integrated exercise was implemented by the U.S. Defense Threat Reduction Agency, Federal Bureau of Investigation (FBI), and Department of Homeland Security as part of a larger cooperative effort between the government of Uzbekistan and the U.S. government. Since December 1996, numerous policy, assessment, and training events have been conducted in Uzbekistan, and more than \$1 million worth of equipment necessary for countering the trafficking of WMD components and related materials has been provided to this country under the ICP program. The equipment provided includes radiation pagers, intrusion detection devices, chemical and radiological detection and measurement devices, individual protective gear, decontamination equipment, and evidence collection kits.[1]

Editor's Note: The mission of the ICP program is to counter the threat of proliferation of WMD, related materials, and technologies across the borders and through the independent states of the former Soviet Union, the Baltic region, and Eastern Europe. The DOD implements this program in collaboration with the FBI, the U.S. Bureau of Customs and Border Protection, and other U.S. federal agencies by providing to participating countries a range of law enforcement and border security training and equipment necessary to enhance their capability to deter, detect, interdict, investigate, and respond to WMD-related incidents.[2]

Sources: [1] "Uzbek Security Officials Complete WMD Integrated Exercise Sponsored by the U.S. Embassy, U.S. Embassy in Uzbekistan press release, November 5, 2004, <<http://www.usembassy.uz/home/index.aspx?=&mid=283&overview=1024>>. [2] "International Counterproliferation Program", Defense Threat Reduction Agency fact sheet, January 2005, <http://www.dtra.mil/press_resources/fact_sheets/display.cfm?fs=icp>.

Illicit Trafficking in the NIS

Summary of NIS Illicit Trafficking Incidents in 2004

Each month the *NIS Export Control Observer* provides coverage of illicit trafficking incidents involving weapons of mass destruction and radioactive materials. Most of the trafficking incidents reported in 2004 involved nuclear and radioactive materials, although some involved scams in which criminals tried to sell non-nuclear materials to buyers under false pretenses. In order to draw a complete picture of illicit trafficking in the NIS, this article provides a list of events reported in the 2004 issues of the *NIS Export Control Observer*, complemented with events tracked in the NIS Illicit Nuclear Trafficking Database maintained by the Center for Nonproliferation Studies. The database records open-source reports of illicit trafficking incidents involving nuclear and radioactive materials in the NIS. To see details of these and previous years' incidents, see the NIS trafficking update page: <<http://nti.org/db/nistraff/update.htm>>.

During 2004, there were 30 incidents of trafficking in nuclear and radioactive materials tracked in the NIS Illicit Nuclear Trafficking Database. As in 2003, none of the 30 reported cases in 2004 involved significant quantities of highly enriched uranium (HEU), and only five cases involved very small amounts of plutonium (such as in smoke detector ionization sources or laboratory calibration sources). Highly enriched uranium and plutonium-239 can be used as the cores of nuclear weapons. Three cases involved various types of uranium. Although incomplete reporting makes it difficult to categorize precisely the material involved, none of these incidents appears to have involved HEU.

The data show fewer tracked incidents than 2003, when there were 40 incidents. The majority of the incidents involved medical and industrial radiation sources, but in contrast to 2003, none of them involved large, highly radioactive sources, such as radioisotope thermal generators. (There were three such incidents in 2003). At first glance one might conclude that the threat of illicit trafficking is receding, but because of incomplete reporting, and the historical tendency of many states in the NIS to limit public reporting of such incidents, it would be difficult to draw any firm conclusions based on the apparent decrease in trafficking incidents.

The geographical distribution of the incidents shows that Russia remains the center of reported illicit trafficking in nuclear and radioactive materials, accounting for 17 of the 30 reported cases. The remaining incidents were spread among Armenia, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, and Ukraine.

The following table presents the data, sorted in reverse chronological order of incident report dates. Due to the vagueness of reports on trafficking incidents and seizures, it is often difficult to categorize accurately the type of material involved. This table should be used as a guide to the approximate number and type of incidents reported during 2004. Entries in this table should not be taken as confirmation that a specific substance was, in fact, seized. No attempt has been made to verify the reports from which these summaries are drawn.

Summary of Incidents Involving Illicit Trafficking of Radioactive and Nuclear Materials in the Newly Independent States during 2004

Date of Report	Date of Incident	Material(s) Seized or Diverted	Quantity of Material	Reported Origin of Material	Reported Destination of Material	Location Where Material Was Seized	Reported Perpetrator(s)
12/29/04	unspecified	depleted uranium container contaminated with iridium	37 kg	unspecified, but probably stolen from an industrial facility	Kazakhstan	Ilek border checkpoint, Russian-Kazakhstani border	a resident of Orenburg, Russia
11/24/04	11/23/04	iridium-192	13 lead cases with iridium-192	South Korea	South Korean DAEWOO-affiliated branch on Sakhalin	the Korsakov seaport on Sakhalin Island, Russia	no suspects yet identified

Date of Report	Date of Incident	Material(s) Seized or Diverted	Quantity of Material	Reported Origin of Material	Reported Destination of Material	Location Where Material Was Seized	Reported Perpetrator(s)
11/08/04	11/08/04	cobalt-60	unspecified	unspecified	unknown	Tbilisi suburb, Georgia	no suspects yet identified
11/05/04	unspecified	radioactive scrap metal	more than 5 tons	Aktau Chemical Combine, Mangistau Region, Kazakhstan	unspecified	Aktau Chemical Combine, Mangistau Region, Kazakhstan	no suspects yet identified
11/02/04	11/01/04	radioactive scrap aluminum	two parcels of scrap metal, 20 kg each, and two pieces of pipe removed from military equipment	Krasnoyarsk Russia	a metal trading company in Chelyabinsk Oblast, Russia	a metal trading company in Chelyabinsk Oblast, Russia	no suspects yet identified
11/02/04	unspecified	four plutonium-238 "pills," three cadmium-109 "pills," and two iron-55 "pills"	no more than 1 milligram (initial reports said 400 grams)	unspecified, but probably abandoned by the former Zmeinogorsk ore mining combine when it was closed down in 1992	suspect surrendered material to the local police	Zmeinogorsk, Altay Kray, Russia	Leonid Grigorov, a nuclear physicist, former employee of the Zmeinogorsk ore mining combine, Altay Kray, Russia See story in this issue of the <i>NIS Export Control Observer</i>
10/29/04	10/29/04	radioactive metal slag	unspecified	unspecified	YuzhUralLes Company, Shershni, Chelyabinsk Oblast, Russia	YuzhUralLes Company, Shershni, Chelyabinsk Oblast, Russia	no suspects yet identified
10/19/04	unspecified	radioactive scrap metal	unspecified	possibly brought from Russian naval base at Vilyuchinsk, Kamchatka Oblast	unspecified	seaport of Petropavlovsk – Kamchatskiy, Russia	no suspects yet identified
10/19/04	10/19/04	depleted uranium	unspecified	unspecified	material was brought to a local scrap metal dealer	Saratov, Russia	discovered by homeless people
10/18/04	10/15/04	cesium-137	unspecified	unspecified	unspecified, suspect was trying to export material when arrested	unspecified, but presumably at a border crossing point	45-year-old Gagik Tovmasyan, a resident of Yerevan, Armenia
09/27/04	09/21/04	plutonium-239	55 old-fashioned Soviet smoke detectors each containing a few micrograms of plutonium	unspecified	unspecified, suspects were attempting to sell material when arrested	near Bishkek, Kyrgyzstan	a Kyrgyz citizen, a 50-year-old farmer from the town of Malovodnyy, Moskovskiy District, Chuyskaya Oblast, Kyrgyzstan
09/02/04	unspecified presumably late August or early September 2004	americium-241	unspecified	unspecified	suspects were driving into Kyiv with the material in their car when arrested	roadside checkpoint near Kyiv, Ukraine	52- and 46-year-old residents of Kyiv Oblast, Ukraine

Date of Report	Date of Incident	Material(s) Seized or Diverted	Quantity of Material	Reported Origin of Material	Reported Destination of Material	Location Where Material Was Seized	Reported Perpetrator(s)
08/18/04	unspecified, probably January 2004	strontium	"two slabs," weight unspecified	unspecified	undercover agents from Voronezh, Russia, Directorate for Fighting Organized Crime	near the city of Voronezh, Russia	four Russian nationals and one citizen of Ukraine
08/16/04	08/15/04	strontium and plutonium, but not confirmed	"three containers," weight unspecified	unspecified	unspecified	Kodyma, Odessa Oblast, Ukraine	three residents of Kodyma, Odessa Oblast, Ukraine
08/12/04	08/10/04	industrial instrument containing cesium-137	unspecified	A metal trading company in Mikhailovka, Volgograd Oblast, Russia	unspecified	Krasnyy Oktyabr Metals Factory, Volgograd, Russia	no suspects yet identified
07/19/04	unspecified, sometime in summer 2003	uranium-235	15 kg	probably the Konstantinov Kirovo-Chepotsk Chemical Combine	probably St. Petersburg, Russia	Kirovo-Chepotsk, Russia	a suspect from St. Petersburg, named Marat (who appeared to be from the Caucasus region)
06/01/04	the end of May 2004	steel contaminated with radionuclides	unspecified	unspecified	unspecified	the town of Stupino, Moscow Oblast, Russia	unspecified
06/01/04	the end of May 2004	plutonium-239	a container holding approximately a dozen smoke detectors	unspecified	unspecified	Moscow, Russia	unspecified
05/27/04	05/12/04	americium-241	30 kg (total weight including container)	Turkey	probably Kazakhstan	Novorossiysk seaport, Russia	Alladin Gyuvendi, most likely Turkish national
05/18/04	unspecified, "several weeks before the announcement to the media"	"red mercury"	11 kg	unspecified	Middle East	Odessa, Ukraine	two Middle East residents
05/06/04	unspecified, but probably early April 2004	cesium-137	"two containers," weight unspecified	unspecified	unknown	the town of Armyansk, Crimea, Ukraine	unspecified number of Ukrainian suspects
04/21/04	04/20/04	a container contaminated with iridium-192	a container used for storing iridium-192	unspecified	unknown	Yekaterinburg-Tyumen highway, Sverdlovsk Oblast, Russia	no suspects yet identified
03/31/04	unspecified	cesium and strontium (probably cesium-137 and strontium-90)	unspecified	South Korea	unknown, presumably Sakhalin Island, Russia	the Korsakov seaport, Sakhalin Island, Russia	no suspects yet identified

Date of Report	Date of Incident	Material(s) Seized or Diverted	Quantity of Material	Reported Origin of Material	Reported Destination of Material	Location Where Material Was Seized	Reported Perpetrator(s)
03/26/04	03/25/04	unspecified radioactive isotopes	“a cylinder, 24 cm in length and 15 cm in diameter”	unknown	unknown	the town of Elektrostal, near Moscow, Russia	no suspects yet identified
03/15/04	03/13/04	plutonium-beryllium neutron source	3 grams	Russia	Afghanistan or Pakistan, according to other reports Pakistan or India	Dushanbe, Tajikistan	a 50-year-old unemployed resident of Fergana, Uzbekistan, and two Tajikistani citizens
03/13/04	unspecified	unspecified radioactive material	unspecified	unspecified	unspecified	Sadakhlo border post, Georgian-Armenian border	an Armenian citizen
02/24/04	02/24/04	Conflicting reports initially indicated materials included: uranium-235, uranium-238, cesium-137, cesium-134, and barium-137. Other sources report only uranium-238. Subsequent reports denied the presence of any radioactive materials.	400 grams	unspecified, probably Ukraine	unspecified, probably Hungary	Tysa border post, Ukrainian-Hungarian border	Yuriy I., a resident of Mukachev, Ukraine
01/28/04	unspecified	unspecified, “gamma-radiation sources”	“several containers,” weight unspecified	unknown	an enterprise in Ufa, Bashkortostan	customs clearing house, Bashkortostan, Russia	no suspects yet identified
01/20/04	unspecified, probably January 17-18, 2004	radioactive scrap metal	unknown	unspecified, probably Atkarsk, Saratov Oblast, Russia	unspecified	seaport of Novorossiysk, Russia	no suspects yet identified

Summaries from the NIS Press

Reports on Plutonium Found in Siberia Corrected

Editor’s Note: The following article tracks the coverage in the Russian media of an incident concerning the discovery of radioactive materials that were held by a private individual without the appropriate authorizations. It demonstrates how lack of correct technical information can lead to the sensationalizing of such stories, but how, in the end, diligent reporting gradually uncovered a wealth of information about the incident and corrected the initial over-dramatization of the episode.

On October 28, 2004, the Kreatika center for advertising campaigns, based in Barnaul, Altay Kray, Russia, placed a news report on its website about an unnamed resident of Zmeinogorsk, Altay Kray, who on October 18 surrendered a “capsule with uranium” to the local police following a police announcement encouraging people to surrender weapons for a reward.[1] The next day, another report appeared on the

same website alleging that this individual, a former nuclear physicist who previously worked at the Zmeinogorsk ore mining combine, in fact surrendered eight containers filled with 400 grams of weapons-grade plutonium. According to this latter report, the individual collected the plutonium at the combine when it was closed down in 1992, and since that time stored the substance in his basement.[2] On October 30, the news was picked up by two central Russian newspapers, *Rossiyskaya gazeta* and *Komsomolskaya pravda*. *Rossiyskaya gazeta* identified the individual as 50-year-old “Aleksy G.” and reported that the substance in the containers was “industrial plutonium-238” that was used in devices to measure the lead content in ores. The newspaper also alleged that Aleksy G. had contracted cancer through handling the radioactive material and needed money for treatment—the reason he surrendered the plutonium.[3] *Komsomolskaya pravda* reported that a former nuclear geophysicist of the Zmeinogorsk ore mining combine surrendered “eight flasks each filled with 50 grams of cadmium.” [Editor’s Note: *Cadmium is a soft, bluish-white metal easily cut with a knife. It is an extremely toxic metal commonly found in industrial workplaces, particularly where any ore is being processed or smelted. The only mineral containing significant quantities of cadmium is greenockite, although some is present in sphalerite. Almost all commercially produced cadmium is obtained as a byproduct of the treatment of zinc, copper, and lead ores. Cadmium is used extensively in electroplating, which accounts for about 60% of its use. It is also used in many types of solder, for standard e.m.f. cells, for nickel-cadmium batteries, and in rods to control atomic fission.*] The flasks were described as gauges used to determine the composition of ore deposits and measure their radioactivity.[4]

The incident gained international publicity on November 2, when the influential Russian news agency ITAR-TASS issued a report, which identified the individual as Leonid Grigorov, a resident of Zmeinogorsk, and described the surrendered items as “eight containers each filled with 50 grams of weapons grade plutonium-238.”[5] [Editor’s Note: *Plutonium-238 is used for industrial purposes, in particular for making special-purpose batteries, and cannot be used as the core of a nuclear weapon. Weapons-grade plutonium is different material—a mixture of plutonium isotopes containing more than 94% plutonium-239.*] The ITAR-TASS report generated a new wave of press reports, both in Russian and foreign media.[6,7,8,9] The new reports provided fresh details on the identity of the individual and circumstances of the incident. Grigorov was described as a nuclear physicist who worked for many years at a laboratory of the Zmeinogorsk ore mining combine. According to Grigorov, he found the containers used in his laboratory seven or eight years ago at a dump. Grigorov sent letters to several institutions regarding the material, which should have been submitted to Radon Special Combine, a state enterprise responsible for disposal of radioactive waste. However, when his approaches went unanswered, Grigorov put the containers in a lead flask and kept them in his garage. Grigorov was quoted as saying that as an expert, he knew that he had to isolate the material in order to avoid tragic consequences. The nuclear physicist eventually decided to turn in the plutonium after reading the above-mentioned police announcement. Grigorov hoped to receive a reward for his find, allegedly worth \$3.3 million. However, the reports claimed, instead of being rewarded Grigorov would face criminal charges for illegal storage of radioactive materials. “Having hidden the hazardous find, Grigorov acted as any person should from the moral point of view. But we are considering the situation from a legal perspective. Grigorov’s actions fall under the Criminal Code,” a local police officer was quoted as saying.[5,6,7,8,9]

However, another Russian news agency, RIA Novosti, provided different information, contradicting earlier stories. Citing the Altay Kray Main Directorate on Civil Defense and Emergency Situations, RIA Novosti reported that the items surrendered to the police were ten containers, 10 millimeters in diameter and 12 millimeters in length, four of which were filled with “radioactive cadmium and plutonium-238,” while the six others were not radioactive. The pill-shaped containers were manufactured in 1988, and, according to Igor Putilov, chief specialist of the directorate’s Department of Radiological, Chemical, and Biological Defense, were used in mining to analyze ore content. He stressed that the containers did not present any health hazard and could not be used in explosive devices. It was also reported that the items were placed in a special storage site run by the state geophysical enterprise entitled Talovskaya Geofizicheskaya Partiya.[10] It eventually became clear that the RIA Novosti report was the closest to the truth.

Commenting on the case, Nikolay Shingarev, spokesman for the Russian Federal Atomic Energy Agency, stated that the recovered material “was not weapons-grade, but an isotope used in various devices.” “Any

plant, which has a license, can freely buy plutonium-238,” said Shingarev, adding “as for weapons-grade plutonium, it is strictly controlled.”[11,12]

A November 11, 2004, report in the Barnaul (Altay Kray) newspaper *Svobodnyy Kurs* clarified the events of the case. According to the report, the original story was written by a well-known Barnaul journalist who placed the news on the Kreatika website. According to Dmitriy Boyko, identified by *Svobodnyy Kurs* as head of the Zmeinogorsk public safety police, Grigorov surrendered a lead container, 10 millimeters in diameter and 20 millimeters in height, filled with several “pills.” The police reported the container to the Altay Kray Main Directorate on Civil Defense and Emergency Situations, which, in turn, reported it to the local branch of the State Sanitary and Epidemiological Service, which checked the radiation level of the container. Subsequently, the container was placed into storage at Talovskaya Geofizicheskaya Partiya. The radiation level of the pills was determined to be slightly higher than the initial readings indicated, while the container itself had a level equal only to normal background radiation. Boyko confirmed that a criminal case has been opened in connection with the incident. However, no information regarding Grigorov’s profile was provided.[13]

Aleksandr Narozhnov, chief sanitary inspector of Zmeinogorsk, said the container did not pose a threat to public health. This conclusion was echoed by Yuriy Shalygin, head of the Altay Radiation Safety Inspection Department of the Federal Service for Environmental, Technological, and Nuclear Oversight. Experts from Talovskaya Geofizicheskaya Partiya identified the contents of the container as low-powered laboratory sources used by the Gagara laboratory installation for ore analysis, consisting of four plutonium-238 pills produced in 1988, three cadmium-109 pills, and two iron-55 pills produced in 1980-1984. Valeriy Borisov, head of the radiation hygiene department of the regional Gossanepidnadzor (now the Federal Service for Oversight in the Sphere of Protection of Consumers Rights and Population Welfare), stated that the weight of the plutonium involved did not exceed 1 milligram. Upon completion of the investigation, the container will be transferred to the Novosibirsk branch of Radon for storage.[13]

Sources: [1] “Zmeinogorskaya militsiya rabotayet na yadernom toplive,” Kreatika website, October 28, 2004, <<http://www.kreatika.ru/news/hotnews.html?id=545&lentId=12>>. [2] “A u nas v zakromakh: Sensatsiya” [See what we have: a sensation], Kreatika website, October 29, 2004, <<http://www.kreatika.ru/news/hotnews.html?id=547&lentId=12>>. [3] Sergey Tplyakov, “Pogreb s yadernoy nachinkoy” [Basement with nuclear stuffing], *Rossiyskaya gazeta*, No. 241 (3618), October 30, 2004; in Integrum Techno, <<http://www.integrum.com>>. [4] Aleksandr Agafonov, “400 grammov kadmiya khranilis v pogrebe” [400 grams of cadmium were stored in a basement], *Komsomolskaya pravda*, No. 206, October 30, 2004; in Integrum Techno, <<http://www.integrum.com>>. [5] Valentin Pavlov, “Oruzheynyy plutoniy-238 dobrovolno sdal v militsiyu zhitel altayskogo goroda Zmeinogorska, no protiv nego vozvuzhdno ugolovnoye delo” [A resident of the Altay town of Zmeinogorsk voluntarily surrendered weapons grade plutonium-238 to the police but a criminal case has been launched against him], ITAR-TASS, November 2; in Integrum Techno, <<http://www.integrum.com>>. [6] Interfax, November 2, 2004; in “Russia: Man Surrenders 8 Containers of Plutonium to Police in Siberia,” FBIS Document CEP20041102000027. [7] “Zhitel altayskogo goroda khranil doma plutoniy” [A resident of the Altay town kept plutonium at home], NTV television channel, November 2, 2004, in Integrum Techno, <<http://www.integrum.com>>. [8] Vladimir Buldygerov, “Initsiativa nakazuyema?” [Is initiative punishable?], *Gudok*, November 5; in Integrum Techno, <<http://www.integrum.com>>. [9] Jeremy Page, “Scientist hid ‘dirty bomb’ plutonium in his garage,” *Times* online version, November 3, 2004, <<http://www.timesonline.co.uk/article/0,,3-1341724,00.html>>. [10] “V Altayskom kraye byvshiy geofizik-yadershchik sdal v militsiyu 10 konteynerov s radioaktivnym kadmiyem i plutoniyem-238” [A former nuclear geophysicist surrendered ten containers with radioactive cadmium and plutonium-238 to the police in the Altay Kray], RIA Novosti, November 2, 2004; in Integrum Techno, <<http://www.integrum.com>>. [11] ITAR-TASS, November 2, 2004; in “Nuclear Official Says No Cases of Missing War-Grade Plutonium Registered in Russia,” FBIS Document CEP20041102000367. [12] “Fizik sdal militsii 8 konteynerov s plutoniyem” [Physicist surrendered eight containers with plutonium to the police], BBC Russian service, November 2, 2004; in Integrum Techno, <<http://www.integrum.com>>. [13] Tamara Dmitriyenko, “Mozhno li nayti \$3,3 mln. na svalke?” [Is it possible to find \$3.3 million at a dump?], *Svobodnyy kurs* (Barnaul), No. 46, November 11, 2004; in Integrum Techno, <<http://www.integrum.com>>.

Restructuring Ukraine’s Arms Exports: An Expert’s Opinion

The online publication [Defense-Express](#) is maintained by the Kiev-based Center for Army, Conversion and Disarmament Research, which is headed by a group of independent journalists who write on export control and weapons transfer issues.[1] To date, it is the only online outlet in Ukraine that publishes materials related to Ukrainian and international defense and arms trade issues. On October 6, 2004, the website posted an article by Serhiy Goncharov, an expert from the Kiev-based Center for Political Risks Assessment, entitled “Military Export Control: ‘Conservative Modernization’ or Radical Reform?” In the article the author analyzes current Ukrainian arms trade mechanisms and provides his views on how to adjust Ukraine’s export controls to make the Ukrainian arms trade more efficient and up to date.

Below are the major arguments made in the article.

- The Committee on Military and Technical Cooperation and Export Control should focus on general supervision and guidance of military exports; its current micromanagement of arms sales contracts is ineffective and unnecessary.
- Ukraine's sluggish licensing mechanism cannot promptly react to demands for "emergency deliveries" of conventional arms. While able to secure long-term arms export contracts, Ukrainian arms traders are largely unsuccessful in selling small numbers of weapons when customers want to receive them urgently. The State Service on Export Control should have a special procedure for licensing exports of arms in cases when customers need them immediately.
- The concept of interagency review of license applications needs revision. In cases when weapons need to be exported promptly, the lengthy process of interagency coordination may lead to losing lucrative deals. Hundreds of such "micro-demand" customers appear in the arms market every year, and many of them are interested in cheap Ukrainian arms. It would make sense to give exporting Ukrainian companies some type of "open license" for a period of one year that would allow them to promptly transfer weapons to the countries that often resort to urgent purchases of weapons. Such arms transfers, however, should not run counter to Ukraine's international commitments.
- The criteria used for controlling arms exports should be altered. Currently, striking power—the potential to inflict physical damage and human casualties—is the main criterion that is taken into account when making licensing decisions. By this standard, exports of, for example, tanks and armored personnel carriers are controlled more strictly than exports of firearms. But firearms are extremely difficult to control in terms of their use, including for criminal and terrorist purposes, and illegal re-export. As such, the criterion of destabilization potential—the ability of exported weapons to fuel domestic or international armed conflicts—should have more weight in licensing decision-making, and exports of armored vehicles should be more liberal than export of machine-guns or grenade launchers.
- Ukraine's international obligations and membership in the multilateral export control regimes are also to be revisited. Although it is politically beneficial for Ukraine to be a part of international nonproliferation institutions, in some cases these international commitments negatively affect the country's defense export capabilities. For instance, Ukraine rather hastily joined the International Code of Conduct Against Ballistic Missile Proliferation. Adherence to this arrangement hinders Ukraine's prospects for space cooperation with such countries as China, India, and Egypt, as well as arms trade with these countries. Another example of poorly thought through decision is a recently announced willingness to join the Australia Group, which may result in additional trade restrictions and limitations. Participation in multilateral nonproliferation arrangements may turn disadvantageous to Ukraine in at least two ways: first, it may result in economic losses in the form of scrapped contracts and "opportunity costs," and second, Ukraine is periodically criticized for violations of the arrangements (e.g., the notorious "Kolchuga" scandal), even if the alleged violations never occurred.
- Adjustment of Ukraine's arms export infrastructure to today's arms markets may take years, and will require the concerted efforts of the Cabinet of Ministers and the Parliament.

Mr. Goncharov's approach is consistent with defending the legitimate rights of Ukrainian arms manufacturers to market their products abroad. However, the reforms that he proposes are inconsistent with the overall direction of the Ukrainian policy in the area of arms exports, which since the late 1990s has been continually shifting towards tighter controls over arms exports and increasing participation in international nonproliferation regimes.[2] It must be noted that in the past the issues related to Ukrainian arms exports had frequently caused serious tensions in Ukraine's relations with the West, which was particularly evident in the aftermath of the controversy surrounding the alleged sales of Kolchuga early warning radar systems.[3] Therefore the Ukrainian arms exports will certainly be high on the agenda of

newly elected Ukrainian president Viktor Yushchenko, who is seeking to strengthen ties with the United States and Western Europe.

Editor's Note: The NIS Export Control Observer will continue to monitor the debate over Ukrainian arms export policy and report on this subject periodically.

Sources: [1] Defense-Express publishes materials in both Russian and English. Respective websites are <<http://www.defense-ua.com/rus/>> and <<http://www.defense-ua.com/eng/>>. The independent English translation of the article is available through Lexis-Nexis at: "Export regulations restricting Ukraine's arms sales," BBC Worldwide Monitoring, October 28, 2004. [2] "Ukraine Tightens Controls on Dual-Use Transfers," *NIS Export Control Observer*, No. 2, February 2003, p. 2; "Ukrainian Defense Ministry Newspaper Lauds Ukraine's Export Controls," *NIS Export Control Observer*, No. 13, February 2004, p. 13, <<http://cns.miis.edu/nis-excon/>>. [3] "Ukraine under Pressure for Iraq Deal," *NIS Export Control Observer*, No. 2, February 2003, p. 5; "Chairman of Ukraine's State Service on Export Control Denies Illegal Sales," *NIS Export Control Observer*, No. 10, October 2003, pp. 13-14; Sarah J. Diehl, "Duelfer Report Finds Iraq Lacked WMD, Many Countries Provided Illegal Arms to Iraq," Special Report, *NIS Export Control Observer*, No. 21, October 2004, pp. 28-32, <<http://cns.miis.edu/nis-excon/>>.

International Developments

IAEA Investigates Undeclared Nuclear Activities in Egypt

On November 5, 2004, the Associated Press reported that, according to diplomats speaking on condition of anonymity, IAEA inspectors found traces of plutonium near an unspecified Egyptian nuclear facility. The media reports did not indicate when the discovery was made.[1,2] In press reports published in January 2005, a diplomat close to the IAEA stated that the agency was initially prompted to launch an investigation into activities in Egypt by research articles published by the Egyptian scientists, who in the past were involved in undeclared experiments with uranium (discussed below).[3,4] Because of the above developments, the IAEA has been actively investigating Egypt since the summer of 2004. The diplomat added that the agency is currently evaluating environmental samples collected in Egypt in December 2004. The test results are expected in late January 2005.[4] The ongoing IAEA investigation has not yet determined whether the discovered plutonium particles represent evidence of a secret attempt to produce plutonium, possibly as part of a clandestine nuclear weapons program, *or might have* originated from a damaged fuel element from a research reactor. The environmental samples collected by the IAEA in Egypt are now being analyzed in several European research laboratories. A Vienna-based diplomat familiar with the IAEA investigation, who refused to permit his name to be used in press reports, stated that the available information suggests that the plutonium particles could not have been released into the environment later than the 1980s. The diplomat also warned against making premature assumptions regarding Egypt prior to the completion of the IAEA investigation.[1,2] According to another Vienna-based source close to the IAEA, the plutonium particles found by the IAEA inspectors in Egypt were a direct indication of so-called "hot cell activity," a characterization implying that Egypt had engaged in clandestine work to obtain plutonium.[5] [*Editor's Note: Hot cells are shielded rooms used for separation of plutonium or other isotopes from radioactive materials.*]

On November 7, 2004, head of the Egyptian National Atomic Energy Agency Ali Islam rejected media speculation about Egypt's alleged clandestine nuclear capabilities and emphasized that the country is committed to the NPT and to cooperating with the IAEA.[6] On the same day, presidential spokesman Magued Abdel Fattah told reporters that the Egyptian nuclear program is transparent and open to international scrutiny. He added that the nuclear sites in Egypt had been inspected by IAEA experts as recently as October 2004.[7,8] On November 8, 2004, the Egyptian Foreign Ministry issued a joint statement with the Egyptian Ministry of Electricity and Energy in which it was stated that the media reports about an alleged secret nuclear program in Egypt had "no basis of truth." [8]

In a further development of the IAEA investigation, on January 4, 2005, unnamed diplomats told the Associated Press that IAEA experts had found further evidence of secret nuclear experiments that could have been used in weapons programs in Egypt. The diplomats specified that while most of the work had been carried out in the 1980s and 1990s, IAEA experts are also examining some work that was performed as recently as 2004. According to the diplomats, Egyptian scientists, who may have acted without governmental approval, attempted to produce various amounts of uranium products, including several pounds of uranium metal and uranium tetrafluoride, which they did not report to the IAEA as they were

supposed to under NPT provisions.[3,9] *[Editor's Note: Uranium metal would be suitable for use in a reactor to produce plutonium. The uranium tetrafluoride (UF4) is a precursor to uranium hexafluoride gas (UF6), which is the material used in uranium enrichment facilities, where uranium can be enriched to weapons grade. Both highly enriched uranium and plutonium can be used as the core of nuclear weapons.]*[9]

While the IAEA investigation continues, preliminary findings indicate that the Egyptian experiments were largely sporadic, lacked an overall objective, and entailed insignificant amounts of nuclear material.[4,9] The combination of these circumstances, according to one of the unnamed diplomats familiar with the matter who had made the disclosure to the Associated Press on January 4, 2005, leads to the conclusion that the nuclear experiments were not directly aimed at creating a nuclear weapons program.[9] Another diplomat close to the IAEA asserted that most of the nuclear experiments discovered in Egypt had taken place before 1982, which is when Egypt signed its comprehensive inspection agreement with the IAEA.[4]

When queried in early January 2005 on unfolding developments, IAEA spokesman Mark Gwozdecky refrained from making public comments regarding the ongoing investigation into the Egyptian activities.[9] In light of the recent developments, the Egyptian government spokesman, Magdy Rady, repeated the earlier assertions that Egypt runs limited nuclear programs for medical and scientific research purposes and that they are closely monitored by the IAEA. Mr. Rady stated, "Nothing about our nuclear program is secret and there is nothing that is not known to the IAEA." [9]

On January 21, 2005, unnamed Western diplomats told the Reuters news agency that IAEA experts are inspecting a laboratory facility located close to Cairo. According to the diplomats, the facility was designed to reprocess plutonium and was likely built in the 1980s. The main purpose of the IAEA inspection is to determine whether any undeclared nuclear experiments with plutonium were carried out on its premises in the past. The IAEA spokesperson declined to comment about this development.[3] Another Western diplomat familiar with the IAEA inspection in Egypt told the Associated Press, "It's what the agency does once there [are] grounds to look at past activities." [10] Western diplomats, speaking on the condition of anonymity, also strongly urged against drawing premature comparisons between Egypt's probable past nuclear experiments and the clandestine nuclear programs in Iran, Libya, and South Korea. In early January 2005, Egyptian Prime Minister Ahmed Nazif repudiated media claims about the alleged existence of the clandestine nuclear program in Egypt and stated that the Egyptian nuclear program is peaceful and is primarily directed "towards generating electricity and desalinating water." [3] In addition to this, Egyptian presidential spokesman Suleiman Awad stated that the Egyptian government is collaborating with the IAEA on transparency of its energy programs.[10]

The Egyptian government's first cautious acknowledgment of the undeclared nuclear activities came on January 25, 2005. The Egyptian pro-government Middle East News Agency (MENA) quoted an unnamed Egyptian official who repeated that Egypt had a peaceful nuclear program and admitted that "the difference in interpreting some aspects of the safeguards agreement... led to a failure to inform the IAEA about some experiments and research activities which were undertaken and which are allowed to be undertaken." [11] The MENA report mentioned that Egypt and the IAEA are currently working on resolving this issue "through complete cooperation and transparency." [11] The IAEA's characterization of the undeclared nuclear activities in Egypt became further clarified on January 27, 2005, when the head of the Egyptian National Atomic Energy Agency Ali Islam told the MENA that while the UN agency found the Egyptian nuclear program to be "sound," it had still officially asked the Egyptian government "to take corrective steps in declaring research activities." [12] Unnamed Western diplomats in Vienna told Reuters that the IAEA will soon decide on whether information collected in Egypt merits submitting a special report to the 35-member Board of Governors, as was the case with the disclosures regarding clandestine weapons-related nuclear activities in South Korea and Iran.[12]

Editor's Notes: Egypt abandoned plans to develop nuclear weapons in the early 1970s. In the 1960s, the Soviet Union and People's Republic of China refused to provide nuclear weapons to Cairo. By the early 1970s the Egyptian government abandoned its project to build a plutonium production reactor and a reprocessing plant. Egypt joined the NPT in 1981. In 1982, Egypt signed a Nuclear Safeguards Agreement with the IAEA, as required by NPT provisions. The IAEA Nuclear Safeguards Agreement allows IAEA

inspectors to monitor the declared civilian nuclear activities of the parties to the NPT in order to ensure that such activities are not diverted for military purposes. Egypt has not yet signed the Additional Protocol to the Nuclear Safeguards Agreement with the IAEA, an amendment that would significantly expand the agency's inspection rights.[13,14]

At present, Egypt runs a very limited nuclear program, which consists of two small nuclear reactors that are primarily used for medical and scientific research purposes at the Inshas Nuclear Research Center. There are no nuclear power plants or reprocessing or enrichment facilities in Egypt. Egypt possesses so-called "hot cells," or shielded rooms that can be used for the production of radioisotopes, as well as for plutonium separation. In 2002, the Egyptian government considered building its first nuclear power reactor and even selected a site near the coastal town of Al-Dabaa for this purpose. However, recently the pro-government Egyptian newspaper Al-Ahram reported that the plant site would be sold to accommodate development of the tourist industry. Notwithstanding the limited nuclear program, Egypt in recent years has been one of the major recipients of nuclear assistance through the IAEA Technical Cooperation Program, which provided Cairo with training and equipment for its nuclear infrastructure.[1,2,5,7,9,14]

Sources: [1] "Plutonium traces found at Egypt nuke facility," Associated Press, November 5, 2004. [2] George Jahn, "U.N.: Traces of Plutonium Found in Egypt," Associated Press, November 5, 2004. [3] Louis Charbonneau, "UN inspectors visit Egypt plutonium lab - diplomats," Reuters, January 21, 2005. [4] Michael Adler, "IAEA probing Egypt for atomic experiments," Agence France-Presse, January 6, 2005. [5] Paul Kerr, "IAEA Investigating Egypt and Taiwan," *Arms Control Today*, January/February 2005, <http://www.armscontrol.org/act/2005_01-02/Egypt_Taiwan.asp>. [6] "Egypt's Atomic Energy Chief Denies Carrying Out Banned Nuclear Activity," MENA news agency (Cairo), November 7, 2004; in FBIS Document GMP20041107000178. [7] "Egypt rejects allegations of secret nuclear programme," Agence France-Presse, November 7, 2004; in Lexis-Nexis Academic Universe, <<http://www.lexis-nexis.com>>. [8] "Egypt rejects speculations over nukes," CHINAdaily website, November 8, 2004, <http://www.chinadaily.com.cn/english/doc/2004-11/08/content_389467.htm>. [9] "Egypt Said to Run Nuclear Tests With Possible Link to Weapons," Associated Press, January 4, 2005. [10] Antonio Castaneda, "Diplomat: IAEA Tours Egyptian Laboratory," Associated Press, January 22, 2005. [11] "Egypt Says Failed to Tell UN Watchdog of Research," Reuters, January 25, 2005. [12] "Egypt says IAEA sees its nuke research as 'sound,'" Reuters, January 28, 2005. [13] "Egypt denies reports of secret nuclear programme," Deutsche Presse-Agentur, November 7, 2004; in Lexis-Nexis Academic Universe, <<http://www.lexis-nexis.com>>. [14] Country Profile: Egypt: Nuclear Overview, Nuclear Threat Initiative website, <http://www.nti.org/e_research/profiles/Egypt/Nuclear/index.html>.

Successful Repatriation of Soviet-Origin HEU from the Czech Republic to Russia

Six kg of HEU fuel were successfully returned to Russia from the Czech Republic in a mission completed on December 22, 2004. The operation was carried out by the United States, the Czech Republic, the Russian Federation, and the IAEA within the framework of the Global Threat Reduction Initiative aimed at identifying, securing, recovering and/or facilitating disposition of vulnerable nuclear materials around the globe.[1] The HEU fuel was originally delivered by the Soviet Union to the Soviet-designed research reactor located in Rez, north of Prague, in the 1960-1970s.[2] Because the HEU fuel has not been irradiated, it could have been particularly attractive to terrorists seeking to make a crude nuclear device.[3] The packaging and removal operation was monitored by IAEA safeguards inspectors and technical experts from the U.S. DOE National Nuclear Security Administration (NNSA).[1] The HEU fuel was repatriated to the All-Russian Scientific Research Institute of Atomic Reactors (NIAR) in Dimitrovgrad, Ulyanovsk Oblast, in the form of fuel assemblies and powder.[2,4] NIAR Director for Technical Issues Vladimir Kalygin stated that the repatriated HEU will be first used for scientific purposes, and then it will be either reprocessed or used as nuclear reactor fuel.[2,4] This is the sixth operation involving HEU repatriation to Russia in the past two years. The first involved the repatriation of 48 kg of Soviet-origin HEU fuel returned from Serbia to Russia in August 2002[1]; this operation was partly funded by the Nuclear Threat Initiative, with the principal financing coming from the U.S. DOE and Department of State. In addition, four other HEU shipments have been funded by the DOE and account for 58 kg of HEU returned to Russia from Romania (September 2003, 14 kg), Bulgaria (December 2003, 17 kg), Libya (March 2004, 17 kg), and Uzbekistan (September 2004, 10 kg).[5, 6, 7]

Sources: [1] "Highly Enriched Uranium Repatriated from the Czech Republic," U.S. National Nuclear Security Administration press release, December 22, 2004, NNSA website, <<http://www.nnsa.doe.gov>>. [2] "Na NIAR iz Chekhii privezli partiyu urana" [A consignment of uranium was delivered to the Scientific Research Institute of Atomic Reactors from the Czech Republic], *Glavnyye novosti Ulyanovska* (Ulyanovsk) information agency, December 24, 2004; in Integrum Techno, <<http://www.integrum.com>>. [3] Mike Nartker, "HEU returned to Russia," Global Security Newswire, December 23, 2004, Nuclear Threat Initiative website, <<http://www.nti.org>>. [4] "Yadernyy podarok dlya Dimitrovgrada" [Nuclear present for Dimitrovgrad], *Ulyanovskiy meridian* (Ulyanovsk), December 29, 2004; in Integrum Techno, <<http://www.integrum.com>>. [5] "Global Threat Reduction Initiative," IAEA fact sheet, IAEA website, <<http://www-pub.iaea.org/MTCD/Meetings/PDFplus/2004/cn139fact.pdf>>. [6] "TC and the Global Threat Reduction Initiative," January 7, 2005, IAEA website, <<http://www->

tc.iaea.org/tcweb/regional/sites/europe/news/newsstory/default.asp?newsid=56>. [7] For more information on Soviet-origin HEU repatriation, see “United States, Russia, IAEA Secure Romanian Nuclear Materials, Plan to Secure More,” *NIS Export Control Observer*, No. 11, November 2003, pp. 6-7; “HEU Removed from Bulgaria under Tripartite Initiative,” *NIS Export Control Observer*, No. 13, February 2004, pp. 16-17; “HEU from Libyan Nuclear Reactor Repatriated to Russia,” *NIS Export Control Observer*, No. 15, April 2004, p. 9; “Russia Repatriates Nuclear Fuel from Uzbekistan,” *NIS Export Control Observer*, No. 20, September 2004, pp. 9-10, <<http://cns.miis.edu/nis-excon>>.

South African Company Fined for Illegal Chemical Exports

[Editor’s Note: The following story is included in the NIS Export Control Observer as an example of global efforts to enforce export controls and curb illicit trafficking in weapons of mass destruction commodities.]

According to news reports of November 24, 2004, African Amines, a South African company based in Newcastle, was fined 100,000 rand (\$16,758 as of November 24, 2004) by the Durban Regional Court for contravening the country’s Non-Proliferation of Weapons of Mass Destruction Act (Act No. 87 of 1993) by exporting the chemical dimethylamine (DMA) to Iran and Australia without an appropriate license.[1,2] The company shipped 120 metric tons of DMA to Iran and 11 metric tons of the chemical to Australia in March and May 2003, respectively.[3]

DMA is a dual-use chemical that has a commercial application in the manufacture of explosives (Tovex water gel type), fertilizers, and water-treatment chemicals, but may also be used in the production of rocket fuel and the nerve agent Tabun.[2] *[Editor’s Note: DMA is listed in the South African declaration of controlled goods under the Non-Proliferation of Weapons of Mass Destruction Act (see Notice in Terms of Section 13 of the Nonproliferation of Weapons of Mass Destruction Act, 1993; Act No. 87 of 1993): Declaration of Certain Goods to Be Controlled Goods and Control Measures Applicable to Such Goods, Government Notice, Department of Trade and Treasury, No. 152, January, 29, 2003; in Verification Research, Training and Information Centre website, <<http://www.vertic.org/>>].*

The only producer and marketer of DMA in Africa, African Amines (a joint venture between South African chemical and energy giant Sasol Chemical Industries Ltd and Air Products South Africa, a manufacturer of industrial gases), accepted a plea bargain after being found guilty on two counts of illegal DMA export and agreed to pay the fine.[2,3] Sasol spokesperson Johann van Rheede said that the company was satisfied with the court’s verdict and stated that “justice has been served.”[2] *[Editor’s Note: Alkylamines, which include DMA, are used in a wide variety of commercial industries and products, among them paints and coatings, pharmaceuticals, plastics, and agrichemicals such as herbicides and pesticides.]*

South African National Prosecutions Authority spokesperson Makhosini Nkosi stated that the DMA had been shipped to companies in the two countries for commercial use and stressed that it had not gone to “a military or terrorist entity for use as a chemical warfare agent.” South Africa has signed international agreements to prevent the proliferation of weapons of mass destruction and “any failure by the government to honor its obligation could result in the United Nations’ withdrawing the country’s non-proliferation status,” the official said.[4]

Sources: [1] “South Africa Fines Company for Chemical Exports,” Global Security Newswire, November 24, 2004, Nuclear Threat Initiative website, <<http://www.nti.org/>>. [2] Steve Swindells, “S Africa chem firm fined for illegal export of DMA to Iran,” *Chemical News & Intelligence*, November 24, 2004; in Lexis Nexis Academic Universe, <<http://www.lexis-nexis.com/>>. [3] “South African company fined for breaching weapons laws,” Agence France-Presse, November 23, 2004; in Lexis Nexis Academic Universe, <<http://www.lexis-nexis.com/>>. [4] “Firm fined for chemical exports,” *The Courier-Mail*, November 24, 2004, <<http://www.thecouriermail.news.com.au/>>.

Heads of FSB, FBI Sign Memorandum of Cooperation

The heads of Russia’s Federal Security Service (FSB) and the U.S. FBI signed a memorandum of cooperation on December 6, 2004, at FSB headquarters in Moscow, pledging to build upon past efforts to fight against terrorism and proliferation of weapons of mass destruction.

According to FSB Director Nikolay Patrushev, past collaboration between the FBI and FSB has been “quite successful,” and the new “memorandum will allow our officers and experts to work more efficiently.” The document will allow the FSB and FBI to exchange information on a range of issues. FBI Director Robert

Mueller said the agreement was a step forward in cooperative efforts against new challenges, such as terrorism.[1]

During his visit to Moscow, Mueller also held meetings with Russian Interior Minister Rashid Nurgaliyev and Prosecutor-General Vladimir Ustinov that centered on efforts to combat terrorism. Russian-U.S. working groups have been actively collaborating since May 2002 in fighting transnational organized crime and are scheduled to meet again in Moscow in the first three months of 2005 to discuss upgrades to the information exchange system on terrorists and high-tech crimes.[2,3]

The rise of global terrorism, and recent terrorist attacks in Russia in particular, have led the FSB and FBI to cooperate more frequently. During its 10-plus years of operations in Russia, the FBI has worked with the FSB and other Russian agencies on a number of cases, including the investigation of the October 2000 *USS Cole* bombing, the October 2002 hostage crisis at a Moscow theater, and the August 2003 undercover operation involving the FBI, FSB, and British services in which a British arms trader was arrested for smuggling an IGLA-2 surface-to-air missile into the United States.[4,5,6] On the basis of a memorandum of understanding signed by the two organizations in 2002, U.S. officials have barred Chechen activists from entering the United States and suppressed a charitable organization suspected of funding terrorism.[3] Patrushev told the Russian media in December 2003 that the FSB cooperates with 87 special services and law enforcement agencies in 62 countries.[7]

Sources: [1] "Heads of FBI, Russia's FSB, Sign Memorandum of Cooperation," ITAR-TASS, December 6, 2004. [2] "Russia, US boost joint efforts against terror," Yahoo! News, December 6, 2004, <<http://news.yahoo.com>>. [3] *Rossiyskaya gazeta*, December 7, 2004; in "FBI Chief Mueller Stresses Need for Mutual Cooperation with Russia's MVD," FBIS Document CEP20041207000169. [4] Interfax, October 29, 2003; in "Russian Officials Cooperating with FBI in Hostage Raid Probe," FBIS Document CEP20031029000186. [5] "Statement of Louis J. Freeh, Former FBI Director, before the Joint Intelligence Committees," October 8, 2002, Federation of American Scientists website, <http://www.fas.org/irp/congress/2002_hr/100802freeh.pdf>. [6] Kaleb Redden, "International Cooperation to Prevent Missile Smuggling Attempt," *NIS Export Control Observer*, October 2003, No. 10, pp. 23-26, <<http://cns.miis.edu/nis-excon>>. [7] Interfax, December 19, 2003; in "FSB Shares Information with CIA, FBI in 'Real Time,'" FBIS Document CEP20031219000068.

U.S. Commerce Department Tightens Missile-Related Export Controls

A new U.S. interim rule on exports of missile-related dual-use items went into effect on November 8, 2004. The rule, issued by the U.S. Department of Commerce and published in the *Federal Register*, expands the scope of end uses for which licenses are required and adds a new "catch-all" requirement. According to this new requirement, the seller must obtain a license if the seller knows or has reason to suspect that an item to be exported, reexported, or transferred within the recipient country will be used in a rocket system or unmanned aerial vehicle (UAV) for the delivery of chemical, biological, or nuclear weapons. Further, the interim rule removes the list of missile projects of concern, and alters the definition of a "missile," formerly defined as a rocket system or UAV capable of delivering a payload of at least 500 kg to a range of at least 300 kilometers (km), removing the minimum payload requirement. These latter changes mean that any rocket system or UAV with a range of 300 km no matter what the payload weight are of concern. In addition, if an exporter is unable to determine the potential range or use of the missile system for which an item is intended, a license is required.[1] To sum up, exporters must now obtain licenses for any exports to countries listed in the regulations if the items will be used in missiles that might have a range of 300 km (regardless of payload), and must also obtain permission to export items to any country if that item will be used in a delivery vehicle for WMD materials (regardless of range).

According to a Commerce Department official cited by Global Security Newswire, the payload requirement was removed due to the lower weight of biological and chemical agents and related dissemination devices. The rule change is designed to help prevent states or terrorist groups from constructing delivery devices to carry such agents.[2] The interim rule came into effect on the date of its publication, although items shipped before December 8, 2004, did not have to obtain the new licenses. The BIS accepted comments on the interim rule through December 23, 2004. BIS is now developing final regulations.

Sources: [1] "Revisions to the Export Administration Regulations: Removal of the List of Missile Projects and Expansion of Missile-Related End-Use and End-User Controls," *Federal Register*, November 8, 2004, Vol. 69, No. 215, pp. 64657-64659. [2] Mike Nartker, "U.S. Strengthens Missile-Related Export Controls," Global Security Newswire, November 24, 2004, Nuclear Threat Initiative website, <http://nti.org/d_newswire/issues/2004_12_6.html>.

Workshops and Conferences

Annual Conference on Globalization of Export Controls Held in London

On November 15-17, 2004, the 17th Annual Conference on the Globalization of Export Controls was held in London.[1] The conference is a yearly forum for business executives and government officials to discuss recent changes to export control regulations, current export control issues, and new developments in the area of export controls. The three-day conference attracted government officials from the United States and several European countries, as well as business leaders of some of the world's largest companies.

Governments in attendance included representatives from Estonia, France, Germany, Ireland, Romania, the Russian Federation, the United Kingdom, and the United States. The European Commission and the United Nations also sent representatives. Alongside these representatives, business executives from companies such as IBM Corporation, Financial Times, Marshall Aerospace, Microsoft, Mitsui & Co., Qualcomm, Raytheon, Rolls-Royce PLC, and SAP participated on panels discussing a range of issues from changes to U.S. and European export regulations to the Proliferation Security Initiative (PSI) and corporate compliance.

The 2004 conference began with presentations on changes to French, German, UK, and U.S. export control regulations. Matthew Borman, U.S. Deputy Assistant Secretary of Commerce for Industry and Security, explained the procedures for putting together an export license application, as well as recent changes to the Federal Register regarding "Knowledge," "Red Flags," and "Safe Harbor." Jo Guthrie of the Export Control Organization at the UK Department of Trade and Industry, and Dr Günther Sprögel, Head of Munitions Control at the German Ministry of Economics, covered recent updates in UK and German export regulations, respectively.[2] Finally, Dominique Lamoureux, General Secretary of Thales International, provided information on changes to export control-related legislation and regulations in France. [*Editor's Note: Thales International is an electronics, defense, and aerospace company founded in France.*]

In addition to receiving updates on national regulations, conference participants also attended panel discussions on issues such as encryption controls, software and technical data controls, and open general export licenses (OGELS). [*Editor's Note: Similar to the U.S. Special Comprehensive License, an Open General Export License allows companies registered with the UK Export Control Organization to export freely without a Standard Individual Export License.*] Panelists from government and non-governmental organizations also debated the progress made in the PSI, Container Security Initiative (CSI), and Transshipment Country Export Control Initiative (TCECI) and discussed several new ideas. For instance, one panel discussed developing a certification system for auditing and verifying corporate internal compliance programs as a way of increasing corporate compliance.[3,4] Under the proposal, G-7 nations would implement a certification scheme similar to other corporate management systems such as Total Quality Management (TQM). [*Editor's Note: TQM is a common business management system used to ensure a certain quality in manufacturing and in the service industry.*] Third-party auditors would audit a corporation's management system and present their findings to G-7 governments for final certification. Upon certification, G-7 certified corporations would be able to trade freely with other G-7 certified corporations. However, one panel member took a different approach, suggesting that governments certify corporate officials with export control training and expertise in export control regulations.[5]

The Annual Conference on the Globalization of Export Controls has become more global in recent years. While past conference participants have been mainly from Western Europe and North American governments and businesses, this year saw increased participation from Eastern Europe and Asia.[3,6] As new export control-related initiatives like PSI, CSI, and certification develop, conferences such as this one will likely play a greater role in government-to-business outreach. The 2005 and 2006 annual conferences on the Globalization of Export Controls will be held in London and in Singapore, respectively.

Sources: [1] IBC Global Conference Daily Schedule for 17th Annual Conference on the Globalization of Export Controls. London, United Kingdom, November 15-17, 2004. [2] IBC Global Conference Pamphlet for the 17th Annual Conference on the Globalization of Export Controls. London, United Kingdom, November 15-17, 2004. [3] Toshio Watanabe, General Manager at Mitsui & Co. Ltd., "Corporate Compliance on Security Trade Controls," Presentation at the 17th Annual Conference on the Globalization of Export Controls. London, United Kingdom, November 15-17, 2004. [4] Toshio Watanabe, General Manager at Mitsui & Co. Ltd., "Outline of Certification for Corporate Internal Compliance Programs," Presentation at the 17th Annual Conference on the Globalization of Export

Controls. London, United Kingdom, November 15-18, 2004. [5] Richard T. Cupitt, "Export Control Compliance: Emerging Standards," Presentation at the 17th Annual Conference on the Globalization of Export Controls. London, United Kingdom, November 15-18, 2003. [6] Nineta Barbulescu, Head of Romanian National Agency for Export Controls, "Government-Industry Relations In a Nut Shell," Presentation at the 17th Annual Conference on the Globalization of Export Controls. London, United Kingdom, November 15-17, 2004.

Internal Compliance Program Workshops Held in Russia

In November 2004, the U.S. DOE's International Nonproliferation Export Control Program (INECP) sponsored two export control workshops in Russia. The first was organized in cooperation with the FAEA at the N. A. Dollezhal Research and Development Institute of Power Engineering (NIKIET) in Moscow on November 10-12, and the second with the support of the Projects Center of Industry Development, a private institution based in Velikiy Novgorod, on November 15-17.

The seminar at NIKIET dealt with nuclear export control and was the first instance of U.S. government cooperation with the facility since it was removed from the U.S. sanctioned entities list in late March 2004.[1] Russian attendees included representatives of the FAEA, Federal Technical and Export Control Service (FTECS), Federal Customs Union, Institute of Physics and Power Engineering (Obninsk), All-Russian Scientific Research Institute of Technical Physics (Snezhinsk), and NIKIET. Presentations by the U.S. delegation included country profiles of proliferating states, export control terminology, high-risk property management, and U.S. internal compliance programs. Presentations were also given by Russian government officials from the FAEA and FTECS, as well as representatives from the FAEA's Russian Export Control Methodological Laboratories.

The internal compliance program seminar in Velikiy Novgorod, hosted by one of Russia's official commodity identification centers, was organized for representatives from private enterprises that conduct business operations that fall under the purview of the export control system. Apart from presentations on the U.S. export control system, the participants also received relatively detailed instruction from participating Russian government officials regarding the Russian export control system—from contract development, through commodity identification and licensing, to customs and currency controls.

Source: [1] U.S. Department of State Bureau of Nonproliferation Public Notice 4677, "Lifting of Nonproliferation Measures Against Four Russian Entities," *Federal Register*, April 1, 2004, Vol. 69, No. 63, pp. 17262-17263, <<http://www.gpoaccess.gov>>.

Commodity Identification Training Workshop Held in Azerbaijan

On October 19-21, 2004, a three-day Nuclear and Nuclear-Related Commodity Identification Training workshop was organized at the Azerbaijani State Customs Committee Regional Training Center, located in Mashtaga settlement outside Baku, Azerbaijan, under the auspices of the U.S. DOE NNSA's International Nonproliferation Export Control Program (INECP). The workshop, held in collaboration with the Institute of Radiation Problems (IRP) of the Azerbaijan National Academy of Sciences, gathered 25 Azerbaijani Customs Committee and State Border Guard Service officers. Funding from the U.S. Department of State Export Control and Related Border Security Assistance (EXBS) program supported the workshop.

This workshop was part of an ongoing DOE/NNSA effort to educate Azerbaijani border control and customs enforcement officers on nuclear export control practices and to improve their skills in interdicting deceptively labeled controlled commodities. Presentations covered such topics as the international nonproliferation regimes, nuclear and dual-use commodities subject to export control, and Azerbaijani export control legislation. Daily practical exercises were also organized based on commodities discussed during the meeting. In line with the DOE's goal to encourage indigenization of the Azerbaijani export control education program, technical experts from the IRP presented the majority of the training modules during the workshop.

Technical Discussions on Nuclear Suppliers Group Held in Kazakhstan

On September 30-October 1, 2004, the Atomic Energy Committee of the Republic of Kazakhstan and the Kazakhstani Scientific-Technical Nuclear Technology Safety Center (NTCS), in cooperation with the U.S. DOE and the Pacific Northwest National Laboratory, organized a seminar entitled "Technical Discussions on the Nuclear Suppliers Group (NSG)" in Almaty, Kazakhstan. Attendees included representatives from Kazakhstani government agencies, scientific institutions, and industrial enterprises, including the Ministry

of Foreign Affairs; Ministry of Industry and Trade; Kazatomprom National Atomic Company and two of its subsidiaries, Ulba Metallurgical Plant and Mangyshlak Atomic Energy Complex; and the Institute of Atomic Energy. A representative from the Czech Republic also attended the workshop and discussed the Czech perspective on the NSG and the European Atomic Energy Community (Euratom).

The main purpose of the seminar was to provide a forum to discuss technical issues in order to assist Kazakhstan, which joined the NSG in 2002, in understanding the history, procedures, guidelines, and concepts of the NSG. Topics included Supplier Regime Characteristics, NSG History, NSG Guidelines, Trigger and Dual Use Commodities, Role of the Technical Expert, Amendments, the NSG Information Sharing System (NISS), and Operating Procedures. The talks and topics were well received and participants expressed enthusiasm for the usefulness of the information and asked many practical questions about the working and operation of NSG.

Special Report

Interview with R. Carlos Sersale di Cerisano

On November 23, 2004, the NIS Export Control Observer interviewed Ambassador R. Carlos Sersale di Cerisano, who recently completed a one-year term as Chairman of the Missile Technology Control Regime. Leonard Spector, Deputy Director of the Center for Nonproliferation Studies (CNS), Sonia Ben Ouagrham, Editor-in-Chief of the NIS Export Control Observer, and Lawrence Scheinman, CNS Distinguished Professor, conducted the interview with the editorial assistance of Elizabeth Eraker, CNS Scoville Fellow. In the interview, Ambassador Sersale di Cerisano addressed the regime's recent outreach activities, the challenges posed by intangible technology transfers and transshipment, concerns about legitimate dual-use trade, and the likely impact of UN Security Council Resolution 1540 (UNSCR 1540) and the Hague Code of Conduct on missile proliferation.

Sersale di Cerisano currently serves as the Director of International Security, Nuclear and Space Affairs in Argentina's Ministry of Foreign Affairs, where he oversees Argentine involvement in international agreements and activities related to WMD nonproliferation and disarmament and the peaceful development of nuclear energy and space affairs. He has previously served as the Director General of Human Rights in Argentina's Ministry of Foreign Affairs, Special Representative of the Director-General for UN Affairs at the UN Industrial Development Organization, and an officer in the Argentine Foreign Service.

MTCR Outreach: Libya, China, Yemen, Serbia, and Montenegro

OBSERVER: Could you highlight the MTCR's outreach activities during your year in office?

SERSALE di CERISANO: The most important outreach activities were our missions to Libya and China. Our work with Libya was based on their statement of December 2003 [that Libya would voluntarily abandon its WMD and missile programs]. That was not an achievement of the MTCR itself, but we moved very quickly to reinforce Libya's decision. In February of 2004, we went to Tripoli and assisted the Libyan government to implement and establish an export control system based on the MTCR Guidelines and the Technical Annex. Note that the MTCR has no secretariat. Its activities are based on the capacity of the chair, and the support of member countries interested in these activities, especially in regional work. In the case of Libya, with the support of some countries that have regional interests, we worked on the three different aspects that a country needs to look at to be a member of the MTCR: intelligence/information exchange, customs policy and enforcement, and implementation of the Technical Annex. On May 1-2, 2004, we set up a workshop for Libyan officials, whose participants included the MTCR chair, representatives of some supportive countries, and the co-chairs of three different MTCR groups [information sharing, customs, and technical issues]. Some countries, on a bilateral basis, are continuing to train Libyan officials in specific areas, like enforcement. I learned last week that Libya formally applied for MTCR membership. They will not get it immediately because, according to MTCR rules, they need to have an effective export control system in place. From the policy perspective, however, the Libyan case is a good example for other countries in Africa and the Middle East.

OBSERVER: So with Libya, one problem was that they possessed missiles, and we had to be concerned with what happened to those missiles and hardware?

SERSALE di CERISANO: We had to be concerned not only with the hardware, but also with the intangible technology that they had. Many of their people have been trained in the manufacture of missiles. The same applies for the nuclear sector. In the missile sector, however, they had very knowledgeable individuals and a significant program—a program that was not related to the exploration of outer space, but which was a missile effort for military purposes. Libya requested assistance from the MTCR on how to follow the rules to become an MTCR member. This means Libya must develop an export control regime and put it into place; they must also adopt the Guidelines and Technical Annex in their own legislation, including the adoption of catch-all provisions. Libya was mainly an importer from North Korea; they were not exporters. But an export control system can serve both purposes: monitoring imports and exports.

OBSERVER: You mentioned that the other major outreach mission was to China?

SERSALE di CERISANO: Yes. With China, it was a different type of outreach. We held two meetings—not to talk about general issues as we did with Libya or with others that were part of our general mission. In the case of China, they were already familiar with MTCR rules. So we held two specific meetings, one dealing with enforcement and the other with the Technical Annex. We were able, with a lot of technical expertise that supported the work of the chair, to analyze the dual-use items in the Chinese legislation, such as its control lists, and to compare it with the Technical Annex of the MTCR.

OBSERVER: The Chinese published export control regulations a year or two ago. When we analyzed them at the Center for Nonproliferation Studies, there were slight variations from the MTCR, but predominantly the two lists were quite similar. Is that what you found, as well?

SERSALE di CERISANO: There were a lot of variations, but they have been solved. In a six-month period, starting in February 2004 and continuing until June, the chair of the Technical Expert Group worked with the assistance of other members, and we solved those differences.

We also looked at China's licensing system—the practical side of an export and how they control goods at customs. We visited the port of Tianjin and viewed the technology that they use to trace containers. They have an organized system in place.

OBSERVER: Do they have the necessary equipment in place?

SERSALE di CERISANO: Yes. During our meetings, we talked with officials from the Ministry of Foreign Affairs and also from the Customs administration, and various other relevant ministries. The second meeting was particularly positive. Afterwards, I was able to conclude in my report that they have an export control system in place.

In addition to our outreach missions in Libya and China, which were probably the most important, we also worked with other countries. For instance, we obtained from Yemen a commitment that they would not purchase missile technology from North Korea. That was an important declaration. We also worked with Serbia and Montenegro. They want to have a licensing system in place because they wish to become members of the European Union and thus play by the rules.

Criteria for MTCR Membership

OBSERVER: What is the constraint on China's becoming a full member of the MTCR? Wouldn't it be important to lock down China as a member?

SERSALE di CERISANO: Membership decisions are based on consensus, and if just one country decides that an applicant is not ready for entry, membership won't be granted. There are different approaches on how to deal with this. The difference possibly is linked to the inclusion or not of the word "effective" before "export controls." In my view, I agree with the article published in the October issue of *Arms*

Control Today. [Victor Zaborisky, “Does China Belong in the Missile Technology Control Regime?” *Arms Control Today* October 2004.] The author argues that it is much better to have China in than out, because there would be additional opportunities to control what this country is doing.

My perception is that China wants to respond to the conflicts occurring in the region, to the north and southwest, that are affecting its own security. That is why they will be a positive help to the U.S. strategy in the six-party talks [talks between North Korea, China, Japan, Russia, South Korea, and the United States on eliminating the North Korean nuclear weapons program]. The benefits to being accepted by the world are larger than not being accepted. China is not like North Korea, which makes a living from the missile trade. China submitted its application to the MTCR in mid-September after completing all these technical consultations.

OBSERVER: When Poland wanted to join the MTCR back in the mid-1990s, the question came up: What is it that you’re providing in international trade that brings you to a level of activity in the field that would warrant this? They didn’t have very much in the way of transactions in 1994-95.

SERSALE di CERISANO: When you look at the membership of the MTCR, most of the European countries don’t have the technology that would be linked to membership criteria. However, each EU country needs to have national export control guidelines consistent with the ones adopted at the regional level by the EU as a whole. There are also transshipment issues that need to be addressed within the context of the EU.

OBSERVER: Does Libya have a technological capacity that meets standards that would normally be expected of an MTCR member?

SERSALE di CERISANO: Libya was a North Korean customer. What they did develop was the capacity to adapt the technology to their own needs. During our visits, they showed us how they modified the missile’s warheads to adjust to climate conditions. They were also exporting liquid fuel to Serbia, which is at least one of the items from Part II of the Technical Annex.

OBSERVER: Do you think that some countries also want to participate in the MTCR for the prestige of being inside the fence?

SERSALE di CERISANO: Of course, but even for those countries who apply, membership may not be granted because of a veto from other members.

The point is that there may be countries that are not producers of missile technology, but if they do not adhere to the guidelines, they might be used as transshipment points. One of the best cases is Cyprus—which adheres to the MTCR Guidelines although it is not a member yet—because it is an important transshipment point. What they need is a licensing system, even for the goods that do not have Cyprus for final destination. Transshipment and intelligence on brokering are new issues that the MTCR was not originally planned for, but that need to be discussed today.

Another article published in *Arms Control Today* argues that for the MTCR to be effective, only [missile technology] producers should be included. Transshipment countries, on the other hand, should be part of another regime because they need a different sort of legislation. I don’t know who is right about that because it’s a theoretical approach. But this argument proposes to create a sub-regime for a regime that itself has no formal legal basis. I think we need to review all of the export control regimes to make them more effective. That applies for all of the export regimes, not only for the MTCR.

OBSERVER: So we should create a legal foundation for the Australia Group, the MTCR, and the NSG?

SERSALE di CERISANO: Possibly not for all of them, but to link what we are doing in the Australia Group, for example, more specifically to the treaties. In the case of missiles, we do not have a comparable instrument and so we need to address this issue.

Regional Outreach Work

OBSERVER: You also did an outreach mission to the Shanghai Cooperation Organization (SCO)?
[*Editor's Note: The Shanghai Cooperation Organization is an intergovernmental international organization founded in Shanghai on June, 15, 2001, by six countries: China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan.*]

SERSALE di CERISANO: That was a regional forum—another type of MTCR outreach. This year we went to the SCO and established a formal contact. I understand that the United States asked to be accepted into this organization—that shows how important it is. Kazakhstan wants to be a member of the MTCR and is part of the SCO. There are a lot of missiles in former USSR republics; the SCO countries are also very close to Afghanistan. Therefore, it would be desirable to make sure that these technologies are going to be controlled. That's why I think MTCR cooperation with the SCO was an important action that, I hope, the next chair will pursue.

OBSERVER: You are not speaking of the nuclear armed, strategic missiles that were in Kazakhstan, but other, shorter-range systems that could take any kind of warhead? Is the goal to try to get these countries to destroy those missiles that are above the MTCR threshold?

SERSALE di CERISANO: Well that is what the MTCR should look for. The SCO has two main objectives: one is to combat terrorism and the other is to work on infrastructure for energy purposes. The obvious thing is that if you want to combat terrorism, you try to dismantle the missile capabilities of those countries.

OBSERVER: Would you say it's a new trend for the MTCR to work with regional organizations, such as the SCO?

SERSALE di CERISANO: It's part of the mandate. I don't know that it's a new trend. My predecessors also did some work with regional organizations. But I think the important outreach was really the new missions, like our first attempt to establish contact with the Arab League. The Arab League is quite reluctant to discuss these issues. Mainly, here are countries that use the excuse that because the MTCR is not a UN institution and has no "global" nature, they don't want to be part of it. But starting a dialogue with them was important. We didn't make much progress, but at least we established a contact to discuss the pros and cons of membership and agreed to have a followup.

UNSC Resolution 1540

OBSERVER: What is your view of the U.N. Security Council's recent Resolution 1540, which I believe extends to missiles?

SERSALE di CERISANO: It is a good step. We define that as the first global instrument that the UN adopted in the nonproliferation field. It is important to have the Security Council leading. This decision by the Security Council is also important because it was taken under Chapter 7 of the UN charter, which makes it mandatory. Indirectly, even if the MTCR is not mentioned, it refers to all the export control regimes. So this is a sort of adoption of the MTCR Technical Annex.

The deadline for submitting reports was October 20, and only 57 countries out of all the UN members submitted reports. There is a lot of work to be done in assisting countries—not only assisting them in doing their reports, but also in promoting the export control regimes in all their aspects: control lists, enforcement, transshipment, and other issues. That's why we gave such importance to this Security Council resolution. What are doing now is exploiting the capacity of the UN to implement the requirements of resolution 1540 through a committee chaired by Romania. [*Editor's Note: The Committee is composed of all Security Council members.*] So the UN needs to think about how to support this committee in its task. The UN has expertise in the missile area [through UN Monitoring, Verification, and Inspection Commission, set up to locate and destroy missiles in Iraq] and resources that were received from the "Oil for Food" program in Iraq—perhaps as much as \$300 million. That is what the committee [that was] established to oversee implementation of Resolution 1540 should be using to help states implement improved export controls. That's my personal view.

OBSERVER: Countries like Egypt and other members of the Arab League traditionally have been very averse to the MTCR and not supportive of the control regimes because these countries consider themselves targets to some degree—the North vs. South conflict. But now under Resolution 1540, they are expected to adopt these rules. Was this issue part of the discussion, when you met with the Arab League?

SERSALE di CERISANO: Yes. That was one of the 13 points in my presentation. It was very good for the MTCR and other export control regimes to have this Resolution 1540. Obviously, as I said, this is a Chapter 7 resolution, which makes it legally binding on all UN member states. Building support for it will depend on the capacity of the chair of the committee to bring reluctant countries in. But your point is right—it becomes mandatory.

Intangible Technology Transfer and Transshipment Issues

OBSERVER: During the latest MTCR plenary, the members discussed the importance of intangible transfers, transshipment, and brokering issues. What action has the MTCR taken in these areas?

SERSALE di CERISANO: Intangible transfers were brought to the MTCR for the first time last September. Transshipment controls were also strengthened in the last plenary.

In the case of intangible transfers, it's more delicate—it's a more difficult issue. The Germans organized a good seminar last June, bringing together representatives from the intelligence and export control communities, as well as private companies and academia. Recently, the issue of academic freedom versus export controls and immigration issues [*Editor's Note: Immigration issues arise when foreign nationals are to receive training in high-tech subjects in advanced countries*] has become part of the debate. It is something that will be more difficult to resolve and will depend on whether you can establish common guidelines among MTCR members. That will depend on every country and the type of regulations they adopt—regulations on visas, for example. This has a lot of technological implications because it is linked to the development of software by foreign nationals in advanced countries, for example, and there are a lot of interests involved. In the MTCR context, we didn't do much, but it is an issue that still needs to be addressed from the policy perspective. The MTCR will continue to organize seminars and workshops to try to identify guidelines, but there are different views among the member states. There are countries who want to put controls on the Internet, for example, and that's impossible in real life.

In the case of transshipment or brokering by firms, there are also obviously some technical issues involved. With intelligence, the licensing system, and the catch-all clause, including end-user controls, transshipment and brokering can be addressed.

But the case of interdiction is more complicated because it is sometimes linked to commerce in international waters. Countries have been working on this in the context of the International Maritime Organization and trying to develop legislated norms that will be a modification of the Convention on the Law of the Sea. This is also linked to UN Security Council Resolution 1540, but the work started before the approval of that resolution.

Other issues still need to be discussed. For instance, liability, and insurance. During an interdiction exercise, someone may be hurt; it is important to determine the responsibilities in this case. These are complex issues; that's why countries are trying to control their participation in PSI through bilateral agreements.

Obviously, all these issues are connected together. It is not sufficient to have control lists and know what is illegal and what is not. It is important to have other components of the export control system, such as a licensing procedure, training for personnel who will enforce these decisions, and intelligence; intelligence is the cross-cutting issue for having effective export controls.

Impact of the MTCR on Dual-Use Trade, Economic Development

OBSERVER: To what extent have you run into arguments that the very nature of this control regime is somehow impeding the ability of states to develop economically and move forward? Do you hear claims

that developing states' technological capabilities are somehow being circumscribed in terms of transfers, accessibility, and the like?

SERSALE di CERISANO: It is a concern. In fact, it is a concern that we in Argentina have, for example, in the case of our space industry, in the MTCR context. [*Editor's Note: As discussed below, Argentina curtailed certain missile development activities in conjunction with joining the MTCR.*] In the case of nuclear technology, Argentina is a country with a successful peaceful nuclear program even though some imported goods for this program are regulated under international control regimes and subject to verification. For us the most important point is that being part of these export control regimes is a proof of conscience.

In the case of the MTCR, its mandate says specifically that all regime activities should not impede the development of space programs for peaceful purposes. On the other hand, however, export licenses are given on an individual basis. Countries that are exporting these technologies look at what the receiving country, whether an MTCR member or not, is going to do with the technologies.

I think that the countries that want to develop illegal programs try not to import goods for these programs through obvious channels. I can't imagine the United States receiving an import request from North Korea. They would use intermediary firms to import dual-use items like graphite, which is used in the automobile industry and also in nuclear reactors. I believe the impact of regime controls on technological development is an issue in the mind of all the countries who are negotiating with the MTCR and even of MTCR members themselves. But it is not a matter that can be negotiated because there are no tradeoffs on these issues.

Argentina, for instance, dismantled its missile program in 1990-91. We became MTCR members in 1993. We have an important space program, and now we are working with NASA on developing a satellite, using Argentine technology. We don't have launchers because it's too expensive. It is preferable to work with the Brazilians in their launch complex in Alcantara or with the launchers that United States has in California or Florida. There are three satellites that have been built with Argentine technology, and in 2008, there's going to be the Aquarius—one that will measure the salinity of the sea. Obviously, I was not part of the missile programs in those days. However, I suppose that this problem [of Argentina's missile development program] was solved, in part, because Argentina not only dismantled the systems that it had but also developed a redefined program that is transparent. The Air Force does not handle the aerospace program anymore. Instead, the program is now handled by a civilian agency—the National Space Affairs Commission (CONAE).

OBSERVER: Have you found that countries raise questions about technology denial that are not necessarily linked to launching, but just to the ability to have a space program?

SERSALE di CERISANO: It is in the back of their minds. We are discussing that in the context of a UN proposal to support countries in converting most of the capacity they have in the missile field. The UN Committee on the Peaceful Uses of Outer Space discusses the policies. As for the attitudes of specific countries towards their own space programs, further analysis would be needed.

Hague Code of Conduct against Ballistic Missile Proliferation (HCOC)

OBSERVER: What is your assessment of the Code of Conduct?

SERSALE di CERISANO: It is a completely voluntary measure—an important component of the MTCR—this “regime that doesn't exist.” In my view, it should be a UN mandatory instrument to be really effective, like a treaty where countries on a nominal basis give declarations of their launches in a sort of UN registry. That will be the only way that this ad hoc effort will survive. If not, you will see that in three, four years, countries will stop exchanging information. That's my view. It is an important initiative, and where the UN should be involved. One hundred and seventeen countries have signed the code, but only 47-48 have submitted their declarations. There needs to be some technical assistance for countries and training on how to fill out the declarations. There is a UN resolution approved by the General Assembly addressing these issues.

OBSERVER: What do you think is the most important confidence boosting measure included in the code—disclosure of how many missiles you have? Advanced notice of launches?

SERSALE di CERISANO: I think most important is notice of all launches, even satellite launches not related to missiles. Particularly important are notices of launches on a regional basis, especially in regions of conflict.

OBSERVER: Thank you, Mr. Ambassador.

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