15 NEWLY-INDEPENDENT STATES

ARMENIA

ARMENIA WITH MULTI-COUNTRY GROUP

2/2/95

It is reported that Armenia is seeking to become a member of the International Science and Technology Center in Moscow, and recently signed on for membership.

Intelligence Newsletter, 2/2/95, p. 6 **(12124)**.

AZERBAIJAN

AZERBAIJAN WITH IRAN

1/95

It is reported that Iran has acquired nuclear technology from Azerbaijan.

Chris Hedges, *New York Times*, 1/5/95, p. A5 **(12420)**.

*The numbers listed in parenthesis following the bibliographic references refer to the identification number of the document in the Emerging Nuclear Suppliers Project Database, from which the news summaries are abstracted. Because of the rapidly changing nature of the subject matter, **The Nonproliferation Review** is unable to guarantee that the information reported herein is complete or accurate, and disclaims liability to any party for any loss or damage caused by errors or omissions.*

AZERBAIJAN WITH TURKEY

10/19/94

Turkish police arrest an Azerbaijani who, after crossing the Armenian border with Turkey, tried to sell 750 g of enriched uranium in Istanbul for $60,000. The Istanbul Atomic Energy Nuclear Investigation Center is testing the uranium to determine whether it is weapons-grade. According to the Anatolia Agency, the seized material was identified as U^{238} and was determined to be "suitable for use in nuclear bombs."

Reuter, 10/20/94; in Executive News Service, 10/20/94 **(12024)**. Doug Clarke, *RFE/RL News Report*, 10/20/94 **(12184)**. *Zerkalo* (Baku), 10/22/94, p. 2; in FBIS-USR-94-118, 10/22/94 **(12184)**.

BELARUS

INTERNAL DEVELOPMENTS

10/6/94

Alexander Mikhailevich, Director of the Institute of Power Engineering Problems at the Belarus Academy of Sciences in Minsk, announces Belarus' plan to implement a domestic nuclear power program before the year 2000. According to the Electric Power Research Institute, Belarus would save $100 million in fuel expenses by using nuclear energy instead of a gas-fueled plant. Belarus has been planning the construction of a nuclear reactor since the 1980s, but the Chernobyl disaster prompted the government to change its plans. The Center for Atomic Energy in Belarus has already begun a training program for experts so that the station will be adequately staffed by the time construction begins and the plant is operational.

Mark Hibbs, *Nucleonics Week*, 10/13/94, pp. 1, 11-12 **(12313)**.

11/94

It is reported that an unclassified U.S. Central Intelligence Agency report outlines the current state of disarmament in Belarus. As of 9/94, Belarus had removed 45 SS-25 ICBMs to Russia; another 36 SS-25s remain on Belarusian territory.

Arms Control Today, 11/94, p. 33 **(12135)**.

11/1/94

It is reported that Belarus plans to have a new nuclear materials control program in place before the end of 1995.

Nihon Keizai Shimbun (Tokyo), 11/1/94, p. 1; in JPRS-TND-94-020, 11/17/94, p. 6 **(12422)**.

12/3/94

It is reported that, according to Alyaksandr Baychorow, head of the International Security and Disarmament Administration at the Belarusian Foreign Ministry, Belarus has completed the dismantling of short- and long-range missiles, is not currently dismantling any others, and has no plans to dismantle any more in the future. Baychorow says that Belarus has no intention of keeping Russian mobile nuclear weapons complexes and launch sites currently based in Belarus.

Syarhey Zayats, *Zvyazda* (Minsk), 12/3/94, p. 1; in FBIS-SOV-94-241, 12/3/94 **(12191)**.

1/14/95

It is reported that, according to "experts," the Belarusian government has "turned a blind eye to the 'export' of radioactive material" from the Research Institute on Nuclear Fuels and Security in Minsk, due to the Institute's poor financial condition. Nuclear material exports are a major source of income for the Institute.

Intelligence Newsletter, 1/95, p. 7 **(12158)**.

BELARUS WITH AUSTRIA, HUNGARY, POLAND, AND SLOVAKIA

12/10/94

Hungarian border police confiscate 1.7 kg of uranium at the Hegyeshalom border station on the Austrian-Hungarian border and arrest four Slovaks. An unnamed *Intelligence Newsletter* source says that "a number of signs indicate" that the uranium was going to be shipped to Poland before being offered to unknown buyers, and that the material may have originated from the Research Institute on Nuclear Fuels and Security in Minsk, Belarus. Laszlo Sztanyik, a scientist at the National Frederic Joliot-Curie Institute of Radiation and Biology, said that approximately one-third of the material consisted of "reactor fuel grade" uranium; the remaining material consisted of depleted uranium. Sztanyik said that the uranium was not Hungarian and that it was "useless for making weapons."

Intelligence Newsletter, 1/95, p. 7 **(12158)**. Reuter (Budapest), 1/12/95; in Executive News Service, 1/12/95 **(12166)**.

BELARUS WITH CZECH REPUBLIC, POLAND, SLOVAKIA, AND UKRAINE

12/14/94

In Prague, Czech police confiscate 2.7 kg of 87.7 percent enriched U^{235} in the form of a gray powder from a blue Saab and arrest a Czech, a Belarusian, and a Ukrainian travelling in the car. Investigators on the case believe that the seized uranium was brought into the country by rail from Poland or Slovakia. The highly-enriched uranium (HEU) is found in two hexagonal metal containers with certificates stating that the containers are owned by an Odessa Black Sea Fleet base. The certificates are in Russian and identify the substance as HEU. The three arrested smugglers are all former nuclear workers. The Czech, 54-year-old Jaroslav Vagner, has worked at the Nuclear Research Institute in Rex, the Ministry of Fuels and Energy, and the Dukovany and Temelin nuclear facilities. Czech investigators say Vagner made a number of trips to the Soviet Union in the 1980s. At the time of his arrest, Vagner was working at an import-export business in Ceske Budejovice which he founded in 1991. The three suspects reportedly tried to sell the uranium in Prague.

Two separate samples of the material were analyzed by the Czech Republic's Nuclear Research Center. Czech authorities indicated that the material seized in Prague had undergone irradiation, reprocessing, and reenrichment so as to create a "special reactor fuel." A number of Western safeguards experts who examined the spectrometric analysis agree with this assessment, in part, because the analysis showed traces of U^{236} which, according to these officials, indicates the presence of reprocessed uranium. Terry Hawkins, Los Alamos Deputy Director of Nonproliferation, said that the 87.7 percent enrichment level suggests that the material was probably produced for research reactor or naval fuel reactor applications. According to IAEA spokesman David Kyd, the Czech seizure represents the "most substantial quantity and the highest quality of uranium that has been seized" to date.

Rick Atkinson, *Washington Post*, 12/21/94, pp. A27, A30 **(12095)**. *International Herald Tribune*, 12/20/94, pp. 1, 8 **(12095)**. Jane Perlez, *New York Times*, 2/15/95, p. A3 **(12499)**. Mark Hibbs, *NuclearFuel*, 2/13/95, pp. 8-10 **(12492)**. Mark Hibbs, *NuclearFuel*, 1/2/95, pp. 12-13 **(12492)**.

1/95

A German Bundeskriminalamt report says that preliminary information indicates that the material seized in Prague on 12/14/94 is "identical" to that purchased on 6/13/94 in the Landshut sting operation. The report also indicates that Jaroslav Vagner "has connections" to a Pole arrested in the Landshut case.

Mark Hibbs, *NuclearFuel*, 2/13/95, pp. 8-10 **(12492)**.

BELARUS WITH IAEA

11/1/94

It is reported that Japan, the U.S., Sweden, and the IAEA are assisting Belarus to assure proper implementation of safeguards in compliance with an IAEA-Belarusian safeguards agreement.

Nihon Keizai Shimbun (Tokyo), 11/1/94, p. 1; in JPRS-TND-94-020, 11/17/94, p. 6 **(12422)**.

BELARUS WITH JAPAN

9/94

Japan signs an agreement to provide Belarus with support for establishing nuclear material control systems.

Kyodo (Tokyo), 11/4/94; in JPRS-TND-94-020, 11/17/94, p. 7 **(12059)**.

11/1/94

It is reported that Japan will furnish Belarus with technologies to control, store, and monitor nuclear materials at the "Susoni" [Sosny] Center, which is believed to have several kilograms of HEU. The Japanese Science and Technology Agency and the Japan Atomic Energy Research Institute will provide information and telecommunications systems, and technologies to construct measuring devices and improve security. Upgrades will include direct satellite and telephone links between Sosny and Japan as well as between Sosny and the IAEA, and a computerized information system.

Nihon Keizai Shimbun (Tokyo), 11/1/94, p. 1; in JPRS-TND-94-020, 11/17/94, p. 6 **(12422)**.

11/7/94-11/11/94

The Japanese Ministry of Foreign Affairs and the Science and Technology Agency train six Belarusian and Kazakhstani nuclear experts in Japan on nuclear materials control, in accordance with an earlier agreement. The training involves discussions with experts from Power Reactor and Nuclear Fuel Development Corporation and the Japan Atomic Energy Research Institute. Foreign Ministry Spokesman Terusuke Terada expresses the hope that the training would be helpful in preventing nuclear materials smuggling in Belarus.

Kyodo (Tokyo), 11/4/94; in JPRS-TND-94-020, 11/17/94, p. 7 **(12059)**. *Atoms In Japan*, 11/94, p. 24 **(12422)**.

BELARUS WITH LITHUANIA

10/21/94

The Belarusian Embassy in Lithuania announces that Belarus and Lithuania are formulating laws on peaceful uses of nuclear energy.

Radio Vilnius Network (Vilnius), 10/21/94; in JPRS-TEN-94-107, 11/18/94, p. 23 **(12312)**.

BELARUS WITH MULTI-COUNTRY GROUP

2/2/95

It is reported that Belarus is seeking to become a member of the International Science and Technology Center in Moscow, and recently signed on for membership.

Intelligence Newsletter, 2/2/95, p. 6 **(12124)**.

BELARUS WITH RUSSIA

10/6/94

It is reported that Belarus hopes to acquire blended down uranium from Russian nuclear weapons stockpiles to fuel reactors that it plans to build as part of its domestic nuclear power program.

Mark Hibbs, *Nucleonics Week*, 10/13/94, pp. 1, 11-12 **(12313)**.

12/27/94

It is reported that the transfer to Russia of the Group of Strategic Rocket Forces is proceeding as planned. The eight rocket regiments of SS-25s, comprised of 72 launchers, will all be in Russia by the end of 1995; the "divisions will be totally disbanded" by mid-1996 in compliance with START I.

Serguei Martynov, *Director's Series on Proliferation*, 12/27/94, pp. 43-47 **(12423)**.

1/26/95

It is reported that, of the 75 nuclear missiles that were located in Belarus after the demise of the Soviet Union, over half have been transferred to Russia and the rest will be returned by the end of 1996 in accordance with START I. A conflicting statement says that the remaining SS-25s will be shipped to Russia before the end of 1995.

Reuter (Minsk), 1/26/95; in Executive News Service, 1/26/95 **(12236)**. *PPNN Newsbriefs*, Second Quarter 1994, p. 16 **(12236)**.

BELARUS WITH UNITED STATES

10/6/94

It is reported that Belarus and the U.S. Nuclear Regulatory Commission have signed a cooperation agreement on the HEU fuel stock left over from a Soviet IRT model research reactor at the Atomic Energy Center in Belarus, which was in operation from 1962 to 1988. The agreement was intended to improve physical protection of the fuel.

Mark Hibbs, *Nucleonics Week*, 10/13/94, pp. 1, 11-12 **(12313)**.

12/5/94

START I enters into force as the presidents of the U.S., Russia, Ukraine, Kazakhstan, and Belarus exchange their instruments of ratification at the CSCE Conference in Budapest.

Patrick Worsnip, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12397)**. Thomas W. Lippman, *Washington Post*, 12/4/94, p. A46 **(12397)**. Paul Mylrea, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12427)**.

2/12/95

It is reported that several factors have combined to slow the implementation of the Cooperative Threat Reduction (Nunn-Lugar) program, including "bureaucratic inertia in Washington, Cold War suspicions in Moscow," and the chaotic political environment in the former Soviet republics. The U.S. Congress has appropriated about $1.3 billion for the Nunn-Lugar program since its inception. Assistant Secretary of Defense Ashton Carter stated that although the implementation of the program is just beginning, Nunn-Lugar funds have played a critical role in convincing Kazakhstan, Ukraine, and Belarus to transfer their nuclear arsenals to Russia. However, Charles Flickner, a Senate Budget Committee staff member, describes the program's record as "dismal," and states that not "a single nuclear warhead nor a single chemical weapon" has been dismantled using Nunn-Lugar funds. Carter indicates that the funds are not being used for actual dismantlement because Russia has refused U.S. offers for assistance in this area. The Pentagon has spent a total of about $150 million in Nunn-Lugar funds, and has committed about $500 million to the program in signed contracts. Over the past three years, Nunn-Lugar funds have been used to remove 2,600 warheads from missiles or bomber bases, dismantle launchers across the former Soviet Union, and transfer 900 warheads from Belarus, Kazakhstan, and Ukraine to Russia for dismantlement.

Fred Hiatt, *Washington Post*, 2/12/95; in Executive News Service, 2/12/95 **(12467)**. Amanda Bichsel, *Defense News*, 2/27/95, pp. 25-26 **(12467)**.

2/21/95

Gregory Govan, head of the U.S. On-Site Inspection Agency, says that beginning in 3/95, the U.S., Russia, Ukraine, Kazakhstan, and Belarus will begin inspecting one another's nuclear sites to ensure compliance with START I. Govan says that following the initial inspections, inspectors from Russia, Belarus, Kazakhstan, and Ukraine will engage in spot inspections of 36 sites in the U.S.; U.S. inspectors will visit 65 sites in the former Soviet Union. START I stipulates that Russia and the U.S. will reduce their nuclear arsenals from a combined total of 21,000 warheads at the height of the Cold War, to 12,000 by the end of 2001.

Times of India, 2/23/95, p. 9 **(12436)**. *Washington Times*, 2/22/95, p. A4 **(12436)**.

ESTONIA

INTERNAL DEVELOPMENTS

10/31/94

The Estonian Strategic Goods Export Control Commission (SGECC), which was established by a 6/5/94 government order, convenes for the first time. The SGECC operates under the Law of Strategic Goods Export and Transit.

Tallinn Ministry of Foreign Affairs Press Release, 11/2/94; in JPRS-TND-94-020, 11/17/94, p. 29 **(12188)**.

11/1/94

The Estonian Border Guard now has the authority to demand export licenses for "nuclear and nuclear-related technology and materials." The Foreign Economic Policy Department of the Estonian Ministry of Foreign Affairs is responsible for issuing export license applications.

Tallinn Ministry of Foreign Affairs Press Release, 11/2/94; in JPRS-TND-94-020, 11/17/94, p. 29 **(12188)**.

11/3/94

It is reported that during a two-year period, 1,700 kg of uranium with an average enrichment level of two percent has gone unaccounted for at the Sillamae chemical production plant, according to Russian records seized by the Estonian government. Mark Sinisoo, Senior Counselor in the Ministry of Foreign Affairs, says that the plant, which handled low-enriched uranium (LEU) and weapons-grade uranium, adjusted the enrichment level of the enriched uranium sent there depending on the fuel type being produced. Sinisoo says there was inconsistency between archival analysis, which showed losses to be less than the amount permitted, and bookkeeping records, which indicated that losses were at the maximum amount permitted. Sillamae, which was considered to be one of the smallest of the former Soviet Union's 16 nuclear fuel processing plants, processed fuel for about five years and was used to test new technology.

Ariane Sains, *Nucleonics Week*, 11/3/94, pp. 16-17 **(12262)**.

1/24/95

It is reported that an Estonian man accused of illegally possessing almost 3 kg of uranium oxide was sentenced to "a year's conditional imprisonment." This is the first time someone in Estonia has been convicted for possessing radioactive material.

BBC Monitoring Service, 1/24/95; in *Uranium Institute News Briefing*, 1/24/95, p. 2 **(12186)**.

1/25/95

The Estonian government announces its intention to move its radioactive waste dumping facility from Saku to Paldiski, the former Russian nuclear submarine base. Juri Tikk, the Estonian government's special representative, said that the Estonian Economics Ministry will create a new department to take over the operations at Paldiski and the Saku deposit area, where past negligent security measures facilitated radioactive materials theft.

BNS (Tallinn), 1/25/95; in FBIS-SOV-95-017, 1/25/95 **(12314)**.

Estonia with Russia

10/10/94

It is reported that Russian experts removed the fuel rods from reactor number two at the Paldiski naval base. The Russian-Estonian decommissioning agreement states that 210 Russian personnel will dismantle the Paldiski reactors. Russia will completely yield the Paldiski facilities to Estonia by 9/30/95.

Dzintra Bungs, *RFE/RL Daily Report*, 10/11/94 **(12189)**. Brian Curran and Dunbar Lockwood, *Arms Control Today*, 10/94, p. 18 **(12189)**. BNS (Tallinn), 1/25/95; in FBIS-SOV-95-017, 1/25/95 **(12314)**.

GEORGIA

Georgia with Multi-Country Group

2/2/95

It is reported that Georgia is seeking to become a member of the International Science and Technology Center in Moscow, and recently signed on for membership.

Intelligence Newsletter, 2/2/95, p. 6 **(12124)**.

KAZAKHSTAN

Internal Developments

11/94

It is reported that an unclassified U.S. Central Intelligence Agency report outlines the current state of disarmament in Kazakhstan. As of 9/94, Kazakhstan had deactivated 44 SS-18 ICBMs by removing their nuclear warheads; Kazakhstan has an additional 60 SS-18s still on its territory.

Arms Control Today, 11/94, p. 33 **(12135)**.

1/26/95

It is reported that, according to a report by Rennes University professor Christian Chenal, the USSR conducted a total of 509 military and peaceful nuclear tests at three sites in the Semipalatinsk polygon between 1949 and 1989. All 124 atmospheric explosions—25 of which were at ground level—were carried out between 1949 and 1962 at the Ground Zero site. The largest number of explosions, 223, was conducted at a southern site (1961-1989), and 123 tests took place at an eastern site (1968-1989). Semipalatinsk tests were not as strong as those conducted at Novaya Zemlya and account for only 2.7 percent of the total megatonnage detonated by the USSR.

Gamini Senevirante and Ann MacLachlan, *Nucleonics Week*, 1/26/95, pp. 6-7 **(12433)**.

1/31/95

In a report, Vladimir Shkolnik, Minister of New Sciences and Technologies, expresses the concern that Kazakhstan does not yet have a final plan for domestic nuclear power development. Shkolnik states that a solid legislative base is needed to promote effective development of the nuclear industry complex. A single state system of registering and controlling nuclear materials, nuclear exports, and licensing of all types of nuclear activities should be established in Kazakhstan, Shkolnik said. According to Ergali Bayadilov, Director General of Kazakhstan's Nuclear Energy Agency, the process of establishing a system of physical protection of nuclear materials and export controls will be completed by mid-1995; the IAEA will provide Kazakhstan with $8 million in financial assistance for this project.

Panorama (Almaty), 2/4/95, p. 2; in FBIS-SOV-95-028, 2/4/95 **(12585)**.

Kazakhstan with India

1/3/95

It is reported that Indian Ambassador to Kazakhstan Kamalesh Sharma headed a delegation which visited the Kurchatov nuclear center. After visiting with scientists and specialists at the center, Sharma discussed his intentions to present a proposal to his

government on joint Indian-Kazakhstani nuclear research.

Kazakhstan Television Network (Almaty), 1/3/95; in FBIS-SOV-95-022, 1/3/95 **(12452)**.

KAZAKHSTAN WITH IRAN

8/92

Western intelligence reports state that Iran has purchased large quantities of low-enriched uranium (LEU) and beryllium from the Ulba plant. Kazakhstani officials deny that the sales occurred.

Bill Gertz, *Washington Times*, 11/24/94, pp. A1, A18 **(12584)**.

11/25/95

It is reported that a high-ranking Russian diplomat denied rumors that Kazakhstan would have sold its 600 kg cache of HEU to Iran had the U.S. not purchased it first. According to the official, the Kazakhstani fuel could not be used in Iran's nuclear research reactor; Iran has no other operational nuclear power stations. Also, the official said, "Over the recent years, Iran has not shown any nuclear ambitions." The official contends that the motive behind such rumors is to give momentum to a plan to place nuclear programs in the CIS, particularly those in Russia, under either U.S. or international control.

Aleksandr Korzun, Igor Porshnev, Yevgeniy Terekhov, and others, Interfax (Moscow), 11/25/94; in FBIS-SOV-94-228, 11/25/94 **(12140)**.

KAZAKHSTAN WITH IAEA

11/3/94

It is reported that the IAEA has assisted Kazakhstan in training personnel on nuclear materials accounting, control, and security.

AFP (Paris), 11/3/94; in JPRS-TND-94-020, 11/17/94, pp. 42-43 **(12318)**.

1/31/95

According to Ergali Bayadilov, Director General of Kazakhstan's Nuclear Energy Agency, the process of establishing a system of physical protection of nuclear materials and export controls will be completed by mid-1995; the IAEA will provide Kazakhstan with $8 million in financial assistance for this project.

Panorama (Almaty), 2/4/95, p. 2; in FBIS-SOV-95-028, 2/4/95 **(12585)**.

KAZAKHSTAN WITH JAPAN

9/6/94

Kazakhstan and Japan sign an agreement in Almaty on the establishment of a nuclear materials control and accountancy system in Kazakhstan. The agreement stipulates that Japan will provide experts and equipment—which Kazakhstan needs to meet IAEA safeguard obligations—to help establish a control system. Funding for the agreement's implementation will come from the 1.17 billion yen Japan disbursed to the Japan-Kazakhstan Committee, an organization set up by the two countries following a 3/94 bilateral agreement to eliminate Kazakhstan's nuclear weapons.

Kyodo (Tokyo), 9/6/94; in JPRS-TND-94-020, 10/17/94, p. 34 **(12057)**.

11/7/94-11/11/94

The Japanese Ministry of Foreign Affairs and the Science and Technology Agency train six Belarusian and Kazakhstani nuclear experts in Japan on nuclear materials control, in accordance with an earlier agreement. The training involves discussions with experts from Power Reactor and Nuclear Fuel Development Corporation and the Japan Atomic Energy Research Institute. Foreign Ministry Spokesman Terusuke Terada expressed the hope that the training would be helpful in preventing nuclear materials smuggling in Kazakhstan.

Kyodo (Tokyo), 11/4/94; in JPRS-TND-94-020, 11/17/94, p. 7 **(12059)**. *Atoms In Japan*, 11/94, p. 24 **(12422)**.

KAZAKHSTAN WITH KYRGYZSTAN

1/21/95

It is reported that Kazakhstan and Kyrgyzstan concluded an agreement under which Kazakhstan will process its uranium in Kyrgyzstan at the Kara-Baltinskiy complex.

Boris Manayev, Itar-Tass (Moscow), 1/21/95; in FBIS-SOV-95-014, 1/21/95 **(12454)**.

KAZAKHSTAN WITH MULTI-COUNTRY GROUP

2/2/95

It is reported that Kazakhstan is seeking to become a member of the International Science and Technology Center in Moscow, and recently signed on for membership.

Intelligence Newsletter, 2/2/95, p. 6 **(12124)**.

KAZAKHSTAN WITH PRC

10/7/94

Kazakhstan's Foreign Ministry releases a statement denouncing China's 10/7/94 underground nuclear explosion at the Lop Nor nuclear test site. In the statement, Kazakhstan calls on China to stop its nuclear explosions and participate in the establishment of a universal nuclear test ban.

Vladimir Akimov, Itar-Tass (Moscow), 10/7/94; in JPRS-TND-94-020, 11/17/94, p. 32 **(12061)**. Reuter (Almaty), 10/7/94; in Executive News Service, 10/7/94 **(12061)**. Reuter (Almaty), 12/11/94; in Executive News Service, 12/12/94 **(12061)**.

2/8/95

According to the Xinhua news agency, China gives Kazakhstan security guarantees that it will not use or threaten to use nuclear weapons against Kazakhstan. In the government statement, China calls upon other nuclear weapon states to give similar security assurances "so as to enhance the security of all non-nuclear weapon states, including Kazakhstan." The action is undertaken in the framework of the Chinese initiative to codify a comprehensive ban on nuclear weapons. The initiative was announced in Geneva in 2/95 by Hou Zhitong, the Chinese Ambassador for Disarmament Affairs.

Reuter (Beijing), 2/8/95; in Executive News Service, 2/8/95 **(12175)**.

KAZAKHSTAN WITH RUSSIA

11/24/94

It is reported that a high-ranking Kazakhstani official said that nuclear weapon transfers to Russia are being delayed due to Kazakhstan's demands that it be compensated for the uranium in the warheads. Kazakhstan Institute for Strategic Studies

Director Oumirserik Toleshovich Kasenov said that rather than paying for the uranium, Russia could forgive part of the debt owed to it by Kazakhstan.

Ariane Sains, *Nucleonics Week*, 11/24/94, p. 10 **(12058)**.

12/94

It is reported that the Russian Ministry of Defense is negotiating with Kazakhstani authorities over the possibility of leasing all or part of the Semipalatinsk nuclear test site within the framework of the Russian-Kazakhstani defense program. Kazakhstani law prohibits the existence of foreign military bases on its territory. However, if this agreement is reached, Russia will regain almost as much control over Semipalatinsk as it had before it turned over the facility to Kazakhstan.

Shirin Akiner, *Jane's Intelligence Review*, 12/94, pp. 552-555 **(12581)**.

1/31/95

It is reported that Russia and Kazakhstan have signed agreements on cooperation in the field of nonmilitary use of nuclear power and transportation of nuclear materials, as well as on payments for the use of nuclear materials derived from dismantled warheads. The International Science and Technology Center in Moscow has allocated $11 million to Kazakhstan.

Panorama (Almaty), 2/4/95, p. 2; in FBIS-SOV-95-028, 2/4/95 **(12585)**.

2/95

It is reported that the Russian-Kazakhstani coordinating group, which was established to oversee dismantling of the unexploded nuclear test device at Semipalatinsk, met for the fourth time and called for the device's end compartment "to be opened up in the first 10 days of March." Once it is opened, Russian Federal Nuclear Center specialists will make a determination on whether to extract the device or explode it on site. The 0.3-0.4 kT charge was designed to test the resistance of military equipment and certain types of weapons to a nuclear explosion.

Sergei Borisov, *Kazakhstanskaya Pravda* (Almaty), 2/14/95; in FBIS-SOV-95-033, 2/14/95 **(12588)**.

Kazakhstan with Russia and United States

1993-1994

On the initiative of Kazakhstani President Nursultan Nazarbayev, Kazakhstani officials approach U.S. Ambassador to Kazakhstan William Courtney and suggest that the U.S. purchase HEU stored in Kazakhstan. However, because the material was produced and shipped to Kazakhstan by Russia, Russia's approval is needed, and the U.S. begins discussions with Russia on the issue early in 1994. Kazakhstan offers the material to the Russian government at the price of $1,400 per kilogram, but Russia rejects the offer [no date specified]. Russian Prime Minister Viktor Chernomyrdin also rejects a proposal, made [apparently in 6/94] by Vice President Al Gore, under which the U.S. would purchase the uranium but Russia would accept it for safekeeping.

Boris Vinogradov, *Izvestiya* (Moscow), 11/25/94, pp. 1, 73 **(12590)**. *Nuclear Engineering International*, 1/95, p. 4 **(12584)**. Michael R. Gordon, *New York Times*, 11/24/94, pp. A1, A8 **(12584)**.

Kazakhstan with United States

10/13/94

The governments of Kazakhstan and the U.S. open a direct satellite communications link in accordance with the U.S.-Kazakhstan agreement on safe and secure dismantlement of nuclear weapons.

Fedor Ignatov and Anatoliy Tyshler, Itar-Tass (Moscow), 10/13/94; in FBIS-SOV-94-199, 10/13/94 **(12317)**.

11/15/94

The U.S. Department of Commerce (DOC) makes public a "draft version of an amendment to the Kazakhstan suspension agreement." Under the agreement, Kazakhstan's quota for U^{308} exports to the U.S. will be 440,000 lbs for each of the next two years. After the two-year transitional period, the level of Kazakhstani exports will depend on the level of U.S. uranium production. Kazakhstan will be allowed to export 330,000 lbs when the U.S. maintains 3.5 million lbs of domestic production; 909,000 lbs of exports will be permitted when the U.S. manufactures 6.5 million pounds. After the first two years, the U.S. and Kazakhstan could agree to return to the initial suspension agreement, which provides for an increase in exports if the DOC indicator price exceeds $13/lb.

NuclearFuel, 12/5/94, p. 3 **(12319)**.

11/23/94

In a joint press conference, U.S. Secretary of Defense William Perry, Department of Energy (DOE) Secretary Hazel O'Leary, and Secretary of State Warren Christopher announce the transfer of approximately 600 kg of HEU from Kazakhstan to the U.S. According to Pentagon officials, the transferred material was almost pure U^{235}. It was estimated that there was enough uranium to build more than 20 nuclear bombs. A senior Pentagon official said that the transferred uranium is "not designed to be put into bombs, but it is material that is directly usable for bombs." However, according to Kazakhstan's Deputy Prime Minister Vitaliy Mette, who was formerly the director of the Ulba Metallurgical Plant where the material had been stored for 20 years, 95 percent of the material would require further processing in order to be used in weapons production.

Western experts argue that the fuel is only enriched to between 30 and 60 percent and far more isotopically contaminated than what the Pentagon has asserted. The material had been produced for use in Soviet nuclear submarines which are no longer in service. Oleg Bukharin, a scholar at Princeton University's Center for Energy and Environmental Studies, said that the material is probably about 50 percent enriched but that some of it could be more than 90 percent enriched. The material will temporarily be kept at the U.S. DOE's Y-12 facility in Oak Ridge, Tennessee.

The highly secretive transfer, code-named "Project Sapphire," was aimed, according to Perry, "to put the bomb grade material forever out of the reach of potential black marketeers, terrorists and new nuclear regimes." Some U.S. officials said that the operation was specifically intended to preclude Iran from getting the material. In 2/93, on the initiative of Kazakhstani President Nursultan Nazarbayev, Kazakhstani officials approached U.S. Ambassador to

Kazakhstan William Courtney and suggested that the U.S. purchase the HEU. (Other sources say that this contact was made in the spring or summer of 1993.) However, because the material was produced and shipped to Kazakhstan by Russia, Russia's approval was needed, and the U.S. began discussions with Russia on the issue early in 1994. Kazakhstan offered the material to the Russian government at the price of $1,400 per kilogram, but Russia rejected the offer [no date specified]. Russian Prime Minister Viktor Chernomyrdin also rejected a proposal, made [apparently in 6/94] by Vice President Al Gore, under which the U.S. would purchase the uranium but Russia would accept it for safekeeping.

On 10/7/94, Clinton authorized the shipment of the HEU to the U.S. A team of 31 specialists from Martin Marietta Energy System, a U.S. DOE contractor, spent six weeks loading the uranium into 1,400 stainless steel drums. According to Alex Riedy, a Martin Marietta employee, security at the Ulba site was far below Western norms. Perry asserted, however, that the HEU had been properly protected at the plant. The shipment cost the Pentagon approximately $3 million and the DOE about $3.8 million. Kazakhstan's compensation for the material remains unspecified, but is reported to be in the "low tens of millions." The U.S. plans to recover transfer expenditures by blending down the material and selling it to commercial operators in the U.S. U.S. officials believe that Kazakhstan does not possess any more nuclear material stockpiles, aside from the plutonium contained in the missiles on its territory. According to a U.S. Office of Technology Assessment report, however, there are 660 lbs of HEU stored at Semipalatinsk. Vladimir Shkolnik, Kazakhstan's Minister of Science and New Technology, stated that there are "colossal amounts" of uranium and plutonium left in Kazakhstan—only a small amount of which is weapons-grade—which will be placed under IAEA control starting early in 1995. The Ulba plant will not manufacture HEU in the future, and the production of enriched uranium for peaceful purposes will be monitored under IAEA safeguards.

Bill Gertz, *Washington Times*, 11/24/94, pp. A1, A18 **(12584)**. Reuter (Almaty), 11/24/94; in Executive News Service, 11/24/94 **(12584)**. *PPNN Newsbrief*, Fourth Quarter 1994, p. 7 **(12584)**. John D. Morrocco, *Aviation Week & Space Technology*, 11/28/94, p. 27 **(12584)**. *Nuclear Engineering International*, 1/95, p. 4 **(12584)**. Michael R. Gordon, *New York Times*, 11/24/94, pp. A1, A8 **(12584)**. Boris Vinogradov, *Izvestiya* (Moscow), 11/25/94, pp. 1, 73 **(12590)**. Jurek Martin and Steve LeVine, *Financial Times*, 11/24/94, p. 17 **(12584)**. Reuter (New York), 11/22/94; in Executive News Service, 11/23/94 **(12584)**. Andrew Higgins, *Independent*, 11/26/94 **(12584)**. *Washington Post*, 12/3/94, p. A16 **(12584)**. Jim Adams, Reuter (Washington), 11/23/94; in Executive News Service, 11/24/94 **(12584)**. Wilson Dizard III, *Nucleonics Week*, 12/1/94, pp. 1, 11-12 **(12574)**.

11/24/94

IAEA spokesman Hans Meyer says that the IAEA had been informed by the U.S. government of its intention to transfer Kazakhstan's cache of HEU prior to the actual operation. Meyer says that the 600 kg of HEU now in the U.S. falls under IAEA safeguards.

Steve Pagani, Reuter (Vienna), 11/24/94; in Executive News Service, 11/28/94 **(12451)**.

11/25/94

It is reported that Russia's Ministry of Atomic Energy, in its comments on Project Sapphire, asserted that none of the U.S. statements on the amount and level of enrichment of the transferred nuclear material "correspond to reality." According to Vitaliy Nasonov, Deputy Chief of the Information Department at the Russian Atomic Industry Ministry, Kazakhstan could not have had any 90 percent enriched uranium except for the 194.4 kg (167 kg of an alloy consisting of U^{235} and beryllium, plus 27.4 kg of U^{235} dioxide powder) left at the Ulba plant after the break-up of the Soviet Union. Russia has stopped supplying HEU to Kazakhstan, which does not have its own processing facilities. However, Ministry of Atomic Energy spokesman Georgiy Kaurov did not reject the possibility that the U.S. had not realized that it was buying the alloy. Russia questioned U.S. statements on the potential of the uranium to be used for military purposes; only Russia and the U.S. can process the U^{235}-beryllium alloy for use in weapons production, and the processing of U^{235} dioxide is very expensive and can be performed only by the U.S., Russia, France, and the U.K. Russia also challenged statements concerning the lack of proper security at the Ulba plant.

Aleksandr Koretskiy, *Kommersant Daily* (Moscow), 11/25/94, p. 4; in FBIS-SOV-94-228, 11/25/94 **(12501)**. Interfax (Moscow), 11/24/94; in FBIS-SOV-94-227, 11/24/94 **(12501)**. David Usborne, *Independent*, 11/24/94 **(12501)**. Boris Vinogradov, *Izvestiya* (Moscow), 11/25/94, pp. 1, 3 **(12590)**.

11/25/94

It is reported that a high-ranking Russian diplomat denied rumors that Kazakhstan would have sold its 600 kg cache of HEU to Iran had the U.S. not purchased it first. According to the official, the Kazakhstani fuel could not be used in Iran's nuclear research reactor; Iran has no other operational nuclear power stations. Also, the official said, "Over the recent years, Iran has not shown any nuclear ambitions." The official contends that the motive behind such rumors is to give momentum to a plan to place nuclear programs in the CIS, particularly those in Russia, under either U.S. or international control.

Aleksandr Korzun, Igor Porshnev, Yevgeniy Terekhov, and others, Interfax (Moscow), 11/25/94; in FBIS-SOV-94-228, 11/25/94 **(12140)**.

12/5/94

START I enters into force as the presidents of the U.S., Russia, Ukraine, Kazakhstan, and Belarus exchange their instruments of ratification at the CSCE Conference in Budapest.

Patrick Worsnip, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12397)**. Thomas W. Lippman, *Washington Post*, 12/4/94, p. A46 **(12397)**. Paul Mylrea, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12427)**.

12/9/94

In a letter from Libyan U.N. envoy Mohamed Azwai to U.N. Secretary-General Boutros-Ghali, it is stated that Libya accused the U.S. of attempting to monopolize, stockpile, and control the production of nuclear weapons by its 11/23/94 covert transfer of over 1,000 lbs of Kazakhstan-origin enriched uranium—enough to produce more than 20 nuclear weapons—to the U.S. Azwai complained in the letter that the possibility still existed for the materials to be moved to another location and even "show up in Israel."

Reuter, 12/9/94; in Executive News Service, 12/9/94 **(12060)**.

12/22/94

In a letter to each of the four former Soviet republics that have suspension agreements with the U.S. (i.e., Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan), Joseph Spetrini, Deputy Assistant for Compliance at the U.S. DOC, states that the U.S. has called for consultations to discuss the issue of "bypass enrichment." In the letter, Spetrini states that the U.S. believes that the four republics are undermining the objectives of the suspension agreements by exporting uranium to the U.S. through third-party countries. According to an ad hoc committee composed of domestic uranium producers, the U.S. Enrichment Corporation (USEC), and the Oil, Chemical & Atomic Workers International Union, as well as a number of trade journals, a large volume of uranium from the CIS countries is being or will be enriched in third-party countries. Such a practice changes the origin of the uranium to the country in which it is enriched. The uranium is then exported to the U.S., thus avoiding the quantitative restrictions imposed by the suspension agreements. Attorney Tom Wilner, who represents Kazakhstan, stated that Kazakhstan is willing to engage in consultations with the DOC, but only on a multilateral basis with all four CIS republics taking part. Wilner also said that the U.S. should not delay the signing of a new suspension amendment with Kazakhstan until the bypass question is resolved.

Michael Knapik, Wilson Dizard III, and Ann MacLachlan, *NuclearFuel*, 1/16/95, pp. 1-2 **(12490)**.

1/5/95

It is reported that the USEC, along with two associations which represent U.S. nuclear employees and uranium producers, requested that the U.S. DOE count all uranium originating from Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan against U.S. import quotas for those countries, regardless of where the uranium is enriched. If implemented, this request would seal the so-called "enrichment loophole."

SpentFUEL, 12/26/94, p. 1; in *Uranium Institute News Briefing*, 12/21/94-1/5/95, p. 1 **(12463)**.

2/8/95

The U.S. DOE announces that the amount of nuclear material transferred in the course of Project Sapphire was 581 kg of HEU, not 600 kg as had originally been reported. During the first week of 2/95, the USEC sent out a request for proposal (RFP) to undisclosed U.S. companies capable of blending down the material. However, the ad hoc group of U.S. Uranium Producers and the Oil, Chemical & Atomic Workers International Union, the petitioners in the uranium anti-dumping case, believe that intentions to sell the uranium to commercial reactors contradict provisions in a draft of the amendment to the Kazakhstani suspension agreement. While the petitioners do not oppose the transaction, they point to the fact that the amendment would not allow the trading of uranium derived directly or indirectly from Kazakhstani HEU in the U.S. market.

Dave Airozo, *NuclearFuel*, 2/13/95, pp. 6-7 **(12575)**. Michael Knapik, *NuclearFuel*, 12/19/94, pp. 14-15 **(12575)**.

2/12/95

It is reported that several factors have combined to slow the implementation of the Cooperative Threat Reduction (Nunn-Lugar) program, including "bureaucratic inertia in Washington, Cold War suspicions in Moscow," and the chaotic political environment in the former Soviet republics. The U.S. Congress has appropriated about $1.3 billion for the Nunn-Lugar program since its inception. Assistant Secretary of Defense Ashton Carter stated that although the implementation of the program is just beginning, Nunn-Lugar funds have played a critical role in convincing Kazakhstan, Ukraine, and Belarus to transfer their nuclear arsenals to Russia. However, Charles Flickner, a Senate Budget Committee staff member, describes the program's record as "dismal," and states that not "a single nuclear warhead nor a single chemical weapon" has been dismantled using Nunn-Lugar funds. Carter indicates that the funds are not being used for actual dismantlement because Russia has refused U.S. offers for assistance in this area. The Pentagon has spent a total of about $150 million in Nunn-Lugar funds, and has committed about $500 million to the program in signed contracts. Over the past three years, Nunn-Lugar funds have been used to remove 2,600 warheads from missiles or bomber bases, dismantle launchers across the former Soviet Union, and transfer 900 warheads from Belarus, Kazakhstan, and Ukraine to Russia for dismantlement.

Fred Hiatt, *Washington Post*, 2/12/95; in Executive News Service, 2/12/95 **(12467)**. Amanda Bichsel, *Defense News*, 2/27/95, pp. 25-26 **(12467)**.

2/21/95

Gregory Govan, head of the U.S. On-Site Inspection Agency, says that beginning in 3/95, the U.S., Russia, Ukraine, Kazakhstan, and Belarus will begin inspecting one another's nuclear sites to ensure compliance with START I. Govan says that following the initial inspections, inspectors from Russia, Belarus, Kazakhstan, and Ukraine will engage in spot inspections of 36 sites in the U.S.; U.S. inspectors will visit 65 sites in the former Soviet Union. START I stipulates that Russia and the U.S. will reduce their nuclear arsenals from a combined total of 21,000 warheads at the height of the Cold War, to 12,000 by the end of 2001.

Times of India, 2/23/95, p. 9 **(12436)**. *Washington Times*, 2/22/95, p. A4 **(12436)**.

KYRGYZSTAN

INTERNAL DEVELOPMENTS

11/28/94

It is reported that Foreign Minister Roza Otunbayeva said that Kyrgyzstan fully supports the Comprehensive Test Ban Treaty and the creation of a nuclear-weapon-free zone in Central Asia.

Aleksandr Korzun, Igor Porshnev, Yevgeniy Terekhov, and others, Interfax (Moscow), 11/28/94; in FBIS-SOV-94-229, 11/28/94 **(12256)**.

KYRGYZSTAN WITH KAZAKHSTAN

1/21/95

It is reported that Kazakhstan and Kyrgyzstan concluded an agreement under which Kazakhstan will process its uranium in Kyrgyzstan at the Kara-Baltinskiy complex.

Boris Manayev, Itar-Tass (Moscow), 1/21/95; in FBIS-SOV-95-014, 1/21/95 **(12454)**.

KYRGYZSTAN WITH UNITED STATES

12/22/94

In a letter to each of the four former Soviet republics that have suspension agreements with the U.S. (i.e., Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan), Joseph Spetrini, Deputy Assistant for Compliance at the U.S. Department of Commerce (DOC), states that the U.S. has called for consultations to discuss the issue of "bypass enrichment." In the letter, Spetrini states that the U.S. believes that the four republics are undermining the objectives of the suspension agreements by exporting uranium to the U.S. through third-party countries. According to an ad hoc committee composed of domestic uranium producers, the U.S. Enrichment Corporation (USEC), and the Oil, Chemical & Atomic Workers International Union, as well as a number of trade journals, a large volume of uranium from the CIS countries is being or will be enriched in third-party countries. Such a practice changes the origin of the uranium to the country in which it is enriched. The uranium is then exported to the U.S., thus avoiding the quantitative restrictions imposed by the suspension agreements. Attorney Tom Wilner, who represents Kazakhstan, stated that Kazakhstan is willing to engage in consultations with the DOC, but only on a multilateral basis with all four CIS republics taking part. Wilner also said that the U.S. should not delay the signing of a new suspension amendment with Kazakhstan until the bypass question is resolved.

Michael Knapik, Wilson Dizard III, and Ann MacLachlan, *NuclearFuel*, 1/16/95, pp. 1-2 **(12490)**.

1/5/95

It is reported that the USEC, along with two associations which represent U.S. nuclear employees and uranium producers, requested that the U.S. Department of Energy count all uranium originating from Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan against U.S. import quotas for those countries, regardless of where the uranium is enriched. If implemented, this request would seal the so-called "enrichment loophole."

SpentFUEL, 12/26/94, p. 1; in *Uranium Institute News Briefing*, 12/21/94-1/5/95, p. 1 **(12463)**.

LATVIA

INTERNAL DEVELOPMENTS

12/2/94

It is reported that the Latvian parliament passed a law prohibiting radioactive waste imports into the country.

Leta (Riga), 12/2/94; in JPRS-TEN-94-030, 12/30/94, pp. 86-87 **(12185)**.

LITHUANIA

INTERNAL DEVELOPMENTS

Fall 1994

It is reported that Kaunus and Vilnius have become "hotbeds" of smuggling between East and West.

Harry Hayes, *International Review*, Autumn 1994 **(12472)**.

11/4/94

Kestutis Mazuika delivers a letter to Swedish Prime Minister Invar Carlsson's office threatening to blow up Ignalina if the Lithuanian terrorist group "Nuc-41 W" is not paid $8 million. Another source reports the amount demanded to be $1.1 million. The letter is reportedly delivered to Swedish officials due to Sweden's economic resources and its involvement with Ignalina. Mazuika is subsequently arrested by Swedish police; the Lithuanian government brings charges against him. "Nuc-41 W" claims responsibility for the disappearance of a fuel rod discovered in 2/93 to be missing from Ignalina. The group says the fuel rod was taken by collaborating plant workers in 1993.

Mattias Lufkens, *Liberation* (Paris), 11/17/94 **(12570)**. Vladas Burbulis, Itar-Tass (Moscow), 11/12/94; in FBIS-SOV-94-219, 11/12/94 **(12570)**. Ariane Sains, *Nucleonics Week*, 11/10/94 **(12570)**. Ariane Sains, *NuclearFuel*, 11/21/94, p. 15 **(12192)**.

11/12/94

German radio reports that, according to Germany's Environment Ministry, Georgy Dekanidze, a prominent Lithuanian businessman who operates an import-export business in Dusseldorf, threatened to blow up Ignalina if his son and local mafia leader, Boris Dekanidze, was not released by 11/15/94, just two days before he was to be executed.

New York Times, 11/15/94, p. A7 **(12418)**. Nikolai Lashkevich, *Izvestiya* (Moscow), 11/16/94, p. 1 **(12418)**. Reuter (Bonn), 11/14/94; in Executive News Service, 11/14/94 **(12418)**. Ariane Sains, *Nucleonics Week*, 11/17/94, pp. 1-2 **(12571)**.

11/13/94-11/17/94

One of two 1,500 MW reactors at Ignalina is shut down due to the recent bomb threat by Georgy Dekanidze. Another source reports that both units are shut down. Plant Director Viktor Shevaldin says that the plant will remain closed for one week. Four experts from Sweden and three experts from the Lithuanian Nuclear Commission (VATESI) will spend the week inspecting the reactors for possible sabotage. On 11/14/94, Shevaldin announces tightened admissions procedures at Ignalina as well as an increase in the number of guards on the grounds. No bombs are uncovered at the reactors during a 11/14/94-11/15/94 search conducted by nuclear experts and bomb-sniffing dogs. On 11/16/94, the Lithuanian government announces that Ignalina and VATESI experts will collaborate with representatives from the national police and the environmental and defense ministries to

develop additional safety procedures.

Nucleonics Week, 11/24/94, pp. 2-3 **(12187)**. Itar-Tass (Moscow), 11/14/94; in FBIS-SOV-94-220, 11/14/94 **(12187)**. Ariane Sains, *Nucleonics Week*, 11/17/94, pp. 1-2 **(12571)**. *New York Times*, 11/15/94, p. A7 **(12418)**. Igor Andreev, *Izvestiya*, 11/26/94, p. 2 **(12418)**. Vladas Burbulis, Itar-Tass (Moscow), 11/14/94; in FBIS-SOV-94-220, 11/14/94 **(12418)**. Reuter (Bonn), 11/14/94; in Executive News Service, 11/14/94 **(12418)**.

11/21/94

It is reported that Lithuanian officials are implementing new preventive security measures. The disappearance of a 200 kg fuel element discovered in 2/93 to be missing from Ignalina has been attributed to lax accountability standard and workers' incompetence. Some authorities suspect that the fresh fuel rod may have been put in the spent fuel pool by workers seeking to avoid being penalized for a damaged rod.

Ariane Sains, *NuclearFuel*, 11/21/94, p. 15 **(12192)**.

12/28/94

Two Lithuanians, Y. Vilchinskas and V. Karbauskas, are arrested in Kaunus in possession of 8 kg of U^{238}; a third suspect is arrested in Vilnius. The men are apprehended by Lithuanian special services officials who, posing as buyers, attempted to purchase the uranium which the suspects offered for $2,000 per kilogram. One of the suspects, a guard at Ignalina, has since escaped and his whereabouts are unknown. According to Investigator Kestutis Ragaisis, the arrested suspects are simply middlemen; the real threat lies within a "very serious mafia." Officials are unsure of the uranium's origin, but suspect that it may be from an Ignalina uranium fuel rod which has been unaccounted for since 1993. Jurgis Jurgelis, head of the Lithuanian Security Department, said that the uranium may have been stolen from Ignalina or taken en route to the plant. Other reports indicate that the uranium may have been stolen from a Russian reactor. According to reports, approximately 100 kg of uranium are currently available on the Lithuanian black market.

BNS (Tallinn), 12/29/94; in FBIS-SOV-94-251, 12/29/94 **(12470)**. Ariane Sains, *Nucleonics Week*, 1/12/95, pp. 9-10 **(12470)**. BNS (Tallinn), 1/3/95; in FBIS-SOV-95-022, 1/3/95 **(12470)**. Nikolai Lashkevich, *Izvestiya* (Moscow), 1/31/95, p. 8; in FBIS-SOV-95-021, 1/31/95 **(12569)**.

1/26/95

It is reported that the Lithuanian Physics Institute (LPI) has determined that the uranium pellets seized in Kaunus in 12/94, which have a street value of $2,000 per kilogram, are "oxide enriched to 2% U^{235}." This means the material is identical to most fuel used in RBMK reactors, such as those at Ignalina. Vidmantas Remeikis, Assistant Director at LPI, confirmed that the 8 kg of confiscated uranium is a mix of U^{238} and U^{235} and may be used in RBMK reactors. It is suspected that the uranium may come from an Ignalina fuel element that has been unaccounted for since 1993.

BNS (Tallinn), 1/3/95; in FBIS-SOV-95-002, 1/3/95 **(12470)**. Ariane Sains, *Nucleonics Week*, 1/26/95, p. 8 **(12470)**. Ariane Sains, *Nucleonics Week*, 1/12/95, pp. 9-10 **(12470)**.

LITHUANIA WITH BELARUS

10/21/94

The Belarusian Embassy in Lithuania announces that Belarus and Lithuania are formulating laws on peaceful uses of nuclear energy.

Radio Vilnius Network (Vilnius), 10/21/94; in JPRS-TEN-94-107, 11/18/94, p. 23 **(12312)**.

MOLDOVA

INTERNAL DEVELOPMENTS

10/11/94

Moldova formally accedes to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) as a non-nuclear weapon state by depositing its instrument of accession. Moldova is the 166th signatory to the NPT.

Arms Control Today, 11/94, p. 33 **(12254)**.

MOLDOVA WITH ISRAEL, ROMANIA, AND UKRAINE

10/10/94

Romanian police from the General Police Inspectorate's Weapons, Explosives, and Drugs Department arrest seven men attempting to sell 7 kg of uranium and strontium in a lead pipe. Three Moldovans (Victor Barta, Ion Bulgariu, and Ion Baleca (a former Red Army officer)), two Israeli citizens (Fuad Abdel Hatem and Abdul Hafez Moh'D Salem), and two Romanians (Dumitru Iordan and Florin Lenghel) are arrested in the village of Urechesti near the Ukrainian border. According to Romanian Interior Minister Doru Ioan Taracila, Baleca smuggled the nuclear material out of Ukraine to Moldova, where it was then given to a group of people in the Romanian province of Transylvania. These intermediaries tried to sell the material to Salem and Hatem, offering the uranium for $400,000, and the strontium for $250,000. At a 10/12/94 press conference, Romanian police and Interior Ministry officials state that they believe Hatem and Salem intended to smuggle the material to either Germany or the Netherlands.

Financial Times, 12/10/94 **(12055)**. Patru Musat, *Adevarul* (Bucharest), 10/12/94, p. 1; in JPRS-TND-94-020, 11/17/94, p. 11 **(12259)**. Peter Bale, Reuter (Bucharest), 10/12/94; in Executive News Service, 10/12/94 **(12206)**.

RUSSIA

INTERNAL DEVELOPMENTS

5/13/94

A Nuclear Oversight Committee (Gosatomnadzor) report says that Russia is unable to properly dispose of and manage about 610 million cubic meters of radioactive waste, that no special measures are taken when plutonium is discarded, and that Russia's waste disposal practices do not "correspond either to the requirements of the

IAEA" or to systems practiced in "developed countries."

Chris Blackhurst and Andrew Cavenagh, *Washington Times*, 11/7/94, p. A14 **(12316)**.

6/94

Three fuel assemblies of weapons-grade uranium are seized from the garage of a retired naval captain. The nuclear material had been stolen from the Servmorput shipyard in 11/93.

Brooks Tigner, *Defense News*, 11/21/94-11/27/94, p. 10 **(12489)**.

Fall 1994

General Yuri Yetimov, head of the Interior Ministry troops that guard strategic installations in Russia, reports that so far in 1994 there have been 12 nuclear smuggling attempts, 900 attempts to illegally access nuclear plant premises, and 700 incidents of attempted document theft by plant employees. In contrast, a total of three nuclear smuggling cases were reported in 1992 and 1993. According to Vyacheslav Sataganov, Chief of the Economic Crimes Department of the Russian Police, the area surrounding St. Petersburg and Kaliningrad—the Russian territory between Lithuania and Poland—is the main center for smuggling activity due to its close proximity to the Baltics. Additionally, former Soviet republics lack a structured legal system to enforce the law; transporting stolen raw nuclear materials across Russian borders only results in a fine.

Harry Hayes, *International Review*, Autumn 1994 **(12472)**.

8/94

It is reported that Anatoliy Dyakov, a Moscow Institute for Technical Physics professor, said that Russia's system of nuclear materials control has long been "outdated." Dyakov said that rules and regulations, such as those requiring the presence of three (and sometimes five) people whenever weapons-grade uranium or plutonium is handled, are no longer adhered to. Dyakov characterized research institutes, which have connections to both the civilian and military nuclear industry sectors, as the "weakest link in our chain of security." Dyakov cited the Moscow Institute for Inorganic Materials as an institution where "principled people" are leaving and are being replaced by others who are "devoid of principles" and "realize that they are practically rolling in money." Dyakov said that there is no need for Russia to produce plutonium since seven tons of it are stockpiled each year for every 2,000 warheads dismantled.

Der Spiegel (Hamburg), 8/22/94, p. 28; in FBIS-SOV-94-162, 8/22/94 **(12173)**.

9/15/94

Yeltsin signs a decree designed to improve the physical control and security of Russia's nuclear materials. The decree names Gosatomnadzor the "supreme agency for nuclear accountancy and physical security"; the organization will report directly to the president. The decree also imposes stricter border controls and increases funding in the FY 1995 budget for anti-smuggling efforts.

Harald Mueller, *Arms Control Today*, 12/94, pp. 7-10 **(12582)**.

10/14/94

It is reported that the Russian government has made moves to enhance the physical protection of a number of strategic facilities in Moscow. The Moscow "financial department" is expected to allocate "4,500 million" rubles to assist the Kurchatov Institute in enhancing its security.

Television 2x2 (Moscow), 10/14/94; in FBIS-SOV-94-199, 10/14/94 **(12179)**.

10/17/94

In Moscow, 27 kg of "industrial-grade" U^{238} are seized from the trunk of a car in a joint operation by the Federal Counterintelligence Service (FSK) and the Interior Ministry. The FSK reports that the nuclear material was "destined for sale in Moscow." The material's origin has yet to be determined. The FSK's Economic Directorate and the Interior Ministry's Main Administration for Combatting Organized Crime are holding twelve people in connection with smuggling attempt. The group, headed by Yuriy Kazaryan, planned to sell the uranium for $1.5 million and had stored the material for a month in a Moscow suburb. Kazaryan was formerly the director of Interattraktsion Ltd. and had previously been indicted for illegally storing weapons.

Andrey Palariya, Itar-Tass (Moscow), 10/18/94; in FBIS-SOV-94-202, 10/18/94 **(12473)**. BBC Monitoring Service, Summary of World Broadcasts, 10/19/94; in *Uranium Institute News Briefing*, p. 2 **(12073)**. Reuter (Moscow), 10/18/94; in Executive News service, 10/19/94 **(12260)**. *Wall Street Journal*, 10/19/94, p. A10 **(12260)**. Ostankino Television First Channel (Moscow), 10/19/94; in FBIS-SOV-94-204, 10/19/94 **(12473)**.

10/26/94

It is reported that, according to Russian Counterespionage Agency statistics, about 12 percent of applied physicists and 40 percent of highly qualified theoretical physicists have emigrated from the former Soviet republics, in particular from Russia. A recent Labor Institute poll indicated that 40 percent of former Soviet scientists might be willing to emigrate, and 13 percent are prepared to do so immediately. General Viatchilev Ogordonikov, Deputy Director General of the Russian Interior Ministry and member of the Control Council of Rosvooruzheniye, stated that Kalmykya has emerged as a key transfer point in the emigration of Russian specialists to Iran.

Dmitriy Pavlov, *Al Hayah* (London), 10/26/94; in FBIS-SOV-94-210, 10/26/94 **(12146)**.

10/26/94

FSK officers from Russia's Pskov regional department arrest three Pskov natives who had attempted to "hand over" 67 kg of U^{238} to unidentified parties. According to unofficial statements made by the Pskov FSK regional department, the intended recipients of the nuclear material may have been citizens of Estonia, Latvia, or Lithuania.

Boris Vlasov, Itar-Tass (Moscow), 10/27/94; in JPRS-TND-94-020, 11/17/94, p. 29 **(12240)**.

10/27/94

It is reported that in response to a proposal by the Ministry of Atomic Energy, the Ministry of Environmental Protection and Natural Resources (MEPNR) has stated it will not accept any proposals to bring in radioactive waste from abroad for burial in Russia. The Ministry of Atomic Energy asked for the authority to import spent fuel that is slated for processing and burial under the auspices of international treaties that Russia has already signed. The MEPNR rejected the request, stating that such agreements should be amended so that spent fuel is returned to the country of origin after it has been processed.

Aleksandr Shuvalov, Itar-Tass (Moscow), 10/27/94; in JPRS-TEN-94-026, 11/8/94, p. 31 **(12309)**.

10/28/94

The Duma ratifies the "Russian-German Customs Service Cooperation Treaty" which is designed to stem the illegal flow of "strategic materials" and other items from Russia.

FBIS Media Note; in FBIS-SOV-94-218, 11/10/94 **(12174)**.

10/31/94

It is reported that the construction of the RT-2 reprocessing facility at Krasnoyarsk-26 has been approved by the territorial administration. Work on the plant began in the 1970s, but was halted in 1986 due to the lack of financial resources and environmental protests against the project. Construction of the facility is expected to be completed within 10 years for an estimated cost of 3.5 trillion rubles. Once finished, the RT-2 plant should have the capacity to store and process approximately 4,000 fuel rods from Russia and other countries, including Sweden, the U.K., and Japan. According to territorial officials, Japan, Taiwan, Switzerland, Ukraine, and Slovenia have "expressed interest in the plant." Also, the Russian Ministry of Atomic Energy and the Krasnoyarsk Territorial Administration are in the process of negotiating the possible construction of a storage facility for weapons-grade nuclear material at Krasnoyarsk-26.

Interfax (Moscow), 10/31/94; in FBIS-SOV-94-211, 10/31/94 **(12559)**. Dmitriy Norikov and Vyacheslav Utkin, NTV Television (Moscow), 10/1/94; in JPRS-TEN-94-026, 11/8/94, p. 31 **(12559)**.

11/94

It is reported that an unclassified U.S. Central Intelligence Agency report outlines the current state of disarmament in Russia. As of 9/94, Russian disarmament included 326 SS-11s, 260 SLBMs, 22 SS-17s, 16 SS-18s, and 10 SS-13s. Russia maintains a force of 369 SS-25s, 224 SS-N-18s, 208 SS-N-8s, 188 SS-18s, 170 SS-19s, 120 SS-N-20s, 112 SS-N-23s, 36 rail-based SS-24s, 30 SS-13s, 25 SS-17s, 16 SS-N-6s, and 10 silo-based SS-24s.

Arms Control Today, 11/94, p. 33 **(12135)**.

11/1/94

It is reported that Igor Kasatanov, First Deputy Commander of the Russian Navy, stated that without the aid of an integrated system to coordinate disposal policy, individual ministries and departments will be ill-equipped to face the task of decommissioning nuclear submarines and disposing of radioactive waste generated during decommissioning. Chief Commander of the Russian Navy Feliks Gromov said that to date, 121 nuclear submarines have been decommissioned. The spent fuel has been removed from all of these vessels, but only some of the submarines have been disposed of completely. Eighty-five submarines have been taken out of service, but are currently moored at their bases.

Interfax (Moscow), 11/1/94; in FBIS-SOV-94-212, 11/1/94 **(12035)**. *RFE/RL Daily Report*, 10/17/94 **(12035)**.

11/3/94

Russian Defense Minister Pavel Grachev states that Leonid Brezhnev's 1982 pledge that the USSR would not be the first to use nuclear weapons will not be included in Russia's new military doctrine. Russian nuclear experts have been pushing for renewed testing of nuclear weapons on the grounds that it will improve the safety and reliability of Russia's nuclear arsenal.

Dunbar Lockwood, *Arms Control Today*, 11/94, pp. 21-24 **(12306)**. *PPNN Newsbrief*, Fourth Quarter 1994, p. 9 **(12306)**.

11/11/94

The Duma votes 257 to 3 to send a bill that would have legalized the import of spent fuel back to committee for revision. The bill would have reversed a 1991 law prohibiting the import of radioactive waste. The Ministry of Atomic Energy supported the measure on the grounds that the import and reprocessing of spent fuel would bring in much needed hard currency which could be used to complete the construction of a reprocessing facility at Krasnoyarsk-26.

UPI (Moscow), 11/11/94; in Executive News Service, 11/11/94 **(12302)**.

11/15/94

The Bellona Foundation, a Norwegian environmental group, releases a report entitled "Sources to Radioactive Contamination in Murmansk and Arkhangelsk Regions" which documents inadequate security for radioactive waste storage sites in Russia's northwest territory. The report cites as an example of lax security the Servmorput naval shipyard located near Murmansk, where nuclear fuel assemblies for Russia's Northern Fleet are stored. According to Nils Bohmer, a nuclear scientist and co-author of the report, there are holes large enough to step through in the fence surrounding the shipyard with only one guard to patrol an area of several square miles. According to the report, the officers guarding the storage sites are underpaid, and are thus susceptible to bribery.

Brooks Tigner, *Defense News*, 11/21/94-11/27/94, p. 10 **(12489)**.

11/24/94

It is revealed that an unpublished 1993 Russian government report discussed the problems facing Russia's nuclear submarine enterprises in the Murmansk region. The report was commissioned after Russian Prime Minister Viktor Chernomyrdin's 1993 visit to the city of Severodvinsk, the site of two facilities now being used to decommission nuclear submarines. A temporary storage facility 12 km southwest of Severodvinsk was filled over 15 years ago, and the facility near the city's harbor is at 85 percent capacity. Facilities for sorting and crushing solid waste are also lacking. Rail transport of spent fuel to Mayak has become problematic since 10/93, when the radioactive material containers were deemed unsafe. In 1993, the state nuclear inspectorate visited Severodvinsk and found that "submarines have practically become floating spent fuel stores. Their technical condition is unsatisfactory and sinking is a real possibility." Only 17 of the 54 nuclear submarines sent to Severodvinsk for decommissioning have had their cores removed. An additional 37, nine of which are moored in Severodvinsk, await decommissioning.

Foreign Report, 11/24/94 **(12039)**.

11/27/94

It is reported that there are approximately 14,500 groups and individuals authorized to handle radioactive materials in Russia, which is believed to have about 1,200 tons of weapons-grade uranium on its territory. Yuriy Vishnevskiy, the chairman of Russia's Atomic Energy Inspectorate, said that there were cases of fissile materials theft by mili-

tary personnel in 1993 due to lax security systems in the former Soviet Union.

Julia Rubin, *Sunday Age*, 11/27/94, p. 16 **(12471)**.

12/94

Nine nuclear-related facilities in dire need of physical protection as well as modern nuclear materials control and accountancy systems are listed for the first time in Russia's press. The nine sites listed are: Arzamas-16 (Kremlev); Chelyabinsk-70 (Snezhinsk); the Kurchatov Institute, which has an insufficient nuclear materials protection system and over 100 tons of LEU and natural uranium in its nine storage sites; Mayak Scientific and Production Association (Chelyabinsk-65), which stores approximately 30 tons of reactor plutonium in conditions that do not meet international safety norms; Penza-19 (Zarechny); the Physics and Energy Institute (Obninsk), which has a weapons-grade plutonium-burning BR-10 reactor; the Siberian Chemical Plant (Tomsk-7), which has lost "several hundred kilograms" of plutonium, according to plant specialists; the V. G. Khlopin Radium Institute (St. Petersburg); and the Zheleznogorsk Mining and Chemical Plant (Krasnoyarsk-26).

Alexander Bolsunovsky and Valery Menshchikov, *Moscow News*, 12/9/94-12/15/94, p. 14 **(12455)**.

12/94

Frank Barnaby, a nuclear expert, argues in an issue of *Medicine and War* that red mercury can be used in either a traditional fission explosive device, or in the development of a new generation of hydrogen bombs which are lighter and smaller. Barnaby, whose argument is based on discussions with a Russian nuclear chemist, says that red mercury is created by irradiating a red powder—created by dissolving mercury antimony oxide in mercury—in a nuclear reactor for 20 days. The mercury is then allowed to evaporate leaving a polymer in gel form called RM 20/20. Actinides, such as californium^{252}, are then mixed with the RM 20/20. Barnaby argues that red mercury enhances efficient compression of the pit after ignition, that the actinides are a useful source of neutrons, and that the substance may reflect neutrons back into the core.

Nigel Hawkes, *Times* (London), 12/12/94 **(12409)**.

12/5/94

It is reported that the Ministry of Atomic Energy may be unaware of how much HEU was produced and is currently held in the inventories of the successor states of the former Soviet Union. According to officials from Gosatomnadzor, nuclear material inventories were maintained at approximately 900 locations.

Mark Hibbs, *NuclearFuel*, 12/5/95, p. 3 **(12178)**.

12/5/94

It is reported that the Smolensk nuclear power plant has tightened its security to prevent possible terrorist acts that could arise from the Chechnya imbroglio.

RIA (Moscow), 12/5/94; in FBIS-SOV-94-235, 12/5/94 **(12181)**.

12/10/94

An unnamed senior Russian naval officer states that Navy Commander Feliks Gromov ordered the implementation of a Russian Security Council decision to retire two nuclear-powered vessels. The vessels are being maintained in Strelok Bay in the Maritime Krai. An undisclosed Pacific Fleet official believes that the Russian Navy will want to dismantle the vessels as soon as possible given the cost of maintaining them. There is speculation, however, that neither the Zvezda dismantling plant near Vladivostok nor any other facility can accommodate the large and sophisticated reactors from the two vessels.

A. Portov, *Tokyo Shimbun* (Tokyo), 12/11/94, p. 5; in JPRS-TEN-94-030, 12/30/94, p. 71 **(12034)**.

12/15/94

It is reported that safety and security measures at the "top-secret" Rakushka plant—a facility in Maritime Kray for decommissioning nuclear submarines—are near a state of crisis. Cuts in maintenance funding have led to the downsizing of security forces at the facility from a guard regiment to a platoon. In the summer of 1994, Maritime Krai administration officials ventured onto the facility without being stopped and found seven "virtually unattended" submarines "brimful with nuclear fuel."

Natalya Barabash, *Komsomolskaya Pravda* (Moscow), 12/15/94, p. 3 **(12592)**.

1/95

It is reported that G. Soloviev, Deputy Chief Engineer at Russia's Ural Electrochemical enterprise, and A. Saprygin, a director of Quality Control, confirmed that in 10/94, one ton of weapons-grade HEU was successfully reprocessed into commercial grade LEU, and that the blended down uranium met the current standards of the American Society of Testing and Materials (ASTM) C996-90 "Standard Specification for Uranium Hexaflouride Enriched to Less Than 5% U^{235}."

NuclearFuel, 1/2/95, p. 17 **(12051)**.

1/2/95

It is reported that local government councils of Russia's 10 closed cities, which are responsible for the development and production of nuclear weapons, voiced their concern to the Ministry of Atomic Energy about the lack of physical protection at their facilities. An official at Tomsk-7 (renamed Seversk), said that current security systems are based on deterring external threats, although the current threat is that personnel within the complex may divert nuclear materials.

Mark Hibbs, *NuclearFuel*, 1/2/95, pp. 13-14 **(12447)**.

1/6/95

It is reported that security measures at nuclear facilities in the Sverdlovsk region, particularly around the Beloyarskaya plant, have been upgraded to guard against possible terrorist attacks related to the Chechnya conflict.

Interfax (Moscow), 1/6/95; in FBIS-SOV-95-005, 1/6/95 **(12458)**.

1/24/95

Vice Minister for Civil Defense Sergei Chetagurov says that in addition to a Russian nuclear submarine containing nuclear warheads, reactors, and torpedoes wrecked near the coast of Bermuda, there are currently 120 Russian nuclear submarines containing spent nuclear fuel docked in shallow harbors; in five years there will be a total of 150 nuclear submarines with burnt-up fuel on board in need of disposal. Chetagurov says that 150 ships—some equipped with two nuclear reactors and car-

rying spent fuel—need to be decommissioned by the year 2000.

Michael Binyon, *Times*, 1/25/95 **(12410)**. *Wall Street Journal*, 1/25/95 **(12410)**. Patrick Chalmers, Reuter (Brussels), 1/24/95; in Executive News Service, 1/24/95 **(12307)**.

1/25/95

President Boris Yeltsin signs a decree "On Structural Reforms and Conversion of the Atomic Industry in Zheleznogorsk (formerly Krasnoyarsk-26) of the Krasnoyarsk Region." The presidential decree provides for the continuation of construction of the RT-2 reprocessing plant and permits spent fuel from foreign facilities to be processed there, under the condition that the finished products will be sent back to the client.

Segodnya, 2/9/95, p. 9 **(12595)**.

2/95

During a conference in Japan on the nuclear fuel cycle, a Russian official states that Russia possesses 170 tons of plutonium in the form of spent fuel. Of this amount, 82 tons are in Soviet-type VVER reactors and 76 tons are in Chernobyl-type graphite-moderated reactors; the remaining 12 tons are in fast breeder BN-600 reactors. According to the official, there are 100 tons of plutonium in Russia "for military purposes."

Yomiuri Shimbun, 2/15/95 **(12563)**.

2/10/95

It is reported that the Russian Ministry of Atomic Energy and the Ministry of Internal Affairs are taking steps to reinforce security measure at Russia's nuclear facilities in response to threats made by Dudaev supporters. On 2/21, an official representative of the Ministry of Atomic Energy says that Dudaev's threats of terrorist acts against nuclear facilities are baseless. The Rostov nuclear power plant is the only nearby facility that could become a potential target, but this facility has not started up and the nuclear fuel has not yet been loaded into the reactors.

Izvestiya, 2/11/95, p. 1 **(12593)**. *Segodnya*, 2/21/95, p. 3 **(12594)**.

2/16/95

It is reported that Russia intends to store up to 200 nuclear reactors from decommissioned nuclear submarines in a secret tunnel in Ara Bay, located approximately 100 km from Norway. According to Thomas Nilsen of the Norwegian environmental organization Bellona, Anatoliy Prochorov, head of nuclear activity inspections at shipyards on the Kola Peninsula, has granted an eight-year license for storage of the reactors. The submarines will be dismantled at the Nerpa shipyard on the Murmansk fjord as well as in Severodvinsk. A permanent disposal site for the reactors is expected to be built in Novaya Zemlya or on the Kola Peninsula. Approximately 150 nuclear submarines containing 280 reactors are destined to be disassembled. Of the 70 submarines already taken out of operation, 20 are being stored in Severodvinsk and the remaining vessels are in naval bases throughout the Kola Peninsula. These 70 submarines contain a total of 130 reactors.

Ole Mathismoen, *Aftenposten* (Oslo), 2/16/95, p. 2 **(12416)**.

2/23/95

Prime Minister Viktor Chernomyrdin, acting on a report stating that 80 percent of Russian nuclear sites lack adequate security and detection equipment "at their gates," issues a mandate for tighter and more modern controls. After hearing statements from Interior Minister Viktor Yerin, Chernomyrdin said that lack of security makes it impossible for Russia to prove that it is not the source of the nuclear material being trafficked internationally. Yerin stated that Russia is currently investigating 30 cases concerning stolen radioactive material. Valeri Menshchikov, a consultant to the National Security Council, has stated that at Tomsk-7, a production center of weapons-grade plutonium, several hundred kilograms of unregistered plutonium have been lost.

Maragaret Shapiro, *International Herald Tribune*, 2/25/95-2/26/95 **(12515)**.

2/25/95-2/26/95

A project on transferring spent fuel from the cores of submarine nuclear power reactors to the Mayak reprocessing facilities is begun. The material has been taken out of temporary storage and loaded onto railway cars. More than 60 nuclear submarines have been removed from service.

Igor Dvinskii, *Segodnya*, 2/28/95, p. 7 **(12596)**.

Russia with Belarus

10/6/94

It is reported that Belarus hopes to acquire blended down uranium from Russian nuclear weapons stockpiles to fuel reactors that it plans to build as part of its domestic nuclear power program.

Mark Hibbs, *Nucleonics Week*, 10/13/94, pp. 1, 11-12 **(12313)**.

12/27/94

It is reported that the transfer to Russia of the Group of Strategic Rocket Forces is proceeding as planned. The eight rocket regiments of SS-25s, comprised of 72 launchers, will all be in Russia by the end of 1995; the "divisions will be totally disbanded" by mid-1996 in compliance with START I.

Serguei Martynov, *Director's Series on Proliferation*, 12/27/94, pp. 43-47 **(12423)**.

1/26/95

It is reported that, of the 75 nuclear missiles that were located in Belarus after the demise of the Soviet Union, over half have been transferred to Russia and the rest will be returned by the end of 1996 in accordance with START I. A conflicting statement says that the remaining SS-25s will be shipped to Russia before the end of 1995.

Reuter (Minsk), 1/26/95; in Executive News Service, 1/26/95 **(12236)**. *PPNN Newsbriefs*, Second Quarter 1994, p. 16 **(12236)**.

Russia with Brazil

9/94

Russian Minister of Atomic Energy Viktor Mikhailov and Brazilian Foreign Minister Celso Amorin sign an agreement on "the peaceful use of nuclear energy" that calls for joint cooperation in the fields of nuclear safety, controlled thermonuclear fusion, applied basic research, radioisotope production, and research reactors.

Nucleonics Week, 9/22/94, pp. 15-16 **(12032)**.

Russia with Bulgaria

1/11/95

It is reported that Bulgaria has been trying to negotiate an agreement in which its used

nuclear fuel stocks could be sent to Russia for reprocessing. Bulgaria has not sent spent nuclear fuel to Russia since 1990, two years before Russia adopted a law banning nuclear waste imports.

Reuter (Budapest), 1/11/95; in Executive News Service, 1/11/95 **(12258)**.

Russia with Central Asia

10/26/94

It is reported that, according to General Viatchilev Ogordonikov, Deputy Director General of the Russian Interior Ministry, a shipment of radioactive material was recently seized while en route from Kalmykya, Russia to Central Asia. An employee at Moscow's Dosodidovo airport detected radioactive emissions from a nearby container. Counterespionage officers who were called to the scene opened the container and discovered that it held a second container measuring 25 cm in width and 1 m in height. An enclosed document indicated only that the container had been sent from Kalmykya to a Central Asian republic. Counterespionage experts indicated that in most cases the final destination for such shipments is Iran, Iraq, or North Korea. An ensuing investigation revealed that the radioactive substance was originally sent from Chelyabinsk in western Siberia. The shipper of the radioactive material left the country and his whereabouts are unknown.

Dmitriy Pavlov, *Al-Hayah* (London), 10/26/94; in FBIS-SOV-94-210, 10/26/94 **(12146)**.

Russia with Czech Republic

12/4/94

Russian Deputy Premier Yuriy Yarov and Czech Deputy Industry and Trade Minister Vaclav Patrecik sign a cooperation agreement which calls for information exchanges between the two countries, cooperation in bringing new facilities on line, maintenance of nuclear facilities, supply of fuel to Czech nuclear plants, improved safety measures during nuclear materials transport, and cooperation in nuclear safety and radioactive protection. Under Article V of the agreement, Russia will bear responsibility for the shipment of fresh nuclear fuel to the Czech Republic, and for the return of spent fuel to Russia for reprocessing. Plutonium derived from reprocessing will be used in the production of mixed-oxide (MOX) fuel, which will be returned to the Czech Republic for use in its reactors. (Some reports indicate that the plutonium itself will be returned to the Czech Republic.) The agreement supersedes the previous spent fuel accord between Czechoslovakia (CSSR) and the Soviet Union, which included the supply of uranium dioxide fuel to the CSSR, and the return of spent fuel to the USSR. The most recent agreement "assumes the possibility" that the Czech Republic may re-export actinides derived from the reprocessing of its spent fuel. However, "in the case of more than 20% refined uranium, plutonium or heavy water," Russia's written consent will be required. The agreement is in full compliance with the NPT; nuclear materials will not be used for military purposes or for the construction of nuclear weapons, and will be under IAEA safeguards while in the Czech Republic or under Czech jurisdiction. The agreement is valid for 10 years and can be automatically extended by two years. The agreement will enter into force once it is ratified by the parliaments of Russia and the Czech Republic.

Reuter (Budapest), 1/11/95; in Executive News Service, 1/11/95 **(12258)**. CTK (Prague), 2/16/94; in JPRS-TND-95-001, 1/23/95, pp. 31-32 **(12468)**. David Stamp, Reuter (Prague), 12/16/94; in Executive News Service, 12/16/94 **(12303)**. Mark Hibbs, *NuclearFuel*, 1/2/95, pp. 14-15 **(12468)**.

12/16/94

Greenpeace releases copies of the reprocessing agreement signed on 12/4/94 by Russia and the Czech Republic. According to Greenpeace spokesman Petr Hlobil, the agreement violates the NPT and should be rejected. However, IAEA spokesman Hans Meyer described the deal as "a completely legal and normal procedure."

David Stamp, Reuter (Prague), 12/16/94; in Executive News Service, 12/16/94 **(12303)**. Jeremy Smith, Reuter (Prague), 12/16/94; in Executive News Service, 12/16/94 **(12303)**. Steve Pagani, Reuter (Vienna), 12/16/94; in Executive News Service, 12/16/94 **(12303)**.

Russia with Denmark, Italy, and Libya

10/10/94

The Danish newspaper *Jyllandsposten* alleges that Danish businessman Joergen Quist Nielson had worked for PET, Denmark's secret service organization, had made contacts with "Russian bigwig" Alexander Kuzin and Italy's "extreme rightist" Marci Affatigato, and had engaged in nuclear smuggling activities on behalf of a number of parties including Libya's Muammar al-Quadhafi. PET head Birgitte Stampe said that Nielson had never been employed by the organization. Out of concern that nuclear materials could be smuggled from Russia through Denmark by way of Finland and other Scandinavian countries, PET reports that it has stepped up inspections on goods and packages coming from Eastern Europe. A special PET task force has been established to conduct surveillance on individuals and businesses suspected of trading materials such as cesium, osmium, and red mercury. The organization said that plutonium, uranium, and other nuclear materials are "brought illegally to Denmark identified as other substances."

AFP (Paris), 10/10/94; in JPRS-TND-94-020, 11/17/94, p. 35 **(12242)**.

Russia with Estonia

10/10/94

It is reported that Russian experts removed the fuel rods from reactor number two at the Paldiski naval base. The Russian-Estonian decommissioning agreement states that 210 Russian personnel will dismantle the Paldiski reactors. Russia will completely yield the Paldiski facilities to Estonia by 9/30/95.

BNS (Tallinn), 1/25/95; in FBIS-SOV-95-017, 1/25/95 **(12314)**. Dzintra Bungs, *RFE/RL Daily Report*, 10/11/94 **(12189)**. Brian Curran and Dunbar Lockwood, *Arms Control Today*, 10/94, p. 18 **(12189)**.

Russia with European Union

1/24/95

At a conference in Brussels, Russian Deputy Minister Sergei Chetagurov asks European Union members to help Russia identify storage options for unused nuclear fuel from its submarines.

Michael Binyon, *Times*, 1/25/95 **(12410)**. *Wall Street Journal*, 1/25/95 **(12410)**.

Russia with European Union and Norway

9/94

Norwegian Justice Minister Grete Faremo and Europol coordinator Juergen Storbeck tour South Varanger (in Norway's northern region bordering Russia) and inspect customs and police controls in order to emphasize their determination to maintain secure borders in the face of possible radioactive materials smuggling by Russian trawlers. Faremo, who does not envisage any imminent change in Norway's border controls, also mentions the important role played by "international intelligence information" in maintaining secure borders. Storbeck expressed his satisfaction with Norway's border security. He said that the border control issue has been taken seriously by both the Russians and the Norwegians and that customs officials, the military, and the police all "seem to be cooperating very well."

Ole Magnus Rapp, *Aftenpost* (Oslo), 9/22/94, p. 4; in JPRS-TND-94-019, 10/17/94, pp. 43-44 **(12063)**.

Russia with Finland

11/1/94

A train carrying 216 spent fuel bundles, removed from Finland's Loviisa nuclear power plant in 1989, leaves Finland for Chelyabinsk-65 (Mayak), Russia, where the spent fuel will be processed. During the last 15 years in which the Mayak facility has cooperated with Loviisa in fuel processing, 2,343 spent fuel bundles have been shipped to Russia. Of the remaining 1,231 spent fuel bundles at Loviisa, 480 are due to be shipped to Russia in 1995 and 1996.

Nuclear Engineering International, 2/95, pp. 6-7 **(12586)**.

Russia with France

11/17/94

French Foreign Minister Alain Juppe and Russian Foreign Minister Andrei Kozyrev sign an agreement on the construction of a storage facility near Novosibirsk, Russia for nuclear materials from Russia's dismantled nuclear weapons. The project, which includes construction of a building capable of storing 3,200 containers of "hydrogen-containing lithium materials," is expected to be completed by mid-1997. The project is estimated to cost 132 million francs.

RFE/RL Daily Report, 12/22/94 **(12587)**. Itar-Tass (Moscow), 11/17/94; in FBIS-SOV-94-223, 11/17/95 **(12587)**.

Russia with Germany

Fall 1994

It is reported that the majority of persons on a list of 300 nuclear smuggling suspects maintained by German intelligence officials are from Russia and Poland. According to the German police, many Russians living in Germany are linked to the Russian mafia and run a "network of firms acting as fronts for illegal business in Germany."

Harry Hayes, *International Review*, Autumn 1994 **(12472)**.

9/28/94

It is reported that, according to a "well-informed source," radioactive material seized in Tengen on 5/10/94 and in Munich on 8/10/94 had "more than likely" been produced in Germany, with Wackersdorf and Alke being the most likely sites. The information, said to have come from the IAEA, was given to "circles arranging Russian President Boris Yeltsin's trip to the United States." The report raised the possibility that "German special services" shipped the radioactive material to Russia and back again in order to cast doubts on Russia's ability to protect and control its fissile materials.

Itar-Tass (Moscow), 9/28/94; in FBIS-SOV-94-190, 9/28/94 **(12071)**.

10/17/94

It is reported that, according to the German Federal Office of Criminal Investigation (BKA), nine Russians plan to ship an unknown amount of nuclear material from Moscow to Germany. Germany's Federal Intelligence Service (BND) has therefore put airports, Federal Border Police, and customs agents "on high alert," telling airport officials to check all passengers from Moscow against the list of nine suspected smugglers. The BKA says that the "interested buyers and contacts" for the expected shipment are not known.

Gunther Schnattman, *Focus* (Munich), 10/17/94, pp. 87-89; in JPRS-TND-94-020, 11/17/94, pp. 35-36 **(12062)**.

10/17/94

It is reported that Siemens intends to pursue a joint venture with the Russian firm Mayak of Chelyabinsk-65 to develop a facility in Russia that will fabricate MOX fuel from the plutonium derived from dismantled nuclear weapons. Siemens has estimated the cost of such a facility to be less than 1 billion German marks. According to expert Juergen Krellman, the 120 tons of weapons-grade plutonium currently stored in Russia could be processed in about 25 years, and the fuel could be used in 10 to 15 light water reactors in Russia and the European Union to produce electricity. A Siemens study contends that the MOX fuel elements would need to be used only once to make the material unusable in a nuclear weapon.

Wolfgang Pollack, *Welt Am Sonntag* (Hamburg), 9/25/94, p. 3; in FBIS-SOV-94-019, 10/17/94, p. 42 **(12568)**. Doug Clarke, *RFE/RL Daily Report*, 10/94 **(12568)**.

12/94

German Federation of Industry head Tyll Necker says that discoveries of Russian plutonium in Germany illustrate the need for the German government to become involved in reprocessing weapons-grade nuclear materials into MOX fuel. In 1992, the German and Russian governments signed an agreement calling for the creation of a project group to examine the issue of burning plutonium in breeder and thermal reactors. Siemens, a member of the group, says that employing vitrification, an idea supported by the U.S., would require 10 years to achieve "industrial maturity" and "would create no value-added."

Nucleonics Week, 11/3/94; in *Congressional Research Reports*, 12/94 **(12164)**.

1/16/95

Russia and Germany are nearly finished with a feasibility study which attempts to establish that weapons-grade plutonium can be fabricated into MOX fuel and subsequently utilized in nuclear reactors. The feasibility study is being conducted primarily by Siemens of Germany and Russia's Ministry of Atomic Energy.

Mark Hibbs, *NuclearFuel*, 1/16/95, pp. 9-10 **(12343)**.

1/30/95

It is reported that current German plans call for converting Russian weapons plutonium into MOX fuel at Siemens' nearly completed plutonium fuels facility in Hanau. Siemens has been unable to obtain adequate financing to build a new MOX plant in Russia. However, sources indicate that it would likely cost more to implement the proposal to make MOX fuel in Germany with Russian feed stock than to build a new facility in Russia. The perception that Moscow lacks enthusiasm for the construction of an interim storage facility for weapons plutonium in Russia, coupled with growing fears about the security of Russian nuclear materials, has led the U.S. Office of Science & Technology, the U.S. DOE and the U.S. State Department to reconsider the MOX option. According to a U.S. official, Russian Minister of Atomic Energy Viktor Mikhailov "has not shown that he really wants to store the plutonium." Instead, according to the official, Mikhailov wants "a full-blown plutonium fuels program, and he would rather set it up yesterday than today."

Mark Hibbs, *NuclearFuel*, 1/30/95, pp. 5-7 **(12583)**.
Mark Hibbs, *NuclearFuel*, 2/13/95, pp. 15-16 **(12516)**.

1/30/95

It is reported that, according to the European Commission, 200 g of lithium, which "was probably produced in a facility in the former USSR," was recently confiscated by German officials.

Mark Hibbs, *NuclearFuel*, 1/30/95, pp. 4-5 **(12338)**.

2/25/95

It is reported that an unpublished study, commissioned in 1992 and conducted by nuclear safety specialists from the German government and Russia's Ministry of Atomic Energy, advocates that plutonium extracted from Russian nuclear warheads be converted into MOX fuel and used in nuclear power stations. The study recommends that Russia build a pilot plant that would have an output of 20 MT of MOX fuel per year. The pilot plant is estimated to cost 8 million British pounds. The pilot plant would utilize 1 MT of weapons-grade plutonium per year from Russia's current 120 MT plutonium stockpile. According to Yevgeniy Kudriavtsev, a senior specialist at the Ministry of Atomic Energy's nuclear chemical division, Russia's ultimate objective is to burn MOX fuel created from military plutonium in four yet-to-be-constructed 800 MW fast reactors. Kudriavtsev admits that Russia may require foreign financial assistance in order to pay for the pilot plant. The study also recommends that MOX fuel be burned in the BN-600 fast reactor at Beloyarsk. However, the BN-600 is designed to produce more plutonium than it needs, and alteration of the reactor would be necessary. Another alternative is to use MOX fuel in the four modern pressurized water reactors at Balakovo on the Volga River; these reactors would require licensing before MOX fuel could be burned in them. Siemens is optimistic about the pilot plant because of the possibility of future contracts for MOX plant in Russia. Greenpeace's nuclear research coordinator Shaun Burnie claims that the proposed scheme is merely a method in which Siemens can "save its MOX business."

New Scientist, 2/25/95 **(12558)**.

Russia with Hungary

8/30/94

The MTI news agency reports that Hungarian police seized 2 kg of radioactive material, thought to be Russian uranium fuel rods, and arrested two Hungarians in the parking lot of a Budapest hotel as they attempted to sell the material for an estimated 26,140 pounds per kilogram.

Times (London), 8/31/94 **(12072)**.

1/11/95

It is reported that Hungary will transport 55 MT of spent nuclear fuel through Ukraine for reprocessing in Russia. This will be the first shipment of spent fuel Russia has accepted since it banned such imports three years ago for environmental reasons.

Reuter (Budapest), 1/11/95; in Executive News Service, 1/11/95 **(12258)**.

2/4/95

It is reported that Russia's Chelyabinsk-65 (Mayak) processing facility has accepted a shipment of 480 fuel elements from Hungary's Paks nuclear power plant under a new bilateral agreement. The fuel left Hungary for Russia on 1/17/95. Another shipment is scheduled to depart in 3/95 or 4/95. Russia's acceptance of foreign nuclear wastes is indicative of its need to overcome desperate economic conditions. In 1994, Russia generated about 70 billion rubles from spent fuel processing.

Karoly Ravasz, *NuclearFuel*, 2/13/95 **(12561)**. A. Mikushin, *Gudok* (Moscow), 2/9/95, p. 4; in FBIS-SOV-95-033-S, 2/9/95 **(12564)**.

Russia with India

11/16/94

It is reported that Iraq, Iran, India, Pakistan and other nations have set up trade offices in Moscow and are soliciting Russian research laboratories to work on their nuclear programs. Foreign nuclear projects are submitted to the government for approval, but it is reportedly "easy to bribe anyone in the hierarchy to grant approval, or to change the name of the project."

Kathleen Hart, *NuclearFuel*, 11/21/94, pp. 2-3 **(12152)**.

12/24/94

During a visit to India by Prime Minister Viktor Chernomyrdin, Russia and India sign an agreement to build two 1000 MWe reactors in Koodangulan, India. Russian Minister of Atomic Energy Viktor Mikhailov said that the contract for the two VVER-type pressurized water reactors is estimated to be worth $2.6 billion. India will pay up to 15 percent of the total cost in hard currency; the remaining costs will be financed on credit. Another source indicates that approximately $1.7 billion of the contract will be financed in the form of counter-trade. According to Mikhailov, the deal is the

Ministry of Atomic Energy's largest contract signed in 1994. Construction of the power station will begin in 1995 and is expected to take eight years. About 1,000 Russian nuclear experts are expected to work on the project. Russia is expected to begin shipping equipment to India in 1996. Western officials indicated that, based on the fact that India will only be required to pay about $400 million in hard currency, it is not yet clear whether Russia will be able to supply the two reactors.

Nuclear News, 2/95 **(12414)**. *Rossiiskaya Gazeta*, 1/6/95, p. 10; in FBIS-SOV-95-005, 1/6/95 **(12322)**. *Novecon*, 1/6/95; in *Uranium Institute News Briefing*, 1/6/95-1/11/95, p. 2 **(12322)**. Michael Mihalka, *OMRI Daily Digest*, 2/23/95 **(12322)**. Mark Hibbs, *Nucleonics Week*, 2/2/95, pp. 10-11 **(12462)**.

1/12/95

It is reported that member governments of the Nuclear Suppliers Group (NSG) asked the Russian government to clarify unconfirmed reports that Russia signed a contract at the end of 1994 to supply India with two VVER-1000 reactors. Unidentified officials stated that Moscow had pledged in 1991 to supply reactor equipment only to those countries which have accepted full-scope safeguards. Moscow, however, indicated its intention to fulfill previous contracts with India. According to a former Soviet official, when the USSR agreed to the terms of the NSG components transfer policy in 1991, it was generally understood "that only the sale of heavy water to India would be 'grandfathered' since the (heavy-water) commerce pre-dated" Russia's commitment to the policy. There was, at the time, no reason to believe that a future reactor sale to India would be permitted without safeguards. India's pressurized heavy water reactors are subject to safeguards, and Russia has supplied heavy water to them since the 1970s. Russia's Ministry of Atomic Energy indicated that NSG concerns about India were baseless because the reactor's design will not allow the "industrial production of war plutonium."

Michael Mihalka, *OMRI Daily Digest*, 2/23/95 **(12322)**. Mark Hibbs, *Nucleonics Week*, 2/2/95, pp. 10-11 **(12462)**.

2/95

Officials from Russia's Ministry of Foreign Affairs have confirmed that the Ministry of Atomic Energy's sale of two VVER-1000 reactors to India will take place "only on the basis of full-scope IAEA safeguards."

Mark Hibbs, *Nucleonics Week*, 2/2/95, pp. 10-11 **(12462)**.

Russia with IAEA

12/9/94

The IAEA Board of Governors approves the development of plans to help countries, primarily the successor states of the former Soviet Union, in their fight against nuclear smuggling. The IAEA, in conjunction with Western nations, plans to make training, equipment, and expertise available to countries wishing to improve their systems of nuclear materials accounting and control. The IAEA indicates that additional funds are expected from Western nations to cover the cost of these programs in 1995.

Steve Pagani, Reuter (Vienna), 12/9/94; in Executive News Service, 12/9/94 **(12261)**.

Russia with Iran

9/23/94

Mikhail Ryzhov, Director of International Relations at Russia's Ministry of Atomic Energy, announces that the Ministry and the Atomic Energy Organization of Iran (AEOI) have drafted a contract for completion of Iran's Bushehr-1 nuclear power reactor. AEOI director Reza Amrollahi expects the project to be finished by 1999. A five-year development plan for Bushehr will begin in 3/95. Construction will entail the installation of VVER-1000 equipment, including a pressure vessel, into the existing reactor building. Iran has indicated that it would prefer U.S., German, or other Western assistance in completing Bushehr's construction. However, the German government has prevented German enterprises from providing such assistance, due in part to strong U.S. opposition.

Mark Hibbs, *Nucleonics Week*, 9/29/94, pp. 3-4 **(12325)**. *Post-Soviet Nuclear Complex Monitor*, 10/5/94, p. 11; in *Uranium Institute News Briefing*, 10/5/94-10/11/94, p. 2 **(12325)**. *Middle Eastern Economic Digest*, 12/2/94 **(12325)**. *Washington Times*, 1/10/95, p. A13 **(12324)**. Reuter, 1/8/95; in Executive News Service, 1/8/94 **(12324)**. *Nuclear Engineering International*, 11/94, p. 10 **(12325)**.

11/16/94

It is reported that Iraq, Iran, India, Pakistan and other nations have set up trade offices in Moscow and are soliciting Russian research laboratories to work on their nuclear programs. Foreign nuclear projects are submitted to the government for approval, but it is reportedly "easy to bribe anyone in the hierarchy to grant approval, or to change the name of the project."

Kathleen Hart, *NuclearFuel*, 11/21/94, pp. 2-3 **(12152)**.

1/95

It is reported that U.S. Secretary of State Warren Christopher said that Russia's plans to help Iran complete nuclear power plants "should not go forward because it enhances Iran's capacity [to produce nuclear weapons]." Despite the fact that the Russian reactors are to be used for peaceful purposes, the U.S. maintains that any assistance in the nuclear field will enhance Iran's ability to obtain nuclear weapons. Senator John McCain, cosponsor of a 1992 law that requires mandatory economic sanctions and termination of aid to any country that assists Iran or Iraq in acquiring nuclear weapons, stated that he is "seriously concerned" about the Clinton administration's failure to cut off aid or impose sanctions against Russia. Russia maintains that it has the right to sell nuclear reactors to Iran, especially in light of the fact that the U.S. and its allies have arranged to give North Korea similar technology. The U.S. is pressuring Russia to include in the contract a provision for the return of Iran's spent fuel to Russia.

Sid Balman, UPI (Washington), 2/13/95; in Executive News Service, 2/13/95 **(12420)**. Elaine Sciolino, *New York Times*, 2/23/95, p. A6 **(12420)**. Thomas Lippman, *Washington Post*, 2/11/95; in Executive News Service, 2/11/95 **(12420)**. James Phillips, *Washington Times*, 1/19/95, p. A18 **(12420)**. Chris Hedges, *New York Times*, 1/5/95, p. A5 **(12420)**. Charles W. Holmes, *Washington Times*, 2/12/95, pp. A1, A9 **(12420)**.

1/8/95

Viktor Mikhailov, Russia's Minister of Atomic Energy, and Reza Amrollahi, President of Iran's Atomic Energy Authority, sign

an $800 million contract that commits Russia to complete one of two nuclear reactors in Bushehr within four years. The contract formalizes a 1993 Russian-Iranian "agreement in principle" to complete the facility.

UPI, 1/8/95 **(12324)**. *Washington Times*, 1/10/95, p. A13 **(12324)**.

1/20/95

It is reported that Russia may have been secretly assisting Iran in basic nuclear research since the 1980s. A Nuclear Research Center (NRC) was established in Iran with Western assistance in 1967. The NRC's reactor acquired "critical assembly capability" in 1990, which suggests that Iran—a state with little nuclear technology of its own—received assistance from Russia and/or Pakistan.

Marko Milivojevic, *Middle East International*, 1/20/95, p. 14 **(12465)**.

2/5/95

Russian Atomic Energy Minister Viktor Mikhailov reports that Tehran and Moscow have agreed that, in addition to completing the Bushehr nuclear power plant, Russia will train Iranian scientists, supply several Iranian universities with experimental reactors, and help Iran construct a nuclear-powered desalinization facility.

Washington Times, 2/7/95, p. 14 **(12149)**. *PPNN Newsbrief*, Fourth Quarter 1994, p. 10 **(12149)**.

2/20/95

The Russian Ministry of Atomic Energy reports that, in addition to one 1,000 MW reactor, Russia may later construct a second 1,000 MW reactor and two 440 MW reactors at the Bushehr site. Russia and Iran have agreed that Iranians will be trained at Russian universities on how to operate Bushehr's reactors. There are currently 150 Russian workers at the Bushehr site and their numbers are soon expected to reach 200.

Financial Times, 2/21/95, p. 4 **(12324)**. Marina Barinova, Itar-Tass (Moscow), 2/16/95; in FBIS-SOV-95-033, 2/16/95 **(12421)**. Interfax (Moscow), 2/15/95; in FBIS-SOV-95-031, 2/15/95 **(12421)**.

2/21/95

Aleksei Yablokov, Chairman of the Security Council Commission for Ecological Security, states that the nuclear power plant Russia is planning to build in Bushehr will have the capability to produce weapons-grade plutonium. Yablokov says, "Thanks to Russia, Iran will be in a position to get the nuclear bomb within a few years."

Penny Morvant, *OMRI Daily Report*, 2/22/95 **(12326)**.

2/22/95

Reuter quotes U.S. State Department spokesperson Christine Shelly as saying that, in spite of U.S. opposition to Russia's agreement to sell nuclear reactors to Iran, the Clinton administration is committed to continued aid for Russia. Speaker of the U.S. House of Representatives Newt Gingrich stated that the U.S. should end aid to Russia if it follows through with supplying the nuclear reactors to Iran. On 2/23/95, Russian Deputy Foreign Minister Georgy Mamedov will finish talks in Washington on the Russian-Iranian deal.

Michael Mihalka, *OMRI Daily Report*, No. 39, Part 1, 2/23/95 **(12150)**.

Russia with Iran and Iraq

10/17/94

Russian special services in Moscow find 27 kg of U^{238} and U^{235} in the trunk of a Volvo. The two isotopes were "mixed" together. Unofficial reports indicate that Iranian businessmen intended to buy the Russian uranium for $1.5 million and then resell it to Iraq. The car belonged to one of the arrested businessmen.

NTV (Moscow), 10/17/94; in FBIS-SOV-94-201, 10/17/94 **(12167)**.

Russia with Iran and Ukraine

3/94

According to Germany's Federal Intelligence Service (BND), 11 of 60 Ukrainian-origin nuclear warheads disappear "on Russian territory" during transport to Russia for dismantlement; Iran was reportedly the "interested buyer." The BND also said that, in a previously unpublicized case, arrested criminals had attempted to "blackmail the land of Baden-Wuerttemberg" by saying that there were six nuclear warheads in the Baden-Wuerttemberg area.

Gunther Schnattman, *Focus* (Munich), 10/17/94, pp. 87-89; in JPRS-TND-94-020, 11/17/94, pp. 35-36 **(12062)**.

Russia with Iraq

10/4/94

It is reported that after a number of German nuclear smuggling-related arrests in 1994, Iraqi officials are "known" to have met with Russian businessmen and a former high-ranking employee of a Russian nuclear facility "to assess the damage and find alternative routes for the fissile material." Although intelligence organizations have no information suggesting that Iraq or other "nuclear ambitious" countries have acquired weapons-grade nuclear material from Russia, there is concern within the intelligence community that the German arrests may lead the Iraqis to try to smuggle nuclear materials using "established" Far Eastern contacts.

Michael Evans and Michael Theodoulou, *Times* (London), 10/4/94 **(12070)**.

10/11/94

It is reported that, during a recent conference in Cambridge, Massachusetts, 17 Russian General Officers stated that it was "highly likely" that Russian nuclear weapons designers had been lured to Iraq's weapons program by offers of high-paying jobs.

Arnaud de Borchgrave, *Washington Times*, 10/11/94, p. A1 **(12145)**.

11/16/94

It is reported that Iraq, Iran, India, Pakistan and other nations have set up trade offices in Moscow and are soliciting Russian research laboratories to work on their nuclear programs. Foreign nuclear projects are submitted to the government for approval, but it is reportedly "easy to bribe anyone in the hierarchy to grant approval, or to change the name of the project."

Kathleen Hart, *NuclearFuel*, 11/21/94, pp. 2-3 **(12152)**.

Russia with Kazakhstan

11/24/94

It is reported that a high-ranking Kazakhstani official said that nuclear weapon transfers to Russia are being delayed due to Kazakhstan's demands that it be compensated for the uranium in the warheads. Kazakhstan Institute for Strategic Studies Director Oumirserik Toleshovich Kasenov

said that rather than paying for the uranium, Russia could forgive part of the debt owed to it by Kazakhstan.

Ariane Sains, *Nucleonics Week*, 11/24/94, p. 10 **(12058)**.

12/94

It is reported that the Russian Ministry of Defense is negotiating with Kazakhstani authorities over the possibility of leasing all or part of the Semipalatinsk nuclear test site within the framework of the Russian-Kazakhstani defense program. Kazakhstani law prohibits the existence of foreign military bases on its territory. However, if this agreement is reached, Russia will regain almost as much control over Semipalatinsk as it had before it turned over the facility to Kazakhstan.

Shirin Akiner, *Jane's Intelligence Review*, 12/94, pp. 552-555 **(12581)**.

1/31/95

It is reported that Russia and Kazakhstan have signed agreements on cooperation in the field of nonmilitary use of nuclear power and transportation of nuclear materials, as well as on payments for the use of nuclear materials derived from dismantled warheads. The International Science and Technology Center in Moscow has allocated $11 million to Kazakhstan.

Panorama (Almaty), 2/4/95, p. 2; in FBIS-SOV-95-028, 2/4/95 **(12585)**.

2/95

It is reported that the Russian-Kazakhstani coordinating group, which was established to oversee dismantling of the unexploded nuclear test device at Semipalatinsk, met for the fourth time and called for the device's end compartment "to be opened up in the first 10 days of March." Once it is opened, Russian Federal Nuclear Center specialists will make a determination on whether to extract the device or explode it on site. The 0.3-0.4 kT charge was designed to test the resistance of military equipment and certain types of weapons to a nuclear explosion.

Sergei Borisov, *Kazakhstanskaya Pravda* (Almaty), 2/14/95; in FBIS-SOV-95-033, 2/14/95 **(12588)**.

Russia with Multi-Country Group

11/16/94

Boris Rosev, a Los Alamos National Laboratory technical staffer who recently spent over a year in Russia studying its nuclear safeguards, reports that Yeltsin is using Russia's perceived technical expertise in the sphere of nuclear weapons to lure foreign investment.

Kathleen Hart, *NuclearFuel*, 11/21/94, pp. 2-3 **(12152)**.

12/94

It is reported that the International Science and Technology Center's Board of Governors has approved 76 projects totalling $41 million.

Dunbar Lockwood, *Arms Control Today*, 12/94, pp. 20, 25 **(12323)**.

12/22/94

It is reported that, according to Japanese officials, Belgium, France, Germany, Japan, Switzerland, the U.K., and the U.S. have "basically agreed" to sign an agreement in early 1995 on an annual declaration of civilian-use plutonium stockpiles. China has expressed no intention of signing the agreement, while Russia remains reluctant. The IAEA has been participating as an observer. According to the Japanese officials, guidelines for global plutonium management will be developed in early 1995.

Naoaki Usui, *Nucleonics Week*, 12/22/94, pp. 4-5 **(12130)**.

2/95

It is reported that Russia, the U.S., the U.K., China, France, Belgium, Germany, Japan, and Switzerland have signed an agreement to "publish plutonium inventories on a regular basis." The IAEA will be involved in the accord as an observer. The accord constitutes significant progress towards institutionalizing a plutonium control system at the international level. Other countries which maintain nuclear power plants will also be able to participate in the "reporting scheme."

Nuclear News, 2/95, p. 60 **(12565)**.

2/2/95

It is reported that Oles Lomacky, a U.S. Department of Defense expert on sensitive technology transfers, will succeed a U.S. Department of Energy official as head of the International Science and Technology Center (ISTC) in Moscow. ISTC funds are used to pay Russian scientists a hard currency salary of $15-30 a day for their work on ISTC reconversion projects. The ISTC's budget is expected to rise to $100 million in the near future. To date, the ISTC has allocated $47 million to finance 92 projects for the conversion of weapons of mass destruction to civilian uses. Alain Gerard, one of three current ISTC deputy chiefs, stated that complete reconversion will take at least 10 years. According to Gerard, the majority of those Russian scientists not involved with the ISTC are not being paid. However, he said fewer scientists have left the former Soviet Union than was originally expected. Gerard stated that the Russian government is closely monitoring its scientific communities, in particular those in formerly closed cities such as Arzamas-16 and Chelyabinsk-70.

Intelligence Newsletter, 2/2/95, p. 6 **(12142)**.

2/17/95

A Western European intelligence report is reported to say that there are no conclusive indications that the more than 12 lbs of fissionable nuclear materials confiscated in the Czech Republic, Germany, and Russia in 1994 were intended for a group or country seeking to acquire nuclear weapons capability; that there is no firm evidence indicating that Iran, Jordan, and Lebanon have attempted to acquire weapons-grade nuclear material; and that none of the smuggled material seems to have originated from nuclear warhead stockpiles. The report said that although Western intelligence has little information about the smugglers' backgrounds, there is speculation that "renegade" elements from the civilian and military nuclear industries in Romania, Russia, and Ukraine are primarily responsible for planning the thefts.

Craig Whitney, *New York Times*, 2/18/95, p. A2 **(12504)**.

Russia with North Korea

See North Korea section.

RUSSIA WITH PAKISTAN

11/16/94

It is reported that Iraq, Iran, India, Pakistan and other nations have set up trade offices in Moscow and are soliciting Russian research laboratories to work on their nuclear programs. Foreign nuclear projects are submitted to the government for approval, but it is reportedly "easy to bribe anyone in the hierarchy to grant approval, or to change the name of the project."

Kathleen Hart, *NuclearFuel*, 11/21/94, pp. 2-3 **(12152)**.

RUSSIA WITH POLAND

2/95

During Prime Minister Viktor Chernomyrdin's visit to Poland, Russia and Poland sign seven agreements establishing the basis for closer cooperation in several areas, including nuclear security.

Gennadiy Yezhov and Aleksandr Potyomkin, Itar-Tass (Moscow), 2/18/95; in FBIS-SOV-95-034, 2/18/95 **(12448)**.

RUSSIA WITH PRC

10/7/94

It is reported that as many as 1,000 Russian specialists may currently be working in China to improve Chinese nuclear and rocket programs.

Mikhail Urusov, *Moscow News*, 10/7/94-10/13/94, p. 8 **(12038)**.

11/18/94

It is reported that China has awarded a contract to the Atomenergoproekt Institute, a Russian export company based in St. Petersburg, to design a nuclear power plant which will be built in Liaoning. China wants construction to begin in 1996.

Post-Soviet Nuclear & Defense Monitor, 11/18/94, p. 22; in *Uranium Institute News Briefing*, 11/23/94-11/29/94, p. 2 **(12412)**.

11/26/94

It is reported that, after a visit to China, Russian Minister of Atomic Energy Viktor Mikhailov said that Russia is interested in participating in China's peaceful nuclear power program and is currently entering into cooperative agreements with China. Mikhailov denied that any Russian nuclear experts are currently working illegally in China.

Baoktiktov, Voice of Russia World Service (Moscow), 11/26/94 **(12344)**.

11/30/94

Hong Kong's *Eastern Express* reports that Russian and Chinese officials have confirmed that secret Sino-Russian nuclear projects are underway in Haikou and Shenzhen. A deal was apparently struck during secret negotiations last weekend, when Russian Minister of Atomic Energy Viktor Mikhailov and First Deputy Minister of Nuclear Power Engineering Vitaly Konovalov were in Shenzhen. The deal makes Shenzhen the center of a $10 million joint venture known as "The China-Russia Nuclear Company." According to the *Eastern Express*, Kong Fandai, president of the company, said that there were already three Russian scientists working in Shenzhen and that as the firm enters into production near the end of 1995, "we will bring in more and more of their scientists because this is Russia's strong point." According to Mikhailov, China also expressed an interest in substantial supplies of cobalt^{60} for use in another project in Haikou, but an agreement has yet to be reached.

Reuter, 11/30/94; in Executive News Service, 11/29/94 **(12038)**. Mikhail Urusov, *Moscow News*, 10/7/94-10/13/94, p. 8 **(12038)**.

RUSSIA WITH ROMANIA

7/94

Five Romanians are arrested in Timisoara attempting to sell 2.6 kg of Russian-origin uranium.

Karin Popescu, Reuter, 11/2/94; in Executive News Service, 11/3/94 **(12056)**. Mark Bello, Reuter (Bucharest), 11/9/94; in Executive News Service, 11/9/94 **(12505)**.

RUSSIA WITH SLOVAKIA

2/13/95

Russian Prime Minister Victor Chernomyrdin and Slovakian Prime Minister Vladimir Mechyar sign an agreement on renewing cooperation in the field of nuclear energy, which will include Russia's continued participation in building the nuclear power plant at Mochovce.

Alexandr Kuranov, *Nezavisimaya Gazeta*, 2/15/95, p. 1; in *Russia & CIS Today*, 2/15/95, p. 14 **(12589)**.

RUSSIA WITH SOUTH KOREA AND UNITED KINGDOM

12/5/94

It is reported that, in 1996 and 1997, British Nuclear Fuels, Ltd. (BNFL) will supply Russia's Techsnabexport with UF^6. The material will be enriched in Russia and then supplied to the Korea Electric Power Corporation.

Pearl Marshall, *NuclearFuel*, 12/5/94, p. 13 **(12538).** *Nuclear Engineering International*, 1/95, p. 7 **(12538).**

RUSSIA WITH SWEDEN

2/95

It is reported that Swedish Christian Democrat Dan Ericcson sponsored a proposal stating that, because "Russian uranium production causes unacceptable environmental and health consequences," Swedish uranium importers should be required to determine the source of imported uranium and the conditions under which it is mined. Russia, Sweden's cheapest supplier of uranium, provides roughly 40 percent of Sweden's uranium imports. Under the European Union membership agreement, Sweden is allowed to purchase Russian uranium at prices beneath the Euratom agreement during a transitional period. Greenpeace is continuing its efforts to stop Swedish imports of Russian uranium.

Ariane Sains, *Nucleonics Week*, 2/2/95, p. 12 **(12143)**.

RUSSIA WITH TAJIKISTAN AND UNITED STATES

10/28/94

Russian railroad customs officials at the Sol-Iletsk train station, located 80 km south of Orenburg, seize nine containers of "crude

uranium and its compounds" which, according to the bill of lading, were being shipped from Tajikistan to the U.S. The containers, which have a total weight of 160 MT, had neither safety certification nor the necessary papers allowing for their transshipment through Russia. A spokesman for the Ministry of Emergencies says that the problem was faulty documentation, and that this was not an attempt to transfer smuggled material. A specially formed regional commission is scheduled to arrive in the town on 10/29/94 to investigate the matter.

Itar-Tass (Moscow), 10/29/94; in JPRS-TND-94-020, 11/17/94, p. 29 **(12157)**. Reuter (Moscow), 10/30/94; in Executive News Service, 10/31/94 **(12257)**.

Russia with Ukraine

8/9/94

Mykhalo Umanets, Chairman of Ukraine's State Committee for Nuclear Power Utilization (Goskomatom), says that Ukraine has received only one-third of its needed nuclear fuel cassettes free of charge and is being forced to pay Russia for additional cassettes in hard currency. Umanets says that Russia will not accept "low-grade raw uranium" from Ukraine as payment for fuel assemblies because of additional costs associated with processing it.

NuclearFuel, 10/10/94, pp. 18-19 **(12036)**.

10/94

Nur Nigmatullin, First Deputy Chairman of Goskomatom, describes Ukraine's fuel shortage as "critical." In the first six months of 1994, Ukraine received only two of the needed 10 reloads from Russia. Goskomatom is supposed to pay Russia $350 million for the reloads, but instead has paid only about $10 million per month. Nigmatullin stated that, "on the basis of the tripartite agreement, 180 fuel assemblies have been received so far and another 250 assemblies will be received by the end of 1994. But we require 550 fuel assemblies for VVER plants, and 800 assemblies for RBMK units."

NuclearFuel, 10/10/94, pp. 18-19 **(12036)**. Viktor Kovalenko, Itar-Tass (Moscow), 8/9/94; in FBIS-SOV-94-154, 8/10/94, pp. 25-26 **(12036)**.

11/17/94

Vitaliy Nasonov, spokesman for Russia's Ministry of Atomic Energy, states that Russia has fulfilled its 1994 requirement to export nuclear fuel to Ukraine, and that since the Ukrainian parliament agreed to accede to the NPT in 11/94, Russia is willing to continue fuel deliveries. Russia sent a total of 249 fuel elements to Ukraine's nuclear power plants in shipments in 3/94, 4/94, 6/94, and 10/94. Nasonov stated that in a 11/16/94 meeting, representatives from Ukraine's Ministry of Atomic Energy "had no complaints" regarding fuel deliveries from Russia. Russia has withheld some scheduled fuel deliveries as a tactic to expedite specific changes in Ukraine's nuclear policy. One of these was a 11/94 ultimatum that Ukraine put its nuclear programs under IAEA safeguards by 6/14/95. This demand was related to a 3/17/92 decree by President Yeltsin which stated that all non-nuclear weapons countries receiving nuclear materials, equipment, or technologies from Russia would be expected to place their nuclear programs under IAEA control.

Interfax (Moscow), 11/17/94; in FBIS-SOV-94-223, 11/17/94 **(12201)**.

1/24/95

Uniar reports that Ukraine's Ministry of Defense issued a statement declaring that Ukraine had "fulfilled all conditions stipulated" in START I with regards to transferring ICBMs out of Ukraine. The statement also said that a group of U.S. observers who arrived at the Pavlodar Mechanical Plant on 1/12/95 had verified that missiles were no longer being produced at the plant.

Ustina Markus, *OMRI Daily Digest*, 1/25/95 **(12202)**.

2/13/95

Nur Nigmatullin, Deputy Chairman of Ukraine's "nuclear power authority," states that Ukraine, with the assistance of two U.S. firms, a Franco-German consortium, and a Russian company, intends to construct a nuclear fuel plant. The project is intended to alleviate Ukrainian dependence on Russian nuclear fuel, which is considered to be poor in quality. Nigmatullin states that a Ukrainian plant could save as much as 30 percent of Ukraine's hard currency that is currently spent on imported fuel, and that Ukraine could provide 50 percent of the uranium needed for the fuel, with the rest being purchased from Russia and perhaps France. Senior officials in Ukraine's nuclear program have stated that thousands of Ukrainian technicians are leaving for better-paid positions in Russia.

Reuter (Kiev), 2/13/95; in Executive News Service, 2/13/95 **(12199)**.

Russia with United Kingdom

9/94

Russian Deputy Minister of Atomic Energy Nikolai Egorov signs a $120 million contract with the U.K.'s Nuclear Electric (NE). The agreement will provide NE with enrichment services and the option to purchase uranium feed stock from Russia. The seven-year deal is valued at $120 million and satisfies 10-20 percent of NE's uranium and enrichment requirements. NE is interested in an even larger contract with Russia, but is prevented by the Euratom supply agency from purchasing more than 15-20 percent of its services from former Soviet states. John Rowland, NE's uranium and enrichment services manager, stated NE's opposition to the limit, and said it could cost NE $16 million annually. Russia has supplied NE with enrichment services since 1975.

Nuclear News, 11/94, p. 60 **(12404)**. *Nuclear Engineering International*, 12/94, p. 7 **(12263)**.

1/26/95

The British tabloid, *The Sun*, reports that Colonel Firzet Djabozov, a senior officer in Russia's "GRU military and scientific espionage agency," defected to Great Britain. According to the report, Djabozov is to provide secrets of Russia's nuclear submarine fleet and atomic weapons installations in exchange for a cash settlement, a pension, and a new identity.

Reuter (London), 1/26/95; in Executive News Service, 1/25/95 **(12147)**.

Russia with United States

1994

According to Washington sources, Russia and the U.S. agree to provide full information in 1995 concerning the number and type

of nuclear warheads in their possession and storage locations for surplus fissile materials. Information on the locations of individual weapons and their design will not be exchanged or revealed.

Washington Post, 12/22/94; in *PPNN Newsbrief*, Fourth Quarter 1994, p. 8 **(12156)**.

1/94

The Moscow-based International Science and Technology Center earmarks $3 million for a joint two year U.S.-Russian research project to study the practicability of creating a particle accelerator that transforms plutonium—present in nuclear waste and warheads—"into less harmful substances." The research will be carried out in Russia. Los Alamos National Laboratory and Russia's Ministry of Atomic Energy began discussions on the project in 1991.

Energy Daily, 8/1/94 **(12053)**.

3/94

A National Academy of Sciences report entitled "Management and Disposition of Excess Weapons Plutonium" makes five recommendations aimed at minimizing the risks associated with nuclear material stockpiles. According to the report, the U.S. and Russia should: 1) declare all fissile materials and nuclear weapons stockpiles; 2) agree to stop the production of weapons-grade fissile material; 3) agree to the "monitored reduction of stockpiles;" 4) allow fissile material storage facilities to be internationally monitored; and 5) agree to "long-term plutonium disposition" that will ultimately shorten the time the material is stored in weapons form, help maintain adequate material safeguards, and make plutonium recovery for weapons use more difficult. Estimates suggest that over the next 10 years, 50 MT of weapons-grade plutonium will become surplus material as the U.S. and Russia dismantle their nuclear arsenals. In Russia, new VVER-1000 reactors currently being constructed could be modified to use MOX fuel in 100 percent of their reactor cores. The old VVER-1000s could also use MOX fuel, but only in part of their cores.

Nuclear News, 3/94, pp. 28-29 **(12177)**.

8/28/94

It is reported that of $988 million allocated from Nunn-Lugar funds, $58 million has been designated for improving export controls and radioactive materials accounting in the former Soviet Union. Of the $4.2 million spent on "accounting and export controls" so far, $1 million was spent on Russia. Russia has refused $22 million earmarked for improving its export controls.

R. Jeffrey Smith, *Washington Post*, 8/28/94, pp. A1, A21 **(12172)**.

8/28/94

It is reported that Russian Atomic Energy Minister Viktor Mikhailov, whom one U.S. official labelled "an extortionist," has delayed the start of construction of a $75 million, U.S.-funded, Russian-designed storage facility in Mayak for plutonium removed from dismantled warheads by requesting an additional $75 million for salaries and compensation for local residents. In addition to the $15 million the U.S. has already spent on funding the facility's design, Mikhailov has requested that an additional $1 million be applied towards paying the Russian designers "as a condition of going forward" with the project. Mikhailov has refused a U.S. offer to help assess the security requirements of 10 nuclear facilities related to the military sector. The Ministry of Atomic Energy also turned down an offer from the U.S. to test enriched uranium accountancy at Elektrostahl, a Ministry of Atomic Energy nuclear facility located near Moscow which produces naval reactor fuel. U.S. embassy officials are said to have reported to Washington that Mikhailov and other Ministry officials have attempted to prevent Western nuclear experts from inspecting sensitive nuclear facilities out of fear that nationalists are compiling "hit lists" of those who cooperate with the U.S.

R. Jeffrey Smith, *Washington Post*, 8/28/94, pp. A1, A21 **(12172)**.

9/28/94

In a Joint Statement on Strategic Stability and Nuclear Safety following the 9/26/94-9/28/94 Washington summit, Presidents Clinton and Yeltsin express a determination to work to curtail illicit trade of nuclear materials by exchanging pertinent information and by improving physical security and regime control of nuclear materials; to exchange information on nuclear warhead and fissile materials stockpiles; to encourage further cooperation between national laboratories and other agencies in the areas of safety, control, accounting, and physical protection of nuclear materials; to facilitate increased cooperation in the field of nuclear security between the Russian Ministry of Defense and the U.S. Department of Defense (DOD); and to expedite the implementation of a joint plan for the construction of a facility at Mayak for long-term storage of fissile materials derived from dismantled warheads. The U.S. reiterates its willingness to provide $75 million for the Mayak project, and Moscow indicates that construction would begin by mid-1995. The U.S. promises to facilitate the timely transfer to Russia of $90 million in already appropriated funds to construct a new site for long-term storage of nuclear materials from dismantled warheads. In addition to $10 million already allocated for improvements in Russian nuclear materials controls, accounting, and security measures, Clinton expresses his readiness to provide $20 million for "nuclear materials security and accounting system upgrades" under the current U.S.-Russian nuclear materials protection, control, and accountability (MPC&A) agreement. The U.S. Department of Energy (DOE) lab-to-lab program, designed to improve Russian security, controls, and accounting of nuclear materials, operated on a $2 million budget in FY 1994. In hopes of increasing the effectiveness of MPC&A, the U.S. will expand the budget of the DOE's lab-to-lab program by $48 million in FY 1995-1996. Conclusion of a successful export control treaty between Russia and the U.S. would mean the allocation of an additional $2.26 million to Russia.

Kathleen Hart, *Nucleonics Week*, 10/6/94, p. 7 **(12168)**. Jack Mendelsohn, *Arms Control Today*, 11/94, p. 26 **(12466)**. *Arms Control Today*, 11/94, pp. 31-32 **(12466)**. Kathleen Hart, *NuclearFuel*, 11/21/94, pp. 2-3 **(12152)**. Mikhail Mzareulov, Itar-Tass (Moscow), 9/29/94; in FBIS-SOV-94-191, 10/3/94 **(12398)**. Paul Mann, *Aviation Week & Space Technology*, 10/3/94, pp. 26-27 **(12398)**.

10/1/94

It is reported that U.S. Secretary of Defense William Perry is concerned about the pace of Russian nuclear disarmament and has asked Russia to expedite its disarming of outdated and excess nuclear weapons, to store these weapons in as few facilities as

possible, and to improve the current methods of controlling and safeguarding storage facilities. Perry has proposed a joint program under the auspices of the Nunn-Lugar program which would enhance Russia's control of nuclear weapons. According to Perry, however, such a program is unlikely given the fact that the U.S. Congress wants to reduce funding for the Nunn-Lugar program.

Barbara Starr, *Jane's Defence Weekly*, 10/1/94, p. 6 **(12154)**.

10/4/94

The Clinton administration reports the delivery of equipment from the U.S. to Russia for the elimination of ballistic missile submarines, strategic bombers, and ICBM launchers. Funding for the equipment is provided under the Nunn-Lugar program.

Arms Control Today, 11/94, p. 33 **(12135)**.

10/10/94

It is reported that Siemens Power Corporation (SPC) and its parent company, Siemens AG of Germany, plan to propose supplying equipment for converting uranium hexaflouride to uranium dioxide, as well as technical assistance on using it, to Russia's Techsnabexport under a $50 million contract. The German firm also plans to propose selling "a larger package of fuel fabrication products and services" to Techsnabexport for an unspecified amount. Russia's fuel fabrication industry is competing for contracts to supply Eastern Europe reactors.

NuclearFuel, 10/10/94, p. 22 **(11691)**. Wilson Dizard III, *NuclearFuel*, 6/6/94, pp. 7-8 **(11691)**.

10/21/94

It is reported that, according to a senior Clinton administration official, $75 million in Nunn-Lugar funds, previously earmarked for the construction of a secure plutonium storage facility at Russia's Chelyabinsk-65 reprocessing plant, may be given to the Ministry of Defense for the purpose of enhancing "safeguards of actual Russian warheads." From the West's perspective, the Ministry of Defense has been far more cooperative than the Ministry of Atomic Energy, which has oversight for the storehouse project. The official indicated that the U.S. is willing to provide equipment for the construction and operation of the plutonium processing facility if Russia begins construction, but the U.S. DOD has refused to deliver any equipment until construction has been started. Russia's Deputy Minister of Atomic Energy Nikolai Yegorov stated that construction has already begun, but Russia lacks the funds needed for the project. Russia reportedly wants an additional $75 million for construction, while the U.S., which spent $15 million to fund the facility's design, contends that Russia should pay for the bulk of construction. The U.S. has obligated $41 million of the $75 million earmarked for the facility's construction. According to Pentagon officials, Russian Minister of Atomic Energy Viktor Mikhailov has failed to disclose sufficient evidence that plutonium pits from dismantled warheads will not be reused, but instead will be stored at the facility.

Joseph Albright, *Washington Times*, 10/21/94, p. A17 **(12148)**. Dunbar Lockwood, *Arms Control Today*, 12/94, pp. 20, 25 **(12323)**.

11/21/94

It is reported that the U.S. government is funding a project to develop a Gas Turbine-Modular Helium Reactor (GT-MHR). The GT-MHR is a potential candidate for a U.S.-Russian joint venture to burn surplus weapons plutonium from Soviet nuclear warheads. The reactor is considered to be safe and relatively inexpensive to build and operate.

Clive Cookson, *Financial Times*, 11/21/94, p. 18 **(12183)**.

12/94

The U.S. completes a secret operation to safeguard "hundreds of kilos" of nuclear materials at Russia's Kurchatov Institute of Atomic Energy in Moscow. According to U.S. officials, the Kurchatov facility "posed the greatest risk of theft in the [f]ormer Soviet Union." The facility had inadequate fencing, no inventory control system, and the walls of one of the buildings were crumbling. The Russian government has agreed to accept U.S. assistance in reviewing the security at six other "high-risk facilities."

Newsweek, 2/19/95 **(12457)**. Charles Aldinger, Reuter, 1/24/95; in Executive News Service, 1/24/95 **(12460)**.

12/94

It is reported that, by the end of FY 1994, 36 projects in Russia, Ukraine, Belarus, and Kazakhstan tentatively committed the U.S. to $969 million in total Nunn-Lugar assistance. Of this figure, $434 million has been obligated to signed contracts, and, according to Deputy Secretary of Defense John Deutch, over $100 million has actually been spent. The U.S. has committed $20 million to a "quick fix" program in which Russian specialists would assess at least 10 Russian facilities that handle HEU or separated plutonium in order to determine which systems and equipment could be quickly provided to improve the protection, control, and accountability of Russian fissile materials. The U.S. has committed nearly $10 million to enhance control and accountability systems at the Elektrostahl uranium fuel fabrication plant in the hope that it will become a model for other facilities. The existing accord on control and accounting of fissile materials governs only civilian facilities. Although the U.S. hopes to broaden this agreement to include military facilities, as of mid-11/94, Russia had yet to give its approval to this provision.

Dunbar Lockwood, *Arms Control Today*, 12/94, pp. 20, 25 **(12323)**.

12/5/94

START I enters into force as the presidents of the U.S., Russia, Ukraine, Kazakhstan, and Belarus exchange their instruments of ratification at the CSCE Conference in Budapest.

Patrick Worsnip, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12397)**. Thomas W. Lippman, *Washington Post*, 12/4/94, p. A46 **(12397)**. Paul Mylrea, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12427)**.

12/5/94

It is reported that, in three procurement deals, the Yankee group of the U.S. purchased uranium, 90,000 lbs of which will be delivered in the first quarter of 1996. Each of the three deals involved matching quantities of Russian uranium. The uranium for one or possibly two of the deals will be supplied through UG-Internexco; Global Nuclear Services & Supply will supply 150,000 lbs of Russian uranium in another of the three deals.

NuclearFuel, 12/5/94, p. 3 **(12319)**.

12/16/94

J. Joseph Grandmaison, Director of the U.S. Trade and Development Agency, awards two grants to Russia, totalling $1.63 million, to explore available options for replacing Russia's plutonium-producing reactors at Tomsk-7 and Krasnoyarsk-26. Officials at Tomsk and Krasnoyarsk will each select a U.S. firm to evaluate the feasibility of replacing existing reactors with coal- or natural gas-burning units. The U.S. firms are expected to complete their studies within six months after the beginning of the project. U.S. and Russian firms will then cooperate in the construction of replacement facilities. In 12/94, Georgiy Kaurov, Director of the Russian Ministry of Atomic Energy's Information Board, reported that, as of 10/1/94, Russia is no longer using plutonium produced at Tomsk-7 and Krasnoyarsk-26 for nuclear weapons production. The reactors cannot be shut down because surrounding communities rely on them for heat and electricity. Although the reactors continue to produce plutonium oxide, the facility for processing the oxide into weapons-grade material has been shut down. Kaurov said that the reactor-grade plutonium will be stored for future use in fast-breeder reactors.

PR Newswire, 12/19/94 **(12304)**. *Post-Soviet Nuclear & Defense Monitor*, 1/31/95, pp. 1-2 **(12304)**. Interfax (Moscow), 12/2/94; in FBIS-SOV-94-232, 12/2/94 **(12304)**.

12/19/94

It is reported that the first delivery of 30 MT of LEU, created from converting 1 MT of HEU obtained from Russian nuclear weapons, is due to arrive in the U.S. in the spring of 1995. The U.S. Enrichment Corporation (USEC) and the Russian Ministry of Atomic Energy agreed in 12/94 that the converted LEU will meet American Society of Testing and Materials requirements for enriched commercial-grade UF^6. However, the USEC and the Ministry have not agreed on a method of payment for the LEU. The contract between the USEC and the Ministry stipulates that the price to be paid is $780 per kilogram of uranium enriched up to 4.4 percent U^{235}, making the first shipment worth $23.4 million. The advance payment was intended to compensate Russia for fuel assemblies that were to be transferred to Ukrainian nuclear facilities. Russia would prefer to receive some of the payment now in order to convert more HEU.

Michael Knapik, *NuclearFuel*, 12/19/94, pp. 1, 13-15 **(12415)**.

12/22/94

It is reported that Russia and the U.S. have agreed in principle to exchange classified data next year on the composition and size of their nuclear stockpiles. The proposal, presented in Moscow by U.S. Vice President Albert Gore in 12/94, calls for an exchange of data on the number and type of warheads produced in each country since 1945, and a listing of the weapons that have been or will be dismantled under previous arms control agreements. Both parties would reveal the locations of fissile material storage facilities, but would not be required to reveal information on specific weapons designs or the location of individual weapons.

R. Jeffrey Smith, *Washington Post*, 12/22/94, p. A31 **(12139)**.

12/22/94

In a letter to each of the four former Soviet republics that have suspension agreements with the U.S. (i.e., Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan), Joseph Spetrini, Deputy Assistant for Compliance at the U.S. Department of Commerce (DOC), states that the U.S. has called for consultations to discuss the issue of "bypass enrichment." In the letter, Spetrini states that the U.S. believes that the four republics are undermining the objectives of the suspension agreements by exporting uranium to the U.S. through third-party countries. According to an ad hoc committee composed of domestic uranium producers, the U.S. Enrichment Corporation (USEC), and the Oil, Chemical & Atomic Workers International Union, as well as a number of trade journals, a large volume of uranium from the CIS countries is being or will be enriched in third-party countries. Such a practice changes the origin of the uranium to the country in which it is enriched. The uranium is then exported to the U.S., thus avoiding the quantitative restrictions imposed by the suspension agreements. Attorney Tom Wilner, who represents Kazakhstan, stated that Kazakhstan is willing to engage in consultations with the DOC, but only on a multilateral basis with all four CIS republics taking part. Wilner also said that the U.S. should not delay the signing of a new suspension amendment with Kazakhstan until the bypass question is resolved.

Michael Knapik, Wilson Dizard III, and Ann MacLachlan, *NuclearFuel*, 1/16/95, pp. 1-2 **(12490)**.

1/5/95

U.S. Secretary of Defense William Perry states that Russia has used Cooperative Threat Reduction (Nunn-Lugar) program funds to destroy about 575 bombers and launchers, and to remove almost 2,600 nuclear warheads from Russian missile and bomber bases.

Jeff Erlich, *Defense News*, 1/9/95, p. 6 **(12300)**.

1/5/95

It is reported that the USEC, along with two associations which represent U.S. nuclear employees and uranium producers, requested that the U.S. DOE count all uranium originating from Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan against U.S. import quotas for those countries, regardless of where the uranium is enriched. If implemented, this request would seal the so-called "enrichment loophole."

SpentFUEL, 12/26/94, p. 1; in *Uranium Institute News Briefing*, 12/21/94-1/5/95, p. 1 **(12463)**.

1/15/95

It is reported that during her visit to Moscow the week of 1/16/95-1/20/95, Gloria Duffy, Deputy Assistant Secretary of Defense and Special Coordinator for the Cooperative Threat Reduction Program, will meet with officials from Russia's Ministry of Defense (MOD) to address the issue of Russian nuclear weapons security and discuss the extent to which the U.S. would be able to provide assistance. The MOD has previously asked for transport and diagnostic equipment technology to ensure the safety of nuclear materials while they are in the Ministry's hands.

Post-Soviet Nuclear & Defense Monitor, 1/15/95, p. 9 **(12134)**.

1/20/95

The Russian Ministry of Atomic Energy and the U.S. DOD amend an agreement that will provide $20 million in Nunn-Lugar funds to the Ministry of Atomic Energy for the purpose of improving the accounting and physical security of plutonium and HEU presently held in Russian research institutes, laboratories, and plants which process nuclear materials. In 1/95, two Los Alamos National Laboratory scientists will install equipment at Russia's Arzamas-16 nuclear complex as part of a pilot program designed to create new control and accountability systems for nuclear materials. Sandia, Lawrence Livermore, Oak Ridge, Brookhaven, and Pacific Northwest Laboratories are also involved in this project.

Post-Soviet Nuclear & Defense Monitor, 1/31/95, p. 4 **(12137)**. Charles Aldinger, Reuter (Washington), 1/24/95; in Executive News Service, 1/24/95 **(12460)**.

1/23/95

It is reported that the U.S. firms Baltimore Gas & Electric, Vermont Yankee Nuclear Power, and North Atlantic Energy received approval from the U.S. DOC to purchase natural uranium of Russian origin under the 3/94 Russian suspension agreement. The sale was facilitated by Techsnabexport's cooperation with the Rio Algom Mining Corporation, UG USA, Internexco Handels, and Urangesellschaft.

Rio Algom Press Release, 1/23/95; in *Uranium Institute News Briefing*, 1/18/94-1/24/94, p. 1 **(12437)**.

1/23/95-1/25/95

During their meeting at Los Alamos National Laboratory, a U.S. delegation, headed by John Boright, Associate Director for International and National Security at the White House's Office of Science and Technology Policy, and a Russian delegation, headed by Valery Bogdan, General Manager of the Ministry of Atomic Energy, agree to study five options for disposal of plutonium and HEU derived from dismantled Russian nuclear weapons: 1) burial in geological repositories or deep boreholes; 2) burning as mixed-oxide fuel in LWRs; 3) immobilization; 4) stabilization; and 5) accelerator transmutation. According to Boright, the option chosen must conform to Clinton administration policy objectives: it must not allow for the fissile material to be used in nuclear weapons; it must be cost effective; it must not create environmental, health, or safety problems; and it must "have the capability to demonstrate that the material can be stored for at least 50 years."

Post-Soviet Nuclear & Defense Monitor, 1/31/95, pp. 3-4 **(12155)**.

1/31/95

It is reported that full implementation of the 6/94 Gore-Chernomyrdin agreement has been delayed due to the inability of Russia and the U.S. to establish a means to verify Russia's compliance with ceasing plutonium production. The creation of a verification regime by the end of 1994 was a condition of the agreement. Rather than completely shutting down reactors which produce plutonium as required under the agreement, Russia now seeks to convince the U.S. that stopping weapons-grade plutonium production alone is satisfactory. A new round of negotiations on this issue is set for early 2/95.

Post-Soviet Nuclear & Defense Monitor, 1/31/95, pp. 1-2 **(12304)**.

1/31/95

It is reported that Russian Minister of Atomic Energy Viktor Mikhailov will visit Washington in 3/95 to initial the "U.S.-Russian Agreement on the Peaceful Use of Atomic Energy." According to the protocol signed in 12/94 during a meeting of the Gore-Chernomyrdin Commission, the new agreement will expand U.S.-Russian cooperation in the fields of defense conversion, research and development of space nuclear technologies, development of a new generation of nuclear reactors, and "inertial confinement fusion." Presidents Clinton and Yeltsin are expected to sign the agreement at the next U.S.-Russian summit. The present agreement between the U.S. and the former USSR "On Science and Technological Cooperation in the Area of Peaceful Uses of Atomic Energy" will expire on 4/30/95.

Post-Soviet Nuclear & Defense Monitor, 1/31/95, p. 3 **(12136)**.

2/2/95

It is reported that, according to Alain Gerard, one of three current International Science and Technology Center deputy chiefs, research centers and universities in the U.S. have supplied Russian researchers with computers and modems, creating the possibility that scientists will be able to share their knowledge without leaving Russia.

Intelligence Newsletter, 2/2/95, p. 6 **(12142)**.

2/12/95

It is reported that several factors have combined to slow the implementation of the Cooperative Threat Reduction (Nunn-Lugar) program, including "bureaucratic inertia in Washington, Cold War suspicions in Moscow," and the chaotic political environment in the former Soviet republics. The U.S. Congress has appropriated about $1.3 billion for the Nunn-Lugar program since its inception. Assistant Secretary of Defense Ashton Carter stated that although the implementation of the program is just beginning, Nunn-Lugar funds have played a critical role in convincing Kazakhstan, Ukraine, and Belarus to transfer their nuclear arsenals to Russia. However, Charles Flickner, a Senate Budget Committee staff member, describes the program's record as "dismal," and states that not "a single nuclear warhead nor a single chemical weapon" has been dismantled using Nunn-Lugar funds. Carter indicates that the funds are not being used for actual dismantlement because Russia has refused U.S. offers for assistance in this area. The Pentagon has spent a total of about $150 million in Nunn-Lugar funds, and has committed about $500 million to the program in signed contracts. Over the past three years, Nunn-Lugar funds have been used to remove 2,600 warheads from missiles or bomber bases, dismantle launchers across the former Soviet Union, and transfer 900 warheads from Belarus, Kazakhstan, and Ukraine to Russia for dismantlement.

Fred Hiatt, *Washington Post*, 2/12/95; in Executive News Service, 2/12/95 **(12467)**. Amanda Bichsel, *Defense News*, 2/27/95, pp. 25-26 **(12467)**.

2/21/95

Gregory Govan, head of the U.S. On-Site Inspection Agency, says that beginning in

3/95, the U.S., Russia, Ukraine, Kazakhstan, and Belarus will begin inspecting one another's nuclear sites to ensure compliance with START I. Govan says that following the initial inspections, inspectors from Russia, Belarus, Kazakhstan, and Ukraine will engage in spot inspections of 36 sites in the U.S.; U.S. inspectors will visit 65 sites in the former Soviet Union. START I stipulates that Russia and the U.S. will reduce their nuclear arsenals from a combined total of 21,000 warheads at the height of the Cold War, to 12,000 by the end of 2001.

Times of India, 2/23/95, p. 9 **(12436)**. *Washington Times*, 2/22/95, p. A4 **(12436)**.

TAJIKISTAN

Internal Developments

1/17/95

Tajikistan formally accedes to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) as a non-nuclear weapon state by depositing its instrument of accession in Russia.

Radio Tajikistan (Dushanbe), 2/14/95; in FBIS-SOV-95-031, 2/14/95 **(12453)**.

Tajikistan with Russia and United States

10/28/94

Russian railroad customs officials at the Sol-Iletsk train station, located 80 km south of Orenburg, seize nine containers of "crude uranium and its compounds" which, according to the bill of lading, were being shipped from Tajikistan to the U.S. The containers, which have a total weight of 160 MT, had neither safety certification nor the necessary papers allowing for their transshipment through Russia. A spokesman for the Ministry of Emergencies says that the problem was faulty documentation, and that this was not an attempt to transfer smuggled material. A specially formed regional commission is scheduled to arrive in the town on 10/29/94 to investigate the matter.

Itar-Tass (Moscow), 10/29/94; in JPRS-TND-94-020, 11/17/94, p. 29 **(12157)**. Reuter (Moscow), 10/30/94; in Executive News Service, 10/31/94 **(12257)**.

Tajikistan with United States

1/2/95

It is reported that the U.S. Department of Commerce and U.S. Customs have qualified approximately 1.4 million lbs of Tajikistan-origin uranium for duty-free entry into the U.S. The nuclear material is being imported by Nukem and will be delivered to ConverDyn for conversion.

Michael Knapik, *NuclearFuel*, 1/2/95, p. 17 **(12255)**.

TURKMENISTAN

Internal Developments

9/29/94

Turkmenistan formally accedes to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) as a non-nuclear weapon state when Deputy Prime Minister Boris Shikhmuradov deposits the instrument of accession during a visit to the U.S. State Department. Turkmenistan is the 165th signatory to the NPT.

Arms Control Today, 11/94, p. 33 **(12254)**. Igor Barsukov, Itar-Tass (Moscow), 10/1/94; in FBIS-SOV-94-192, 10/1/94 **(12254)**.

Turkmenistan with Iran

1/95

It is reported that Iran has acquired nuclear technology from Turkmenistan.

Chris Hedges, *New York Times*, 1/5/95, p. A5 **(12420)**.

UKRAINE

Internal Developments

7/94-10/94

Opinion polls in Kiev show decreasing support for nuclear disarmament. This period follows the 7/94 election of Leonid Kuchma, who advocated a quick disarmament policy during his campaign and complained about the fact that the U.S. has delivered only $6 million of $350 million in aid promised to Ukraine. Ukraine has declared that it will not ratify the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) until the 4/95 review conference, where it will petition for "special status."

Financial Review, 10/27/94 **(12047)**.

8/94

Viktor Baryakhtar, Chairman of the Presidential Committee for Nuclear Policy, states that Ukraine is planning to produce its own fuel for its nuclear reactors. According to Baryakhtar, Ukraine has the technical means, labor resources, and uranium and zirconium resources necessary to produce nuclear fuel domestically. Ukraine reportedly has uranium reserves that will satisfy energy needs for "at least 100 years" and controls the vast majority of the CIS zirconium market. By producing its own fuel, Ukrainian hard currency expenditures for imported nuclear fuel will be reduced by 50 percent and many new jobs will be created. "Reactor cassette" [fuel assembly] elements will be produced in Zheltiye Vody at the Vostochniy mining and enrichment plant, in Dneprodzerhinsk at the Pridneprovskiy chemical works, and in Nikopol at the Yuzhnotrubniy facility. The Presidential Committee has decided, however, that it would be more cost effective for Ukraine to import enriched uranium than to enrich domestically extracted uranium. Ukrainian "raw [natural] uranium" exports would be used to pay for enriched uranium imports.

Radio Ukraine (Kiev), 8/16/94; in *Russia/CIS Intelligence Report*, 8/16/94 **(12037)**. Yelena

Alikhanyan, Itar-Tass (Moscow), 8/15/94; in FBIS-SOV-94-157, 8/15/94, p. 44 **(12037)**. Viktor Kovalenko, Itar-Tass (Moscow), 8/9/94; in FBIS-SOV-94-154, 8/10/94, p. 34 **(12037)**.

10/94

A conference on nuclear fuel development, the nuclear fuel cycle, and insurance for the nuclear power industry is held in Kharkov, Ukraine. Ukraine's State Committee on Nuclear Energy Use, the Kharkov Physics and Engineering Institute, the U.S. firm Westinghouse, and the Ukrainian insurance company Arma organized the conference. Twenty Ukrainian organizations attend the meeting. The possibility that Ukraine may build a nuclear fuel fabrication plant is discussed at the conference. The "involvement of Western expertise" in building such a plant is being considered.

Ukrainian State Committee on Nuclear and Radiation Safety; in NucNet, 10/28/94; **(12043)**.

10/5/94

President Leonid Kuchma submits a letter to parliament asking it to support accession to the NPT. According to a statement by presidential spokesman Mykhailo Doroshenko, submission of the letter was a fulfillment of Kuchma's promise to other countries that he would ask for parliamentary approval of the NPT, and that Ukraine would join the NPT before the 1995 Review and Extension Conference. While the text of the letter was not publicly disclosed, it included a statement that a prompt accession to the NPT was important "in view of Ukraine's strategic interests." Ukraine is concerned about receiving an international guarantee of its national security; Doroshenko said that Kuchma had recently sent letters to the governments of the U.S., the U.K., France, and Russia on the issue. Ukraine's Foreign Minister Hennady Udovenko stated that he did not want to link the two subjects "and give the impression that we are dragging it [the accession process] out." Another problem is aid for disarmament which the U.S. has promised to Ukraine: according to Kuchma's chief of staff, Dmytro Tabachnyk, the U.S. has given only 6 percent of the $350 million it has promised.

Lida Poletz, Reuter (Kiev), 10/5/94; in Executive News Service, 10/5/94 **(12204)**.

10/6/94

Lieutenant General Volodymyr Borysenko, Commander of the Internal Security and Convoy Troops, reports that his forces guard ten "defense industry facilities of special importance" and five nuclear power stations in order to prevent possible terrorist attacks and nuclear material thefts.

Unian (Kiev), 10/6/94; in FBIS-SOV-94-195, 10/6/94 **(12041)**.

10/24/94

Two rail cars containing "fresh nuclear fuel" collide in the city of Dnepropetrovsk. The collision is not considered serious and, after an inspection, the train continues to its destination, the South Ukraine nuclear power station. On 10/26/94, the fuel arrives at the nuclear power station and is found to be undamaged. Although the cause of the accident is not known, it occurred during rail switching operations. Ukraine's Office of the Public Prosecutor and the Dnepropetrovsk branch of the National Department of Security Services are investigating the accident. In an unofficial report from Ukrainian officials, the collision was said to have happened in a place not on the predetermined rail route to South Ukraine; for an unknown reason, the cars were switched to a different route.

Alex Brall, *NuclearFuel*, 11/7/94, p. 14 **(12044)**.

11/94

It is reported that an unclassified U.S. Central Intelligence Agency report outlines the current state of disarmament in Ukraine. As of 9/94, Ukraine had deactivated 37 SS-24 and 40 SS-19 ICBMs; nine SS-24s and 90 SS-19s remain on Ukrainian territory.

Arms Control Today, 11/94, p. 33 **(12135)**.

11/94

The Ukrainian parliament fails to pass a bill clarifying third-party liability for nuclear accidents. This failure prevents the implementation of various foreign aid projects, such as a $60 million-plus European Union Tacis project, a U.S. aid package under the Lisbon Initiative worth $30 million, and $60 million of German assistance for safety improvements at the Rovno nuclear power plant.

Peter Coryn, *Nucleonics Week*, 11/17/94, pp. 13-14 **(12048)**.

11/9/94

The Ukrainian parliament agrees to debate accession to the NPT before a 11/19/94 visit by President Kuchma to the U.S. The debate is tentatively scheduled for the period 11/15/94-11/18/94.

Reuter (Kiev), 11/9/94; in Executive News Service, 11/9/94 **(12511)**.

11/9/94

Volodymyr Mukhin, Chairman of the Commission on Defense and Security, states that a document on joining the NPT has been created and "carefully worded," and that he expects the treaty to be ratified next week. Mukhin states that objections to ratification are "purely emotional," as Ukraine has no means of servicing its nuclear weapons.

Interfax (Moscow), 11/9/94; in FBIS-SOV-94-218, 11/9/94 **(12511)**.

11/15/94

President Leonid Kuchma meets with a delegation of ambassadors from the U.S., Japan, Canada, and European countries to discuss the European countries' requirements for Ukraine after it accedes to the NPT. The delegation offers a $234,386,000-plus aid package to Ukraine, as an addition to a $500 million aid package already given by the G-7 and the European Union.

Unian (Kiev), 11/15/94; in FBIS-SOV-94-221, 11/15/94 **(12267)**.

11/16/94

During a Supreme Council session, President Kuchma makes a speech urging accession to the NPT. He states that the parliamentary deputies will be affecting "the world process of nuclear disarmament" with their vote, and that accession is a necessary continuation of Ukraine's previous disarmament agreements. Kuchma also states that because Ukraine has neither the monetary resources, facilities, nor experts to continue a nuclear weapons program, it should willingly give up its nuclear weapons capability.

Radio Ukraine World Service (Kiev), 11/16/94; in FBIS-SOV-94-222, 11/16/94 **(12510)**.

11/16/94

The Ukrainian Parliament votes 301-8 to accede to the NPT with six reservations. The reservations are, first, that the NPT's

provisions "[do] not completely embrace the unique situation" that exists as a result of the USSR's dissolution; second, that Ukraine claims ownership of the nuclear weapons on its territory, and that after dismantling the weapons, the weapons material belongs to Ukraine for its use in peaceful projects; third, that although Ukraine resolves to destroy its nuclear weapons, until the destruction process is complete, the presence of weapons in Ukraine does not conflict with Articles I and II of the NPT; fourth, that the use of force or threats to use force against Ukraine, either militarily or economically, would count as "exceptional circumstances" to Ukraine's "highest interests," including its sovereignty and political independence; fifth, that Ukraine would give the documents of accession to the depository countries after the NPT is voted into effect; and sixth, that the NPT will take effect for Ukraine after it receives security guarantees by way of a "corresponding international legal document" signed by the nuclear weapon states. The most important factor leading to the parliamentary vote was security guarantees. This issue was partially resolved after a document pledging assurances from the U.S., the U.K., and Russia arrived in Kiev on 11/16/94. France stated separately that it would also give security guarantees to Ukraine after the formal accession. After the vote, Volodymyr Mukhin, Chairman of the Ukrainian Parliament's Committee for Defense and National Security, stated that China had indicated in a 11/94 meeting that it was also considering giving Ukraine guarantees.

Radio Ukraine World Service (Kiev), 11/16/94; in Executive News Service, 11/16/94 **(12513)**. *International Herald Tribune*, 11/17/94 **(12198)**. Steven Greenhouse, *New York Times*, 11/17/94, p. A6 **(12198)**. Ron Popeski, Reuter (Kiev), 11/16/94; in Executive News Service, 11/17/94 **(12198)**. Dunbar Lockwood, *Arms Control Today*, 12/94, p. 17 **(12194)**. Marta Kolomayets, *Ukrainian Weekly*, 11/27/94, p. 1 **(12428)**.

11/17/94

It is reported that reservations were voiced by unidentified "Russian experts" regarding the Ukrainian Parliament's vote, particularly with respect to a "special resolution" on the subject of weapons ownership that the Parliament passed as an appendix to the law ratifying adherence to the NPT. Ukraine asserted that it owned the nuclear weapons on its territory, which, according to experts cited by the Russian Ministry of Internal Affairs, means that Ukraine will join the NPT as a nuclear state. This would contradict previous international agreements made by Ukraine that it will be a non-nuclear party to the NPT. Russian Foreign Ministry spokesman Grigory Karasin states that Russia will not give Ukraine security guarantees until the nuclear weapons ownership issue is cleared up.

Interfax (Moscow), 11/16/94; in FBIS-SOV-94-222, 11/16/94 **(12200)**. Andrey Serov, Itar-Tass (Moscow), 11/17/94; in FBIS-SOV-94-222, 11/17/94 **(12200)**. Steven Gutterman, UPI (Moscow), 11/17/94; in Executive News Service, 11/17/94 **(12427)**.

12/4/94

China states that it applauds Ukraine's decision to join the NPT and affirms the Chinese position not to attack or threaten to attack with nuclear weapons a non-nuclear weapon state. However, China does not offer Ukraine guarantees of security against aggression, but does say that "all differences should be settled peacefully." China also states that it is prepared to nurture "friendly and cooperative relations" with Ukraine.

Reuter (Beijing), 12/4/94; in Executive News Service, 12/4/94 **(12427)**.

12/5/94

At the CSCE Conference in Budapest, Ukraine formally accedes to the NPT as a non-nuclear weapon state by handing over its instrument of accession. At the ceremony, Russia, the U.S., and the U.K. sign a security memorandum with Ukraine, Belarus, and Kazakhstan. The U.S., Russia, and the U.K. promise to honor Ukraine's current borders, and to not use military or economic coercion to force Ukraine to fulfill any demands. The three countries also promise not to attack Ukraine except in self-defense or as permitted under the U.N. Charter. Although security assurances are standard for non-nuclear NPT signatories, Igor Timofeyev, an official at the Ukrainian Foreign Ministry's Disarmament Department, stated that Ukraine considered the guarantees to be "an international legal document." Also at the Conference, the U.S., Russia, Kazakhstan, Belarus, Ukraine, and the U.K. sign a protocol which formally brings START I into force.

Paul Mylrea, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12427)**. Patricia Koza, UPI (Budapest); in Executive News Service, 12/5/94 **(12427)**. Nicholas Doughty, Reuter (Budapest), 11/30/94 **(12427)**. Interfax (Moscow), 12/6/94 **(12427)**.

2/95

The parliament approves the "Law on Atomic Energy Use and Radiation Protection" which will regulate the future use and development of nuclear power in Ukraine. Passage of the law may encourage Western organizations which are considering financial and technical aid for Ukraine's nuclear industry to go forward with the aid.

ENS NucNet, 2/14/95 **(12429)**. *Nuclear News*, 3/95, p. 17 **(12429)**.

Ukraine with Belarus, Czech Republic, Poland, and Slovakia

12/14/94

In Prague, Czech police confiscate 2.7 kg of 87.7 percent enriched U^{235} in the form of a gray powder from a blue Saab and arrest a Czech, a Belarusian, and a Ukrainian travelling in the car. Investigators on the case believe that the seized uranium was brought into the country by rail from Poland or Slovakia. The HEU is found in two hexagonal metal containers with certificates stating that the containers are owned by an Odessa Black Sea Fleet base. The certificates are in Russian and identify the substance as HEU. The three arrested smugglers are all former nuclear workers. The Czech, 54-year-old Jaroslav Vagner, has worked at the Nuclear Research Institute in Rex, the Ministry of Fuels and Energy, and the Dukovany and Temelin nuclear facilities. Czech investigators say Vagner made a number of trips to the Soviet Union in the 1980s. At the time of his arrest, Vagner was working at an import-export business in Ceske Budejovice which he founded in 1991. The three suspects reportedly tried to sell the uranium in Prague.

Two separate samples of the material were analyzed by the Czech Republic's Nuclear Research Center. Czech authorities indicated that the material seized in Prague had undergone irradiation, reprocessing, and re-

enrichment so as to create a "special reactor fuel." A number of Western safeguards experts who examined the spectrometric analysis agree with this assessment, in part, because the analysis showed traces of U^{236} which, according to these officials, indicates the presence of reprocessed uranium. Terry Hawkins, Los Alamos Deputy Director of Nonproliferation, said that the 87.7 percent enrichment level suggests that the material was probably produced for research reactor or naval fuel reactor applications. According to IAEA spokesman David Kyd, the Czech seizure represents the "most substantial quantity and the highest quality of uranium that has been seized" to date.

Rick Atkinson, *Washington Post*, 12/21/94, pp. A27, A30 **(12095)**. *International Herald Tribune*, 12/20/94, pp. 1, 8 **(12095)**. Jane Perlez, *New York Times*, 2/15/95, p. A3 **(12499)**. Mark Hibbs, *NuclearFuel*, 2/13/95, pp. 8-10 **(12492)**. Mark Hibbs, *NuclearFuel*, 1/2/95, pp. 12-13 **(12492)**.

1/95

A German Bundeskriminalamt report says that preliminary information indicates that the material seized in Prague on 12/14/94 is "identical" to that purchased on 6/13/94 in the Landshut sting operation. The report also indicates that Jaroslav Vagner "has connections" to a Pole arrested in the Landshut case.

Mark Hibbs, *NuclearFuel*, 2/13/95, pp. 8-10 **(12492)**.

Ukraine with Canada

10/94

A deal is finalized between Canada's Ontario Hydro and the government of Ukraine to purchase up to 550 dry storage containers for radioactive waste generated at the Chernobyl and Rovno nuclear power plants. Canada is giving Ontario Hydro $2.9 million—one-fifth of Canada's $15 million nuclear aid package for Ukraine—to convert the casks to store fuel from Ukraine's plants. After the conversion process is complete, Ukraine's State Committee for Nuclear Power plans to develop facilities to build the canisters, and will pay Ontario Hydro a licensing fee of $6.5 million for this purpose.

Ray Silver, *Nucleonics Week*, 10/27/94 **(12197)**. *Nuclear Europe Worldscan*, 11/94-12/94 **(12197)**.

Ukraine with Germany

11/94

Yuri Kostenko, the Ukrainian Minister of Environmental Protection, calls for assistance from German firms in the development of Ukrainian fuel cycle facilities.

Alex Brall, *Nucleonics Week*, 11/24/94, p. 7 **(12049)**.

Ukraine with IAEA

9/28/94

IAEA Director General Hans Blix and Nicolai A. Steinberg, Chairman of the Ukrainian State Committee on Nuclear and Radiation Safety, sign a safeguards agreement covering all nuclear materials used in Ukraine's civilian nuclear activities. The agreement allows the IAEA to inspect Ukraine's civilian nuclear facilities to ensure that fissile materials from these facilities are not used for military purposes. The agreement will enter into force after the IAEA receives documentation from Ukraine that the "statutory and constitutional requirements" of the agreement have been finalized. The agreement will remain in force until Ukraine signs another safeguards agreement subsequent to its accession to the NPT. In 9/92, the Ukrainian Ministry of Foreign Affairs notified the IAEA that Ukraine planned to accede to the NPT as a non-nuclear weapon state.

IAEA Bulletin, 12/94, p. 68 **(12066)**. Radio Rossii Network (Moscow), 10/5/94; in FBIS-SOV-94-194, 10/5/94 **(12066)**.

11/3/94

It is reported that the IAEA has assisted Ukraine in training personnel on nuclear materials accounting, control, and security.

AFP (Paris), 11/3/94; in JPRS-TND-94-020, 11/17/94, pp. 42-43 **(12318)**.

1/17/95

It is reported by Ukraine's Foreign Ministry that the Cabinet of Ministers decided to adopt the resolution "on ratification of the agreement between Ukraine and the [IAEA] on providing guarantees on all nuclear materials used for peaceful purposes by Ukraine" as required by the NPT. A press statement issued by Ukraine's Foreign Ministry stated that the government hoped the agreement would encourage improved relations between Ukraine and other countries in the fields of nuclear energy research and utilization.

Ukrinform (Kiev), 1/17/95; in FBIS-SOV-95-015-A, 1/17/95 **(12514)**.

Ukraine with Iran and Russia

3/94

According to Germany's Federal Intelligence Service (BND), 11 of 60 Ukrainian-origin nuclear warheads disappear "on Russian territory" during transport to Russia for dismantlement; Iran was reportedly the "interested buyer." The BND also said that, in a previously unpublicized case, arrested criminals had attempted to "blackmail the land of Baden-Wuerttemberg" by saying that there were six nuclear warheads in the Baden-Wuerttemberg area.

Gunther Schnattman, *Focus* (Munich), 10/17/94, pp. 87-89; in JPRS-TND-94-020, 11/17/94, pp. 35-36 **(12062)**.

Ukraine with Israel, Moldova, and Romania

10/10/94

Romanian police from the General Police Inspectorate's Weapons, Explosives, and Drugs Department arrest seven men attempting to sell 7 kg of uranium and strontium in a lead pipe. Three Moldovans (Victor Barta, Ion Bulgariu, and Ion Baleca (a former Red Army officer)), two Israeli citizens (Fuad Abdel Hatem and Abdul Hafez Moh'D Salem), and two Romanians (Dumitru Iordan and Florin Lenghel) are arrested in the village of Urechesti near the Ukrainian border. According to Romanian Interior Minister Doru Ioan Taracila, Baleca smuggled the nuclear material out of Ukraine to Moldova, where it was then given to a group of people in the Romanian province of Transylvania. These intermediaries tried to sell the material to Salem and Hatem, offering the uranium for $400,000, and the strontium for $250,000. At a 10/12/94 press conference, Romanian police and Interior Ministry officials state that they believe

Hatem and Salem intended to smuggle the material to either Germany or the Netherlands.

Financial Times, 12/10/94 **(12055)**. Patru Musat, *Adevarul* (Bucharest), 10/12/94, p. 1; in JPRS-TND-94-020, 11/17/94, p. 11 **(12259)**. Peter Bale, Reuter (Bucharest), 10/12/94; in Executive News Service, 10/12/94 **(12206)**.

Ukraine with Multi-Country Group

12/94

A German-Belgian consortium, led by Lahmeyer International, announces that it has completed a comprehensive "start-up plan" for the completion and operation of three new VVER-1000 reactors in Ukraine—Rovno 4, Khmelnitsky 2, and Zaporozhe 6. Implementation of the plan, funded by the European Union's Tacis program, will cost an estimated $950 million.

Nuclear Engineering International, 1/95, p. 11 **(12341)**.

2/13/95

Nur Nigmatullin, Deputy Chairman of Ukraine's State Committee for Nuclear Power Utilization, states that Ukraine, with the assistance of two U.S. firms, a Franco-German consortium, and a Russian company, intends to construct a nuclear fuel plant. The project is intended to alleviate Ukrainian dependence on Russian nuclear fuel, which is considered to be poor in quality. Nigmatullin states that a Ukrainian plant could save as much as 30 percent of Ukraine's hard currency that is spent on imported fuel, and that Ukraine could provide 50 percent of the uranium needed for the fuel, with the rest being purchased from Russia and perhaps France.

Reuter (Kiev), 2/13/95; in Executive News Service, 2/13/95 **(12199)**.

Ukraine with Romania

11/2/94

Romanian police report that two illegal shipments of uranium were seized and 12 people arrested in the last two months. Romanian Police Chief General Ion Pitulescu says that three criminal groups from the former Soviet Union operating in Bulgaria, Romania, and Ukraine were broken up by the 10/94 arrests. In 6/94, Romanian police arrested three Romanians in Pitesti, 113 km northwest of Bucharest, attempting to smuggle 3 kg of uranium tablets. Although the origin of the uranium has not yet been confirmed, police believe that the uranium originated outside Romania.

Karin Popescu, Reuter, 11/2/94; in Executive News Service, 11/3/94 **(12056)**. Mark Bello, Reuter (Bucharest), 11/9/94; in Executive News Service, 11/9/94 **(12505)**.

Ukraine with Russia

8/9/94

Mykhalo Umanets, Chairman of Ukraine's State Committee for Nuclear Power Utilization (Goskomatom), says that Ukraine has received only one-third of its needed nuclear fuel cassettes free of charge and is being forced to pay Russia for additional cassettes in hard currency. Umanets says that Russia will not accept "low-grade raw uranium" from Ukraine as payment for fuel assemblies because of additional costs associated with processing it.

NuclearFuel, 10/10/94, pp. 18-19 **(12036)**.

10/94

Nur Nigmatullin, First Deputy Chairman of Goskomatom, describes Ukraine's fuel shortage as "critical." In the first six months of 1994, Ukraine received only two of the needed 10 reloads from Russia. Goskomatom is supposed to pay Russia $350 million for the reloads, but instead has paid only about $10 million per month. Nigmatullin stated that, "on the basis of the tripartite agreement, 180 fuel assemblies have been received so far and another 250 assemblies will be received by the end of 1994. But we require 550 fuel assemblies for VVER plants, and 800 assemblies for RBMK units."

NuclearFuel, 10/10/94, pp. 18-19 **(12036)**. Viktor Kovalenko, Itar-Tass (Moscow), 8/9/94; in FBIS-SOV-94-154, 8/10/94, pp. 25-26 **(12036)**.

11/17/94

Vitaliy Nasonov, spokesman for Russia's Ministry of Atomic Energy, states that Russia has fulfilled its 1994 requirement to export nuclear fuel to Ukraine, and that since the Ukrainian parliament agreed to accede to the NPT in 11/94, Russia is willing to continue fuel deliveries. Russia sent a total of 249 fuel elements to Ukraine's nuclear power plants in shipments in 3/94, 4/94, 6/94, and 10/94. Nasonov stated that in a 11/16/94 meeting, representatives from Ukraine's Ministry of Atomic Energy "had no complaints" regarding fuel deliveries from Russia. Russia has withheld some scheduled fuel deliveries as a tactic to expedite specific changes in Ukraine's nuclear policy. One of these was a 11/94 ultimatum that Ukraine put its nuclear programs under IAEA safeguards by 6/14/95. This demand was related to a 3/17/92 decree by President Yeltsin which stated that all non-nuclear weapons countries receiving nuclear materials, equipment, or technologies from Russia would be expected to place their nuclear programs under IAEA control.

Interfax (Moscow), 11/17/94; in FBIS-SOV-94-223, 11/17/94 **(12201)**.

1/24/95

Uniar reports that Ukraine's Ministry of Defense issued a statement declaring that Ukraine had "fulfilled all conditions stipulated" in START I with regards to transferring ICBMs out of Ukraine. The statement also said that a group of U.S. observers who arrived at the Pavlodar Mechanical Plant on 1/12/95 had verified that missiles were no longer being produced at the plant.

Ustina Markus, *OMRI Daily Digest*, 1/25/95 **(12202)**.

2/13/95

Nur Nigmatullin, Deputy Chairman of Ukraine's "nuclear power authority," states that Ukraine, with the assistance of two U.S. firms, a Franco-German consortium, and a Russian company, intends to construct a nuclear fuel plant. The project is intended to alleviate Ukrainian dependence on Russian nuclear fuel, which is considered to be poor in quality. Nigmatullin states that a Ukrainian plant could save as much as 30 percent of Ukraine's hard currency that is currently spent on imported fuel, and that Ukraine could provide 50 percent of the uranium needed for the fuel, with the rest being purchased from Russia and perhaps France. Senior officials in Ukraine's nuclear

program have stated that thousands of Ukrainian technicians are leaving for better-paid positions in Russia.

Reuter (Kiev), 2/13/95; in Executive News Service, 2/13/95 **(12199)**.

UKRAINE WITH UNITED STATES

10/94

In a meeting between Parliamentary Speaker Oleksander Moroz and U.S. Assistant Secretary of Defense Gloria Duffy, Moroz proposes a U.S.-Ukrainian joint venture to establish a complete nuclear fuel cycle in Ukraine. Moroz states that with Ukrainian raw materials and U.S. funds and technology, nuclear fuel processing facilities could be built in Ukraine that would not only supply Ukraine with fuel for its nuclear plants, but could process fuel as an exportable commodity. Ukraine currently receives nuclear fuel from Russia in exchange for dismantled nuclear warheads, and uses Russia as an enricher for its raw uranium; but the cost of the raw material is only 10 percent of the price for the nuclear fuel. Moroz said that $120-150 million would be needed for the project, which is part of the U.S.'s Nunn-Lugar aid plan for Ukraine. Duffy said that the U.S. would consider the proposal in the next four weeks and would subsequently inform the Ukrainian government of its decision.

Vladimir Medyany and Alexey Petrunya, Itar-Tass (Moscow), 10/20/94; in FBIS-SOV-94-204, 10/20/94 **(12264)**.

11/94

U.S. Ambassador to Ukraine William Miller visits a closed South Machine Building Plant (Yuzhmash) in Dnepropetrovsk, where in accordance with START I, 130 SS-19 ICBMs will be destroyed; the U.S. is providing equipment for the operation.

Anatoliy Polyakov, *Krasnaya Zvezda*, 11/16/94, p. 1 **(12131)**.

11/94

It is reported that, according to a U.S. official, several U.S. firms have proposed joint ventures with Ukraine to produce nuclear fuel. Gloria Duffy, Special Coordinator for the Cooperative Threat Reduction Program under the Assistant Secretary of Defense for Nuclear Security and Counter Proliferation, said that the U.S. will respond to these proposals soon, and indicated that cooperation with the U.S. could help Ukraine to close the fuel cycle.

Alex Brall, *Nucleonics Week*, 11/24/94, p. 7 **(12049)**.

11/94

The U.S. Department of Energy (DOE) states that it will pay for the construction, transport, and installation of three concrete spent fuel storage casks for Ukraine's Zaporozhye nuclear power plant. These casks will be the first installment of 14 VSC-24 concrete storage casks made by the U.S. firms Duke Engineering & Services, Inc. and Sierra Nuclear Corporation. The Brookhaven National Laboratory will be the financial intermediary in the fuel storage project, and will be providing "several million dollars" of U.S. federal funds. The casks are intended to expand the available radioactive waste storage space at the Zaporozhye plant; the lack of present space is anticipated to force the closure of the plant in 1995 if no expansion is made. After the 14 casks are constructed and transported to Ukraine, the DOE has stated that Sierra Nuclear Corporation may have the technology and facilities in Ukraine to start a local construction program.

Elaine Hiruo, *NuclearFuel*, 12/9/94, pp. 8-9 **(12042)**.

11/14/94

Ukrinform-Tass reports that reconstruction has begun at the Southern Machine-Building plant in Dnipopetrovsk, Ukraine, which constructed SS-19 intercontinental ballistic missiles before the collapse of the Soviet Union, and will now be used for SS-19 dismantlement. The U.S. is providing financial aid and expertise for the project in accordance with a 10/93 agreement with Ukraine. After the reconstruction process is complete, the plant is expected to be able to dismantle four missiles per month.

Ustina Markus, *RFE/RL Daily Report*, 11/15/94 **(12068)**.

12/94

It is reported that the U.S. increased funding for the elimination of Ukrainian strategic weapons systems from $135 million to $185 million during fiscal year 1994. The additional funding is to be used to dismantle 46 SS-24 ICBM silos at the Pervomaysk base. Ukrainian and U.S. companies have already signed contracts to dismantle and store fuel from SS-19 missiles at Dnepropetrovsk. According to the U.S. Department of Defense, the equipment to eliminate strategic weapons in Ukraine "will be in place by early summer 1995."

Dunbar Lockwood, *Arms Control Today*, 12/94, pp. 20, 25 **(12323)**.

12/5/94

START I enters into force as the presidents of the U.S., Russia, Ukraine, Kazakhstan, and Belarus exchange their instruments of ratification at the CSCE Conference in Budapest.

Patrick Worsnip, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12397)**. Thomas W. Lippman, *Washington Post*, 12/4/94, p. A46 **(12397)**. Paul Mylrea, Reuter (Budapest), 12/5/94; in Executive News Service, 12/5/94 **(12427)**.

1/95

It is reported that Ukraine will receive $8.5 million from the U.S. to construct a nuclear training center at Khmelnitsky. The center will teach procedures in the areas of reactor control, turbine control, reactor refueling, plant operations, and instrumentation and control.

ENS Nucleus, 1/95 **(12308)**.

1/4/95

Secretary of Defense William Perry and Defense Minister Valeriy Shmarov announce the installation of a government-to-government communications link. The link, which is part of the 12/18/93 Cooperative Threat Reduction implementing agreement, will be used to exchange notification information required under the START and INF treaties as well as information connected with nuclear weapons dismantlement and inspections.

Post-Soviet Nuclear & Defense Monitor, 1/15/95, pp. 7, 9 **(12205)**.

2/12/95

It is reported that several factors have combined to slow the implementation of the Cooperative Threat Reduction (Nunn-Lugar) program, including "bureaucratic inertia in Washington, Cold War suspicions

in Moscow," and the chaotic political environment in the former Soviet republics. The U.S. Congress has appropriated about $1.3 billion for the Nunn-Lugar program since its inception. Assistant Secretary of Defense Ashton Carter stated that although the implementation of the program is just beginning, Nunn-Lugar funds have played a critical role in convincing Kazakhstan, Ukraine, and Belarus to transfer their nuclear arsenals to Russia. However, Charles Flickner, a Senate Budget Committee staff member, describes the program's record as "dismal," and states that not "a single nuclear warhead nor a single chemical weapon" has been dismantled using Nunn-Lugar funds. Carter indicates that the funds are not being used for actual dismantlement because Russia has refused U.S. offers for assistance in this area. The Pentagon has spent a total of about $150 million in Nunn-Lugar funds, and has committed about $500 million to the program in signed contracts. Over the past three years, Nunn-Lugar funds have been used to remove 2,600 warheads from missiles or bomber bases, dismantle launchers across the former Soviet Union, and transfer 900 warheads from Belarus, Kazakhstan, and Ukraine to Russia for dismantlement.

Fred Hiatt, *Washington Post*, 2/12/95; in Executive News Service, 2/12/95 **(12467)**. Amanda Bichsel, *Defense News*, 2/27/95, pp. 25-26 **(12467)**.

2/21/95

Gregory Govan, head of the U.S. On-Site Inspection Agency, says that beginning in 3/95, the U.S., Russia, Ukraine, Kazakhstan, and Belarus will begin inspecting one another's nuclear sites to ensure compliance with START I. Govan says that following the initial inspections, inspectors from Russia, Belarus, Kazakhstan, and Ukraine will engage in spot inspections of 36 sites in the U.S.; U.S. inspectors will visit 65 sites in the former Soviet Union. START I stipulates that Russia and the U.S. will reduce their nuclear arsenals from a combined total of 21,000 warheads at the height of the Cold War, to 12,000 by the end of 2001.

Times of India, 2/23/95, p. 9 **(12436)**. *Washington Times*, 2/22/95, p. A4 **(12436)**.

UZBEKISTAN

Uzbekistan with United States

10/31/94

It is reported that the U.S. Department of Commerce (DOC) and Uzbekistan agreed to an amendment to the Uzbekistani suspension agreement. The new quota for Uzbekistani uranium exports to the U.S. is now based on the level the U.S. maintains in its domestic production: from 11/1/94 to 11/1/96, Uzbekistan can sell up to 440,000 lbs of U^{308} equivalent, and an additional 100,000 lbs of U^{308} equivalent if the price is greater or the same as the "reference price" established by the DOC.

Ux Report, 10/3/94, p. 2; in *Uranium Institute News Briefing*, 9/28/94-10/4/94 **(12578)**.

12/22/94

In a letter to each of the four former Soviet republics that have suspension agreements with the U.S. (i.e., Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan), Joseph Spetrini, Deputy Assistant for Compliance at the U.S. DOC, states that the U.S. has called for consultations to discuss the issue of "bypass enrichment." In the letter, Spetrini states that the U.S. believes that the four republics are undermining the objectives of the suspension agreements by exporting uranium to the U.S. through third-party countries. According to an ad hoc committee composed of domestic uranium producers, the U.S. Enrichment Corporation (USEC), and the Oil, Chemical & Atomic Workers International Union, as well as a number of trade journals, a large volume of uranium from the CIS republics is being or will be enriched in third-party countries. Such a practice changes the origin of the uranium to the country in which it is enriched. The uranium is then exported to the U.S., thus avoiding the quantitative restrictions imposed by the suspension agreements. Attorney Tom Wilner, who represents Kazakhstan, stated that Kazakhstan is willing to engage in consultations with the DOC, but only on a multilateral basis with all four CIS republics taking part. Wilner also said that the U.S. should not delay the signing of a new suspension amendment with Kazakhstan until the bypass question is resolved.

Michael Knapik, Wilson Dizard III, and Ann MacLachlan, *NuclearFuel*, 1/16/95, pp. 1-2 **(12490)**.

1/5/95

It is reported that the USEC, along with two associations which represent U.S. nuclear employees and uranium producers, requested that the U.S. Department of Energy count all uranium originating from Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan against U.S. import quotas for those countries, regardless of where the uranium is enriched. If implemented, this request would seal the so-called "enrichment loophole."

SpentFUEL, 12/26/94, p. 1; in *Uranium Institute News Briefing*, 12/21/94-1/5/95, p. 1 **(12463)**.