

NUCLEAR-RELATED TRADE AND COOPERATION DEVELOPMENTS FOR SELECTED STATES, NOVEMBER 1995-JANUARY 1996

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Stopping the smuggling and illegal transfer of nuclear materials, technology, and equipment continued to be the major challenge for the international nonproliferation regime from November 1995 through January 1996.

Reported incidents of nuclear materials theft in the **former Soviet Union** were particularly plentiful during this period; however, many of the cases involved substances not directly usable in nuclear weapons or as nuclear fuel (i.e., cesium, thorium, osmium, and strontium). None of the reported incidents involved HEU or plutonium. Also significant was the fact that, in at least two cases, the smuggled materials originated from mining facilities in **Russia** and **Kazakstan**, rather than from facilities that have been recipients of material protection, control, and accounting (MPC&A) assistance under U.S. Cooperative Threat Reduction and lab-to-lab initiatives.

Other attempted smuggling cases—two of which involved the seizure of kilogram quantities of uranium—included the arrest of a **South Korean** citizen in **Russia** and the apprehension of a customs inspector in **Kazakstan**. In one reported case, the smuggled uranium appears to have originated in **Lithuania**. In other cases and reports, **Austria**, **Central Asia**, the **Czech Republic**, **Italy**, **Poland**, **Switzerland**, and **Turkey** were identified or implicated as transit routes for smuggled nuclear materials.

The need for continued efforts to improve MPC&A in the **former Soviet Union** was underscored when IAEA investigators determined that approximately 75 kg (instead of the registered amount of 15 kg) of HEU was in storage at the Kharkiv Physics & Technology Institute in **Ukraine**. The discovery of a small quantity of cesium, which had been concealed in Moscow's Izmailovsky Park by Chechen separatists, also demonstrated the poor state of nuclear waste storage facilities in **Russia**; a nuclear waste site in Grozny has been implicated in the incident. The Izmailovsky Park incident also raised concerns over possible future terrorist acts involving radioactive substances.

UNSCOM analysis of documents released by Baghdad in 8/95 revealed that **Iraq** acquired classified blueprints and components for the powerful TC-11 gas centrifuge from **German** technician Karl-Heinz Schaab. The centrifuges, stolen from Urenco affiliate MAN Technologie, were to be installed in a cascade at the Rashdiya Engineering Design Center.

Revelations that the **Japanese** cult Aum Shinrikyo sought nuclear technology and material from **Russia**, nuclear-related equipment from the **United States**, and natural uranium from **Australia** provided further causes for concern.

Fearing that **Iran** is trying to acquire illicit nuclear materials or technology clandestinely, the **United States** continued its opposition to the **Russian-Iranian** agreement to complete the Bushehr nuclear power plant. Furthermore, opponents of the recently signed **U.S.-Euratom** nuclear cooperation treaty claim that by granting "long-term advanced consent" on the transfer of **U.S.**-origin nuclear material to **Euratom** members, the **United States** weakened its ability to influence the trade of nuclear fuel for nonproliferation purposes substantially. The proposed sale of **Russian** HEU to members of the **European Union** only highlights this concern. Other nuclear materials trade during this period included uranium transfers from **Kazakhstan** to **Belgium** and from **Russia** to **Lithuania**. **Russia** continued its cooperation with **France** on the development of a fast-reactor to burn high plutonium-content fuels, and with the **United States** on the development of a gas turbine-modular helium reactor (GT-MHR) that would be used for the same purpose.

In other developments, a sodium coolant leak at **Japan's** Monju fast breeder reactor threatened to derail **Japan's** nuclear recycling program. Bowing to popular anti-nuclear pressures, the Japanese Science and Technology Agency has reconsidered its plutonium usage policy and changed the design plans for the Rokkasho-mura reprocessing plant.

In November, **China** released its "White Paper on Arms Control and Disarmament," in which it denied ever having sold weapons of mass destruction to other countries and chided the other nuclear weapon states for practicing discriminatory arms control policies. In the meantime, **Iranian** officials said that their deal with **China** to purchase two 300 MW reactors was still alive, but **Chinese** officials denied this. The **Chinese** did, however, say they intended to continue cooperating with **Iran** on nuclear energy development.

The close of the year marked an important milestone in the **North Korea-KEDO** (Korean Peninsula Energy Development Organization) negotiations. In mid-December, after prolonged debate over issues such as auxiliary facilities, a contract for the supply of two light water reactors was signed. Immediately upon signing the deal, however, both sides issued warnings about potential problems in its implementation. One ongoing obstacle is funding for the transfer of heavy oil to **North Korea**. The **United States** has begun to cast about for financing from, among others,

the **European Union** and the Middle East. Negotiations on this and other issues continue.

Andrew Koch, R. Adam Moody, and Holly Porteous

NOTE:

A date marked with an "" indicates that an event was reported on that date; a date without an "*" is the date when an event actually occurred.*

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