

# NUCLEAR-RELATED TRADE AND COOPERATION DEVELOPMENTS, JUNE 1994-SEPTEMBER 1994

## EMERGING NUCLEAR SUPPLIER STATES

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### ARGENTINA

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#### INTERNAL DEVELOPMENTS

**6/21/94**

Argentine President Carlos Menem pledges to introduce legislation in the Argentine Congress "asking for approval" for Argentina to sign the NPT.

Maria O'Donnell, *Pagina/12* (Buenos Aires), 6/22/94, p. 11; in JPRS-TND-94-014, 7/13/94, p. 26 (11822).

**Mid-8/94**

Argentina's CNEA takes bids for the supply of approximately 130,000 lbs. U<sup>308</sup>.

*NuclearFuel*, 8/29/94, p. 17 (11907).

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*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.*

**9/94**

Latin American officials report that Argentina's pilot gaseous diffusion centrifuge plant at Pilcaniyeu, currently only partially operational, will go fully online in 1995 after repairs are completed.

Mark Hibbs, *NuclearFuel*, 9/26/94, p. 3 (11664).

**9/26/94**

It is reported that although President Menem said [in 6/94] that Argentina would join the NPT, the Argentine legislature has not yet given its approval.

Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 3-4 (11966).

#### ARGENTINA WITH ABACC, BRAZIL, AND IAEA

**7/7/94**

It is reported that the IAEA will inspect Brazil's Angra-1 nuclear power plant, the fuel element factory in Resende, the Coordinating Center for Special Projects (Copesp) plant for conversion of uranium into uranium hexafluoride, and three research reactors located at the Institute for Nuclear and Energy Research (IPEN) in Sao Paulo, the Nuclear Technological Development Center (CTDN) in Rio de Janeiro, and the Nuclear Energy Institute (IEN) in Belo Horizonte. The IAEA is currently analyzing uranium samples which it obtained while inspecting the Navy Aramar Research Center in Ipero, Sao Paulo, to verify that the

center is not enriching uranium above 20 percent, the maximum enrichment level which its license allows. Assistant Secretary of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) Carlos Feu Alvim states that Brazil's adherence to the Quadripartite Agreement (between Brazil, Argentina, ABACC, and the IAEA) is evidence that Brazil will use its nuclear facilities only for peaceful purposes.

*Agencia de Estado* (Sao Paulo), 7/7/94; in FBIS-LAT-94-132, 7/11/94, p. 17 (11553).

**Mid-9/94**

Latin American officials say ABACC wants to discuss terms for inspector access to safeguarded nuclear facilities in Argentina and Brazil with the IAEA and facility operators prior to 1996. The IAEA has already written Facility Attachments for all Brazilian and Argentine locations previously covered under INFCIRC-66 style safeguards agreements. The IAEA is in the process of inspecting the military-run facilities not covered by INFCIRC-66, and, under a bilateral agreement, Argentina and Brazil have already conducted joint inspections of all nuclear facilities in both countries. All nuclear materials in Brazil and Argentina will be under ABACC and IAEA control by 11/94.

Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 3-4 (11966).

**ARGENTINA WITH ABACC AND UNITED STATES**

**9/26/94**

It is reported that ABACC is jointly designing a "safeguards regime" with U.S. Department of Energy experts and the Martin Marietta Corp. in order to effectively manage the large process inventory at Argentina's Pilcaniyeu station.

Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 3-4 (11966).

**ARGENTINA WITH ALGERIA, EGYPT, AND PERU**

**9/94**

Officials report that Argentina plans to export enriched fuel with up to 20 percent U<sup>235</sup> to Algeria, Peru, and Egypt for use in their research reactors.

Mark Hibbs, *NuclearFuel*, 9/26/94, p. 3 (11664).

**ARGENTINA WITH CANADA**

**6/21/94**

Argentine Minister of Foreign Affairs and International Trade Guido Di Tella and Canadian Foreign Minister Andre Ouellette sign a nuclear cooperation agreement permitting Canadian firms to furnish reactor components and nuclear fuel to Argentina's German-supplied reactor. The agreement also allows for future reactor sales to Argentina.

Ray Silver, *Nucleonics Week*, 6/23/94, pp. 8-9 (11822). Dave Todd, *Ottawa Citizen*, 6/21/94, p. A7 (11822).

**ARGENTINA WITH UNITED STATES**

**8/29/94**

The U.S. removes Argentina, Brazil, Chile, and South Africa from a list of countries (Section 810.8(a) list of 10 CFR Part 810) requiring specific authorization before U.S. firms can assist with nuclear power reactors.

Kathleen Hart, *NuclearFuel*, 8/29/94, p. 5 (11607).

**BRAZIL**

**INTERNAL DEVELOPMENTS**

**9/21/94**

Senior Latin American officials report Brazil is evaluating plans to build a centrifuge enrichment plant using domestic technology. The plant would be run by Brazil's commercial fuel cycle industry and would have a capacity to supply separative work units (SWU) for up to 2,000 MW of "installed nuclear generation capacity" for use at Brazil's Angra nuclear power complex.

Mark Hibbs, *NuclearFuel*, 9/26/94, p. 3 (11664).

**BRAZIL WITH ABACC, ARGENTINA, AND IAEA**

**7/7/94**

It is reported that the IAEA will inspect Brazil's Angra-1 nuclear power plant, the fuel element factory in Resende, the Coordinating Center for Special Projects (Copesp) plant for conversion of uranium into uranium hexafluoride, and three research reactors located at the Institute for Nuclear and Energy Research (IPEN) in Sao Paulo, the Nuclear Technological Development Center (CTDN) in Rio de Janeiro, and the Nuclear Energy Institute (IEN) in Belo Horizonte. The IAEA is currently analyzing uranium samples which it obtained while inspecting the Navy Aramar Research Center in Ipero, Sao Paulo, to verify that the center is not enriching uranium above 20 percent, the maximum enrichment level which its license allows. Assistant Secretary of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) Carlos Feu Alvim states that Brazil's adherence to the Quadripartite Agreement (between Brazil, Argentina, ABACC, and the IAEA) is evidence that Brazil will use its nuclear facilities only for peaceful purposes.

*Agencia de Estado* (Sao Paulo), 7/7/94; in FBIS-LAT-94-132, 7/11/94, p. 17 (11553).

**Mid-9/94**

Latin American officials say ABACC wants to discuss terms for inspector access to safeguarded nuclear facilities in Argentina and Brazil with the IAEA and facility operators prior to 1996. The IAEA has already written Facility Attachments for all Brazilian and Argentine locations previously covered under INFCIRC-66 style safeguards agreements. The IAEA is in the process of inspecting the military-run facilities not covered by INFCIRC-66, and, under a bilateral agreement, Argentina and Brazil have already conducted joint inspections of all nuclear facilities in both countries. All nuclear materials in Brazil and Argentina will be under ABACC and IAEA control by 11/94.

Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 3-4 (11966).

**BRAZIL WITH GERMANY**

**Mid-7/94**

Siemens AG reports that as a result of Brazil's agreement to implement full-scope IAEA safeguards, it is negotiating with Nuclebras of Brazil over terms for possible restart of bilateral cooperation on Brazilian fuel cycle infrastructure development. The German government had halted the cooperation program in the mid-1980s over suspicions that Brazil was using German know-how to clandestinely develop nuclear weapons. The two companies have received approval to undertake the second and third steps of their initial agreement: building a plant in Brazil for enriched UO<sup>2</sup> fuel pellet production and constructing a facility to convert UO<sup>2</sup> to UF<sup>6</sup>. Siemens still has not applied for permits to export the facilities.

Mark Hibbs, *NuclearFuel*, 7/18/94, p. 12 (11592).

**8/94**

The Brazilian and German governments say they will not abandon their nuclear cooperation treaty, which is scheduled to end in 1995. Construction of the Brazilian Angra-2 reactor—the major remaining project of the bilateral treaty—is 75 percent complete. The German government and Brazil's Furnais Centrais Electricas will make available fur-

ther financing for completion of the plant.  
*Nuclear Engineering International*, 8/94, p. 5 (11554).

**8/17/94**

Germany announces that it has removed Brazil from its "H List," thus lifting restrictions on the supply of sensitive nuclear technologies from German companies.

*O Estado de Sao Paulo*, 8/18/94, p. 1; in JPRS-TND-94-017, 9/8/94, p. 14 (11594).

**9/26/94**

Brazil is reportedly evaluating acquisition of a pressurized water reactor fuel fabrication plant from Siemens AG. Although Brazil does not currently have plans for constructing industrial-scale chemical conversion plants, Siemens is interested in providing commercial-scale facilities for converting U<sup>308</sup> to UF<sup>4</sup> and UF<sup>4</sup> to UF<sup>6</sup>.

Mark Hibbs, *NuclearFuel*, 9/26/94, p. 3 (11664).

## BRAZIL WITH RUSSIA

**6/9/94**

It is reported that although "no one has yet proposed it," the possibility of Brazil trading its German-supplied Angra-2 nuclear power plant, which is still under construction, for a Russian nuclear submarine "is already being considered."

Alberto Tamer, *O Estado de Sao Paulo*, 6/9/94, p. B12; in JPRS-TND-94-014, 7/13/94, p. 26 (11555).

**8/94**

German Minister Bernd Schmidbauer discloses in an intelligence analysis that the Brazilian Embassy in Moscow allegedly forwarded to Brazil 60 employment applications from CIS scientists.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

**9/15/94**

Russia and Brazil sign an agreement to cooperate in civilian uses of nuclear energy. According to Brazilian Foreign Minister Selso Amorim and Victor Mikhaylov of Russia's Ministry of Atomic Energy, the agreement will promote cooperation in such areas as space science, thermonuclear power, applied physics, and superconductivity. The

agreement also covers high technology transfer.

Andrey Kurguzov, Itar-Tass (Moscow), 9/16/94; in FBIS-SOV-94-180, 9/16/94, p. 13 (11687).

**9/26/94**

Brazilian National Nuclear Energy Commission (CNEA) President Jose Mauro Esteves dos Santos says that although Russia and Brazil recently signed a nuclear cooperation agreement, Russia will not supply Brazil with technology or equipment for building a commercial-scale centrifuge enrichment plant.

Mark Hibbs, *NuclearFuel*, 9/26/94, p.3 (11664).

## BRAZIL WITH RUSSIA AND UNITED STATES

**8/1/94**

It is reported that the U.S. firm Nuexco made a deal to obtain uranium from Brazil. Nuexco may supply Brazil with nuclear material from the CIS to be enriched at Urenco.

Michael Knapik, *NuclearFuel*, 8/1/94, pp. 17-18 (11699).

## BRAZIL WITH UNITED STATES

**3/2/94**

The U.S. firm B&W Fuel Co. obtains necessary governmental approval to assist Brazil with safety-related measures, including the examination of fuel rods, at Brazil's Angra-1 power station.

*NuclearFuel*, 7/4/94, p. 14 (11500).

**Early 1994**

Brazil reportedly exports a shipment of uranium to Nuexco Trading Corp. of the U.S., possibly via Canada.

*NuclearFuel*, 8/29/94, p. 17 (11907).

**8/94**

Sources indicate that Nuexco Trading Corp. has a shipment of uranium en route from Brazil.

*NuclearFuel*, 8/29/94, p. 17 (11907).

**8/29/94**

The U.S. removes Argentina, Brazil, Chile, and South Africa from a list of countries

(Section 810.8(a) list of 10 CFR Part 810) requiring specific authorization before U.S. firms can assist with nuclear power reactors.

Kathleen Hart, *NuclearFuel*, 8/29/94, p. 5 (11607).

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## INDIA

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### INTERNAL DEVELOPMENTS

**6/94**

India's Nuclear Fuel Complex (NFC) is in the midst of an expansion and diversification program, having already completed construction of new plants at its Moula Ali site. NFC will commission the new plants in late 1995, thus doubling its yearly production of fuel bundles to 32,000.

*Nuclear Engineering International*, 6/94, p. 10 (11614).

**6/10/94**

Indian Prime Minister P.V.N. Rao tells Congress Party delegates that "we do not want to give up the choice of producing a bomb." India's largest opposition party, the Bharatiya Janata Party (BJP), applauds this hardening of the government's stance on India's nuclear weapons program. The BJP strongly advocates nuclear weapon development, arguing that it is necessary to protect India's "integrity, security, and sovereignty" against nuclear threats from both China and Pakistan. BJP leaders Lal K. Advani and A.B. Vajpayee have even suggested that India declare itself a nuclear weapon state, contending that China's recent nuclear testing and the emergence of the U.S. as the only superpower require an independent Indian nuclear weapons capability.

UPI, 6/11/94; in Executive News Service, 6/13/94 (11579). *Hindustan Times* (Delhi), 6/13/94, p. 17; in JPRS-TND-94-014, 7/13/94, p. 37 (11579). Ian Stewart, UPI, 8/31/94; in Executive News Service, 8/31/94 (11579). *Reuter*, 8/31/94; in Executive News Service, 8/31/94 (11579).

6/15/94

The Press Trust of India cites a report by India's Department of Atomic Energy that accuses foreign nuclear powers of preventing India from acquiring nuclear safety technology and from obtaining fuel for its Tarapur nuclear plant.

Reuter, 6/15/94; in Executive News Service, 6/15/94 (11891).

8/25/94

Prime Minister Rao tells Congress Party members that India has the means to quickly assemble a nuclear bomb if it needs to. The statement is intended to reduce constituent worries over former Pakistani Prime Minister Nawaz Sharif's mid-8/94 statement that Pakistan possesses a nuclear weapon.

Jawed Naqvi, Reuter, 8/25/94; in Executive News Service, 8/25/94 (11556).

Mid-9/94

In reaction to former Pakistani Prime Minister Nawaz Sharif's mid-8/94 statement, former head of India's Atomic Energy Commission M.R. Sirinivasan states that India has nuclear weapons capability and that it should become more "hawkish" on the nuclear issue.

Rahul Bedl, *Daily Telegraph*, 9/19/94 (11557).

#### INDIA WITH PAKISTAN

8/94

It is reported that India has proposed two nuclear arms control measures to Pakistan: the expansion of an existing agreement not to attack one another's nuclear facilities to encompass the civilian population and economic centers, and a "no-first-use" doctrine. Indian analysts argue that Pakistan can no longer justify not responding to India's offer now that "the Pakistani bomb has come out of its closet."

*Asian Age*, 8/31/94; in *International Security Digest*, 9/94, p. 5 (11748). K. Subrahmanyam, *Economic Times* (New Delhi), 9/14/94 (11748).

8/25/94

Indian Junior Foreign Minister Salman Khursheed says in a statement to the Indian

parliament that India will recommend an international response to former Pakistani Prime Minister Nawaz Sharif's declaration that Pakistan possesses a nuclear weapon. According to Khursheed, reports that Pakistan is smuggling nuclear material prove Islamabad is secretly procuring material for its weapons program by any means possible.

Alistair Lyon, Reuter, 8/25/94; in Executive News Service, 8/25/94 (11752). K.K. Katyal, *Hindu* (International Edition), 9/3/94, p. 5 (11752). *Asiaweek*, 9/14/94, p. 32 (11752).

9/1/94

It is reported that India has rejected a Pakistani proposal to issue a joint declaration denouncing the use of nuclear weapons.

*Daily Telegraph*, 9/1/94 (11748).

#### INDIA WITH PAKISTAN AND RUSSIA

8/29/94

It is reported that during his official visit to Moscow in 8/94, Indian Home Minister S. B. Chavan will discuss the migration of Russian nuclear specialists to Pakistan with Russian officials.

All India Radio (Delhi), 8/24/94; in FBIS-SOV-94-167, 8/29/94, p. 12 (11640).

#### INDIA WITH ROMANIA

9/23/94

Viorel Marculescu, director of Romania's Cernavoda nuclear power plant, says that India's State Department of Atomic Energy will export 350 tonnes of heavy water to Romania as coolant for the country's first nuclear power plant. Romania is building the plant's 700 MW reactor, which is expected to come on stream in 1995, with Canadian Candu technology. The terms of the deal allow Romania to pay for its imports with cash or with Romanian-produced heavy water once it is available; all but one of the production units at Romania's Halinga heavy water plant are currently closed for safety reasons.

Reuter, 9/23/94; in Executive News Service, 9/23/94 (11502).

#### INDIA WITH RUSSIA

8/94

German Minister Bernd Schmidbauer discloses in an intelligence analysis that India has purportedly received applications for employment from four Russian scientists.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

#### INDIA WITH SOUTH KOREA

4/11/94

It is reported that the PRC and India will each supply South Korea with 100 metric tons of heavy water, to be used in three 600 MW Candu-type reactors under construction at Wolsung, while Canada will supply the remaining heavy water requirements. The deal with India is worth \$23 million.

BBC World Service, 4/11/94; in *Programme for Promoting Nuclear Nonproliferation Newsletter*, 2nd Quarter 1994, p. 11 (11871). *Nuclear Engineering International*, 6/94, p. 10 (11614).

#### INDIA WITH UNITED STATES

7/94

India and the U.S. agree to cooperate on commercial nuclear power plant safety issues. The U.S. hopes this step will bring India closer to signing a convention on nuclear safety. U.S. Secretary of Energy Hazel O'Leary mentions the possibility of exchange visits between Indian and U.S. reactor sites.

Reuter, 7/14/94; in *Uranium Institute News Briefing*, 7/13/94-7/19/94, p. 3 (11892). UNI, 7/21/94; in *Hindu* (International Edition), 7/30/94, p. 12 (11892).

## IRAN

### INTERNAL DEVELOPMENTS

#### Late 6/94

Iran's Kurdish Democratic Party General Secretary Mostapha Hejri says that Iran intends to develop its own nuclear arms.

Mouna Naim, *Le Monde*, 6/29/94 (11597).

#### 7/5/94

It is reported that according to Pentagon officials, Iran's nuclear weapons development program is not progressing as rapidly as Western experts had previously predicted. Some intelligence analysts claim that Iran could now take over 10 years to develop a nuclear weapon since infighting in the government over the allocation of decreasing finances is slowing nuclear development efforts. According to some reports, Iran is using 10 nuclear facilities for military research. Western intelligence sources say Tehran spends over \$1 billion annually on its nuclear program, which will be expanded as soon as reactors bought from China and Russia are put into operation.

Elaine Sciolino, *New York Times*, 7/5/94, p. A1 (11977). *Jane's Defence Weekly*, 7/30/94, pp. 30-35 (11977).

#### 8/94

Iranian President Akbar Hashemi Rafsanjani says during a news conference that Iran is not trying to obtain nuclear weapons. Rafsanjani reproaches the nuclear weapon states and requests that they give up their nuclear weapons before demanding that Iran do so.

*Asian Defence Journal*, 8/94, p. 91 (11849).

#### 9/1/94

In a speech at the U.N. Conference on Disarmament in Geneva, Iranian Foreign Minister Ali Akbar Velayati proposes that the Persian Gulf States create a forum for the discussion of security issues, including a commitment to forswear nuclear weapons acquisition and establishment of a weapons-

of-mass-destruction-free zone in the Gulf region.

Robert Evens, *Reuter*, 9/1/94; in *Executive News Service*, 9/1/94 (11994).

#### 9/11/94

Official Iranian radio cites Iranian Atomic Energy Organization head Reza Amrollahi as saying that phase one of a nuclear energy research program at the Bonab Atomic Energy Research Center in northwestern Iran will open in 1995. Amrollahi says the center "will be used for agricultural purposes."

*Reuter*, 9/11/94; in *Executive News Service*, 9/11/94 (11997).

#### Mid-9/94

A senior Iranian official says Tehran has indicated it is considering withdrawing from the NPT because Western nations continue to deny it nuclear technology, even though it has complied with NPT requirements. The official's statement confirms "rumors" circulating in the Western intelligence community that Iran might decide to leave the NPT. However, during the week of 9/19/94, Iranian representatives at the IAEA General Conference indicate that Iran will not make a move to withdraw from the NPT until after the 1/95 fourth Preparatory Committee (PrepCom) meeting for the 1995 NPT Review and Extension Conference. One representative cautions that "quitting the NPT is a card which, at an appropriate time, Iran could play," if it fails to gain consensus support on NPT issues in the Non-Aligned Movement prior to the Conference.

Mark Hibbs, *Nucleonics Week*, 9/22/94, pp. 1, 8-9 (12006). Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 9-10 (11993).

### IRAN WITH ISRAEL

#### 6/29/94

Israeli Prime Minister Yitzhak Rabin says in an interview that Israel is asking the U.S. for help in stopping Iran and Iraq from developing long-range ballistic missiles and nuclear weapons. According to an Israeli intelligence official, China, North Korea, and some European countries are supplying manufacturing tools and components Iran is using in its nuclear weapons program. The official notes that Israel regu-

larly provides the names of nuclear suppliers suspected of dealing with Iran to other countries' intelligence services, and adds that a first step in confronting Iran's nuclear weapon development should "focus on sanctions or a boycott."

Richard C. Barnard, *Defense News*, 7/4/94, pp. 4, 29 (11978).

#### 9/19/94

Israeli army intelligence head Uri Saguy says that within about eight years, Iran is likely to have developed a nuclear weapon. Saguy adds that Israel and other countries are undertaking measures to thwart Iran's nuclear ambitions.

*Reuter*, 9/19/94; in *Executive News Service*, 9/19/94 (11997).

### IRAN WITH NORTH KOREA

#### 7/17/94

According to sources in the U.S. Secret Service, North Korea may have agreed to accept high payments made in counterfeit dollars for the sale of nuclear technology to Iran. Iran is reportedly involved in counterfeiting U.S. \$100 bills, possibly in cooperation with North Korea.

Nick Rufford, *Sunday Times* (London), p. 18 (11851).

#### 8/94

During a news conference, President Akbar Hashemi Rafsanjani says that even if North Korea has developed nuclear weapons, Iran does not want them. Rafsanjani was responding to the question of whether or not Iran is attempting to buy nuclear weapons from North Korea.

*Asian Defence Journal*, 8/94, p. 91 (11849).

### IRAN WITH PAKISTAN

#### Mid-9/94

Iranian officials say the U.S. "exerted heavy pressure on Pakistan" to block the visit of Iranian engineers and technicians to the construction site of Pakistan's Chinese-origin Chashma pressurized water reactor.

Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 9-10 (11993).

## IRAN WITH PRC

**Mid-6/94**

Iran's Interior Ministry acknowledges the 6/7/94 kidnapping of a Chinese nuclear engineer working with a group of Chinese experts for the Iranian Atomic Energy Organization (IAEO). The Chinese experts are assisting with the construction of uranium enrichment plants at Rudan in Shiraz.

*Intelligence Newsletter*, 6/23/94, p. 5 (11850).

## IRAN WITH RUSSIA

**6/16/94**

It is reported that Russia will assist Iran in completing construction of the Bushehr nuclear power plant. The plant—expected to produce one-seventh of Iran's electricity demand—is scheduled for completion by 1995. Currently, Russian specialists are finishing technical research for the project.

Oleg Kuzmin, *Itar-Tass* (Moscow), 6/16/94; in FBIS-SOV-94-117, 6/17/94, p. 12 (11801).

**7/5/94**

According to unverified reports, Russia has refused to sell two nuclear power reactors to Iran [for a plant at Gorgan] due to Tehran's inability to pay for them.

Elaine Sciolino, *New York Times*, 7/5/94, p. A1 (11977).

**8/94**

German Minister Bernd Schmidbauer discloses in an intelligence analysis that Iran has purportedly had 14 CIS nuclear scientists within its borders since the beginning of 1992, and may have concluded employment contracts with 200 technicians and over 50 nuclear experts.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

**9/28/94**

It is reported that Iran is trying to secretly acquire nuclear materials and related technology, particularly from Russia.

*Sueddeutsche Zeitung*, 9/28/94 (12004).

## IRAQ

### INTERNAL DEVELOPMENTS

**6/29/94**

Israeli Prime Minister Yitzhak Rabin says that Iraq's nuclear development capability has not yet been destroyed by international inspections.

Philip Finnegan, Theresa Hitchens, and Barbara Opall, *Defense News*, 9/12/94-9/18/94, pp. 3, 24 (11847).

**Mid-9/94**

It is reported that U.S. officials expect Iraq will now concentrate on enriching uranium by using gas centrifuge technology, which would be easily concealed and could be spread among several sites. One U.S. official says Iraq may still have much of the necessary equipment, and former U.N. inspector David Kay says the team of Iraqi nuclear scientists involved in Iraq's weapons program is still intact. Israeli intelligence officials say Iraq still has a nuclear procurement network in place.

Philip Finnegan, Theresa Hitchens, and Barbara Opall, *Defense News*, 9/12/94-9/18/94, pp. 3, 24 (11847).

### IRAQ WITH IAEA AND UNITED NATIONS

**6/21/94**

A 14-member U.N. nuclear team travels to Baghdad to install video cameras at the most important Iraqi nuclear sites in order to prevent Iraq from restarting its nuclear weapons program. On 6/28/94 Chief Inspector Garry Dillon says the team has installed a "camera installation in Um al-Ma'rik... and a bigger camera installation in Nasr" to monitor the machines at the facilities.

Reuter, 6/21/94; in *Executive News Service*, 6/21/94 (11848).

**8/30/94**

The IAEA informs U.S. Ambassador to the U.N. Madeline Albright that during the week of 8/21/94 the IAEA posted resident

inspectors in Iraq who will carry out routine and ad hoc inspections of nuclear sites under the ongoing monitoring program. Inspection activities will include the collection of environmental samples to measure isotopes indicative of nuclear activity and the checking of dual-use machine tools to ensure they are not employed for nuclear use. The IAEA will monitor 24 sites that housed nuclear activities or activities supporting or related to Iraq's nuclear program before the Gulf War. At a number of sites, the IAEA is installing video cameras for further monitoring activities. According to Western officials, the IAEA has "no information" showing any continuing Iraqi nuclear development activities.

Mark Hibbs, *Nucleonics Week*, 9/1/94, pp. 16-17 (11969).

**Early 9/94**

U.N. inspectors present evidence, including papers written by two scientists, proving that from 1981 to 1986 Iraq had a laser isotope enrichment research program. Iraq had previously denied that it was attempting to develop a laser enrichment capability.

*Washington Times*, 9/17/94, p. A10 (11971).

### IRAQ WITH JORDAN

**3/94**

U.S. customs officials accuse Jordanian national Al M. Harb of having "procured for shipment" through Jordan motor brushes, globe valves, and other technical items intended for Iraq's nuclear program.

Amy Kaslow, *Christian Science Monitor*, 7/18/94 (11972).

**7/94**

U.S. Customs is investigating Jordanians living in the U.S. who were involved in exporting dual-use equipment to Iraq through companies based in Jordan. According to U.S. court documents, the dual-use equipment illegally exported to Iraq includes "devices used for testing nuclear military equipment." U.S. Customs Service Senior Special Agent Thomas Madigan says that "Jordan has served as the primary point of diversion for illegal smuggling into Iraq since implementation of the [U.N.] embargo."

Amy Kaslow, *Christian Science Monitor*, 7/18/94 (11972).

**IRAQ WITH RUSSIA**

**8/94**

German Minister Bernd Schmidbauer discloses in an intelligence analysis that Iraq may employ 50 nuclear experts from the former Soviet Union, including a laser specialist from Arzamas-16.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

**IRAQ WITH SAUDI ARABIA**

**1985**

According to former Saudi diplomat Mohammed al-Khilewi, "by at least 1985" Saudi nuclear experts were cooperating with their Iraqi counterparts. Khilewi makes the charges in 7/94 after defecting. Khilewi contends that by 1985 Saudi Arabia and Iraq had reached an agreement under which the Saudis would fund Iraqi efforts to enrich uranium to weapons-grade in exchange for some of the nuclear weapons Iraq developed. Khilewi estimates that of the \$25 billion in Saudi funding for Iraq's war against Iran, at least \$5 billion was designated for Iraq's nuclear program. Reports in the U.S. in 7/94 and 8/94 claim that the CIA determined in 1990 that the Saudis had indeed financed Iraqi nuclear efforts in exchange for technology and weapons developed. By 1985, after seeking to obtain nuclear weapons from Pakistan and Iraq, Saudi Arabia began "to think seriously about starting its own nuclear weapons program."

Marie Colvin, *Sunday Times* (London), 7/24/94 (11996). Paul Lewis, *New York Times*, 8/7/94, p. 20 (11995).

**1989**

A team of Saudi nuclear experts secretly meet with their Iraqi counterparts in the desert outside of Judeida. The Saudis hand over 30 boxes of unspecified "special equipment" and hear Iraqi requests for more funding, according to notes transcribed at the meeting by former Saudi diplomat Mohammed al-Khilewi.

Marie Colvin, *Sunday Times* (London), 7/24/94 (11996).

**1990**

A team of Saudis makes a \$15 million down payment to Russian middlemen in a \$75 million deal to obtain one tonne of red mercury.

Marie Colvin, *Sunday Times* (London), 7/24/94 (11996).

**8/94**

In response to allegations made by former Saudi diplomat Mohammed al-Khilewi regarding Saudi attempts to acquire a nuclear weapon capability, Adel al-Jubir of Saudi Arabia's embassy in Washington questions the authenticity of documents revealed by Khilewi but verifies that the Saudis had openly made an offer to fund the rebuilding of Iraq's Osiraq reactor after the 1981 bombing by Israel.

Paul Lewis, *New York Times*, 8/7/94, p. 20 (11995).

**IRAQ WITH FORMER SOVIET UNION**

**Mid-9/94**

It is reported that senior U.S. officials indicate that Iraq could have a nuclear device in three to six months if Baghdad obtains the needed enriched uranium or plutonium from the former Soviet Union. Although Iraq would need longer to develop a nuclear weapon deliverable by a missile or plane, it could easily load a device on a truck to be driven to a detonation site in a nearby country, according to one of the U.S. officials. U.S. expert Michael Eisenstadt says that Iraq has already been involved in attempts to acquire nuclear materials from the former Soviet Union. Historical ties between the Russian and Iraqi militaries also increase the possibilities that Iraq could obtain Russian nuclear materials.

Philip Finnegan, Theresa Hitchens, and Barbara Opall, *Defense News*, 9/12/94-9/18/94, pp. 3, 24 (11847).

**IRAQ WITH UKRAINE**

**8/94**

German Minister Bernd Schmidbauer discloses in an intelligence analysis that Iraq may have 50 nuclear experts from the former Soviet Union, including a Ukrainian MIRV expert.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

**IRAQ WITH UNITED KINGDOM**

**5/29/94**

It is reported that U.N. documents show that British technology was discovered at 10 Iraqi nuclear weapons facilities. According to the documents, there are 16 companies which manufactured British technology supplied to Iraq. Twelve of the 16 companies are British, while the other four are foreign firms that "made...equipment in Britain or received British export licenses" for the technology they supplied to Iraq. The former group is comprised of Bridgeport, Colchester Lathes, FMT, Hadland Photonics, Harrison, Instron, Lumonics, Matrix Churchill, Millitorr, Morgan Rushworth, Renishaw-Probe, and Wickman Bennett; the latter firms are Cincinatti Milacron, Fanuc, Hardinge Brothers, and Heidenhain. Millitorr supplied equipment supposedly for the manufacture of "electrical components" but which Iraq used in EMIS uranium enrichment. Wickman Bennett supplied machine tools. TDG and Meed International both acted as defense procurement agents for Iraq and as middlemen in Iraqi acquisitions for its nuclear weapons program. According to U.S. analyst Ken Timmerman, in 8/90 the British government confiscated from TDG "three truckloads" of documents on Iraqi procurement which it has never revealed to the public.

Mark Watts and Bill Goodwin, *Daily Telegraph* (London), 5/29/94, p. 14; in JPRS-TND-94-014, 7/13/94, p. 53 (11970).

**IRAQ WITH UNITED STATES**

**9/26/94**

U.S. officials say that Iraq has a new underground research facility, where more than 7,000 scientists are working on nuclear, chemical, and biological weapons development. On 9/23/94, CIA Director James Woolsey said Iraq "is accelerating construction of deep underground shelters and tun-

nels to produce and store weapons of mass destruction.”

Sid Balman, Jr., UPI, 9/26/94; in Executive News Service, 9/26/94 (12004).

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## ISRAEL

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### INTERNAL DEVELOPMENTS

6/94

Israel remains ambiguous about whether its Dimona nuclear complex—where foreign experts estimate that it has fabricated some 200 nuclear bombs—is indeed a nuclear weapons facility. Israel’s nuclear program is increasingly under fire, as international attention has been focused on the issue by the situation in North Korea, the progress of Middle East peace talks, and the forthcoming 1995 NPT Review and Extension Conference. According to one diplomat, it has been proposed that Israel should either unilaterally stop producing fissionable material or simply declare the Dimona facility closed for repairs.

Bradley Burston, Reuter, 6/19/94; in Executive News Service, 6/19/94 (11599).

6/2/94

Israeli Ambassador to the U.N. Itzhak Libor expresses Israel’s support for “a global and universally applicable” comprehensive test ban treaty (CTBT). Libor emphasizes the importance of the agreement for “stability and security” in the Middle East and expresses the hope that Israel’s neighbors will adhere to a CTBT.

Reuter, 6/2/94; in Executive News Service, 6/2/94 (11601).

8/31/94

Israeli Foreign Minister Shimon Peres rejects both an Egyptian proposal that Israel adhere to the NPT and a proposal to create a weapons-of-mass-destruction-free zone in the Middle East.

Reuter, 8/31/94; in Executive News Service 8/31/94 (11860). AP; in *Le Monde*, 9/2/94 (11860).

### ISRAEL WITH IAEA

9/23/94

The IAEA elects to reinstate technical cooperation with Israel and start a technical assistance program for the autonomous territories of Jericho and the West Bank. The IAEA had refused technical aid to Israel since its 1981 bombing of Iraq’s Tammuz-1 research reactor. The decision meets with resistance from other Middle Eastern states, and on 9/27/94 Syrian newspapers accuse the IAEA of hurting the cause of peace in the Middle East and of harming the possibility of making it a weapons-of-mass-destruction-free zone.

*Washington Times*, 9/28/94, p. A12 (11551). Mark Hibbs, *Nucleonics Week*, 9/29/94, p. 6 (12008).

### ISRAEL WITH IRAN

6/29/94

Israeli Prime Minister Yitzhak Rabin says in an interview that Israel is asking the U.S. for help in stopping Iran and Iraq from developing long-range ballistic missiles and nuclear weapons. According to an Israeli intelligence official, China, North Korea, and some European countries are supplying manufacturing tools and components Iran is using in its nuclear weapons program. The official notes that Israel regularly provides the names of nuclear suppliers suspected of dealing with Iran to other countries’ intelligence services, and adds that a first step in confronting Iran’s nuclear weapons development should “focus on sanctions or a boycott.”

Richard C. Barnard, *Defense News*, 7/4/94, pp. 4, 29 (11978).

9/19/94

Israeli army intelligence head Uri Saguy says that within about eight years, Iran is likely to have developed a nuclear weapon. Saguy adds that Israel and other countries are undertaking measures to thwart Iran’s nuclear ambitions.

Reuter, 9/19/94; in Executive News Service, 9/19/94 (11997).

### ISRAEL WITH SOUTH AFRICA

7/94

Armaments Corporation of South Africa (ARMSCOR) head Tielman de Waal denies allegations that South Africa developed nuclear weapons in conjunction with Israel.

Channel Africa Radio; in *Africa Intelligence Report*, 7/14/94 (11544).

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## JAPAN

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### INTERNAL DEVELOPMENTS

6/94

The Japanese Science and Technology Agency announces that of the 3,224 new technologies that were imported into Japan in fiscal year 1992, 75 (2.3 percent) were nuclear-related. From 1988 to 1992, Japan has imported an average of 70 to 90 new nuclear-related technologies per year.

*Atoms in Japan*, 6/94, pp. 24-25 (11980).

6/3/94

The Japanese Minister of Science and Technology announces plans to regularly publish figures on the amount of plutonium stored in Japan.

*Yomuri Shimbun*, 6/4/94 (11890).

6/17/94

Japanese Prime Minister Tsutomu Hata announces that although Japan has the capability to produce nuclear weapons, it will not do so in accordance with its commitment under the NPT.

Kyodo (Tokyo), 6/17/94; in JPRS-TND-94-014, 7/13/94, p. 14 (11889).

6/24/94

In response to proliferation and environmental concerns, Japan’s Atomic Energy Commission (AEC) approves a plan to reduce the amount of plutonium produced and stockpiled in the country by postponing several nuclear projects. The plan pushes back

plutonium use projects, including fast breeder reactor (FBR) construction, operation of reprocessing plants, and MOX fuel use, by about 10 years and cuts 10 tons off the previously predicted plutonium supply and demand level for 1991-2010. To compensate for the reduction of plutonium use, the plan suggests increasing the percentage of MOX fuel used in Japan's light water reactors. Additionally, the plan promotes domestic reprocessing over contracting with European reprocessors.

*Nuke Info Tokyo*, 6/94-7/94, pp. 1-2 (11981). Naoaki Usui, *Nucleonics Week*, 7/4/94, pp. 12-13 (11981).

#### 7/25/94

Japan's Science and Technology Minister Makiko Tanaka states that the Murayama administration will not change its commitment to the continuing use of plutonium. Tanaka says that plutonium should be placed under international management and control.

Naoaki Usui, *Nucleonics Week*, 7/28/94, p. 7 (11867).

#### 7/28/94

The Advisory Committee of Japan's Fast Breeder Reactor (FBR) Development Program submits a report on the promotion of FBRs to the Japanese Atomic Energy Commission, stating that FBRs may be economically and technically superior to light water reactors. The group urges the completion of two demonstration FBRs and the establishment of a commercial FBR in Japan by 2030.

*Atoms in Japan*, 7/94, pp. 4-7 (11989). Naoaki Usui, *Nucleonics Week*, 7/28/94, p. 10 (11989).

#### 8/1/94

Japanese Foreign Ministry spokesperson Hiroko Taniguchi confirms the existence of a 1969 Japanese government document entitled "Outline of Our Nation's Diplomatic Policy" which urged Japan to maintain a nuclear weapons production capability. Taniguchi refuses to reveal its contents and claims that the document was "an informal working document" which was never acted upon.

Michael Williams, *Wall Street Journal*, 8/2/94, p. A9 (11863).

#### 8/3/94

Japanese Foreign Minister Yohei Kono says Japan has never sought to develop nuclear weapons.

Gordon Cramb, *Financial Times*, 8/4/94 (11863).

#### 8/28/94

Japan's Ministry of International Trade and Industry is reported to be considering a plan to develop a cost-effective, simplified light water reactor design for export to other Asian countries.

*Nuke Info Tokyo*, 9/94-10/94, pp. 9-10 (11663).

#### JAPAN WITH BELARUS

##### 9/94

The Japanese Foreign Ministry sends a representative group to Belarus to consider issues for the Committee for Nuclear Non-proliferation, a joint committee created by the two countries in 1993. At the conclusion of the talks, it is expected that the Belarusian State Nuclear Industry Inspection body and the new committee will finalize an agreement to create a physical security system for nuclear materials in Belarus.

Radio Minsk Network (Minsk), 9/23/94; in FBIS-SOV-94-185, 9/23/94, p. 58 (11793).

#### JAPAN WITH FRANCE

##### 6/15/94

The Nuclear Power Engineering Corporation (NUPEC) of Japan signs an agreement with the Commissariat à l'Énergie Atomique (CEA) of France to work together on light water reactor research and development. The agreement provides for the exchange of nuclear specialists and information.

*Atoms in Japan*, 6/94, p. 20 (11986).

##### 7/29/94

The Japan Atomic Energy Research Institute (JAERI) and the Commissariat à l'Énergie Atomique (CEA) of France sign a cooperation agreement covering radioactive waste and spent fuel management. The arrangement is based on a 9/92 five-year cooperation agreement between JAERI and CEA for nuclear research and development.

*Atoms in Japan*, 8/94, pp. 27-28 (11868).

#### JAPAN WITH FRANCE AND UNITED KINGDOM

##### 6/94

Due to problems with the construction of its first Rokkashomura reprocessing plant, Japan is considering cancelling plans to construct another plant on the site and instead rely on further reprocessing contracts with Cogema and British Nuclear Fuels (BNFL).

Mark Hibbs, *NuclearFuel*, 7/4/94, pp. 1, 15-17 (11982).

##### 6/20/94

Japanese utilities and fuel cycle companies announce that beginning in the spring of 1995, Cogema of France and BNFL of the U.K. will ship over 3,000 canisters of high-level waste (HLW) back to Japan over the next fifteen years. The returned HLW is to be stored at the Rokkasho storage facility, which is to be completed in 1/95.

Naoaki Usui, *NuclearFuel*, 7/4/94, pp. 13-14 (11984).

#### JAPAN WITH IAEA

##### 6/10/94

Japan's Science and Technology Agency (STA) announces that the Power Reactor and Nuclear Fuel Development Corporation (PNC) of Japan and the IAEA have agreed to reduce the amount of plutonium buildup at the Tokai Plutonium Fuel Production Facility by 85 percent over the next two years. Approximately 70 kg of plutonium had been heldup in the plant, causing a discrepancy in Japan's plutonium accountancy and thus raising international concern that Japan was attempting to divert plutonium for non-civilian use.

*Atoms in Japan*, 6/94, p. 19 (11859). Naoaki Usui, *Nucleonics Week*, 6/2/94, pp. 8-9 (11859). *Arms Control Today*, 7/94-8/94, p. 27 (11859).

#### JAPAN WITH MULTI-COUNTRY GROUP

##### 6/4/94

At an unofficial meeting to study an international framework for the uses of plutonium, Japan proposes a regime for plutonium management which would encompass

materials used in both civilian and military sectors.

*Asahi Shimbun*, 6/7/94 (11886). *Nikkei Sangyo Shimbun*, 6/7/94 (11886). *Plutonium*, Summer 1994, p. 19 (11886).

### 6/17/94

The Japanese Steering Committee on Fast Breeder Reactor (FBR) Research and Development signs a cooperation agreement with its European analog. The Japanese group is comprised of the Japan Atomic Power Company, the Power Reactor and Nuclear Fuel Development Company (PNC), the Japan Atomic Energy Research Institute (JAERI), and the Central Research Institute of the Electric Power Industry (CRIEPI); the European signatory is composed of the Commissariat à l'Énergie Atomique (CEA) of France (which also represents the Kernforschungszentrum Karlsruhe [KFK] and Siemens AG of Germany) and the Atomic Energy Authority (AEA) of the U.K. The agreement foresees information and personnel exchanges, R & D collaboration, and reciprocal use of each others' facilities, especially as they relate to Japan's 660 MW Demonstration Fast Breeder Reactor (DFBR) project and to the European countries' 1,500 MW European Fast Reactor (EFR).

*Atoms in Japan*, 6/94, p. 20 (11985).

### 7/94

Japan Atomic Energy Research Institute's (JAERI) High Temperature Engineering Test Reactor (HTTR) Director Osamu Kobayashi indicates that JAERI intends to use the 30 MW HTTR currently under construction in Japan in an international research venture known as IAEA-CPR4 with France, Germany, Israel, the PRC, Russia, and the U.S.

Naoaki Usui, *Nucleonics Week*, 7/28/94, p. 16 (11885).

## JAPAN WITH NORTH KOREA

### 6/9/94

The North Korean Foreign Ministry announces that if Japan joins the U.S. and South Korea in efforts to impose sanctions on North Korea, North Korea would consider this a "declaration of war" by Japan, and "Japan would be unable to evade a de-

serving punishment for it." Japanese officials respond to these threats by reiterating their continued support for the possible use of sanctions to alleviate the North Korean nuclear problem. However, Japanese officials have been hesitant to use any forceful action against North Korea, since Japan is vulnerable to North Korea's military and faces the possibility of terrorist attacks from North Korean residents in Japan.

David P. Hamilton, *Wall Street Journal*, 6/10/94, p. A7 (11911).

### 6/10/94

Japan offers its own three-step plan to deal with the North Korean nuclear issue: "a warning, sanctions on arms sales and technical cooperation, and then [sanctions] that include financial remittances" in order to avoid cutting off the money flow from North Koreans living in Japan to their relatives in North Korea. A cut-off would reduce North Korea's available foreign exchange and aggravate the increasing tension between Tokyo and Pyongyang.

Daniel Williams, *Reuter*, 6/10/94; in *Executive News Service*, 6/10/94 (11939).

### 6/12/94

Ichiro Ozawa, chief coalition strategist for Prime Minister Tsutomu Hata, says that Japan should implement economic sanctions against North Korea "after consulting South Korea and the [U.S.]," and not wait for a U.N. Security Council resolution to be passed to deal with the North Korean nuclear issue.

*Reuter*, 6/12/94; in *Executive News Service*, 6/13/94 (11941).

### 6/19/94

Japanese Foreign Minister Koji Kakizawa says that Japan is willing to help North Korea convert its nuclear facilities to light water reactors. Kakizawa says the offer was prompted by North Korea's acceptance [during talks held with former U.S. President Jimmy Carter on 6/15 and 6/16] of IAEA inspections of its nuclear facilities.

Peter Kenny, *UPI*, 6/19/94 (11874).

### 7/94

It is reported that from 1/94 to 5/94, Japan sold nuclear power plant equipment valued at 1.1 billion yen (U.S. \$11 million) to

North Korea. These figures show a three percent increase over exports during the same period in 1993. Nuclear equipment is Japan's main export category to North Korea and includes reactors, boilers, and machines.

*Munwha Ilbo* (Seoul); in *PAC RIM Intelligence Report*, 7/14/94 (11549). *BBC Monitoring Service*, Summary of World Broadcasts, 7/16/94; in *Uranium Institute News Briefing*, 7/13/94-7/19/94, p. 3 (11549).

### 7/7/94

It is reported that ethnic Koreans running pachinko (pinball) parlors in Japan are annually filtering 375 to 500 million British pounds worth of Japanese currency earned from the game into North Korea, where it has become an important source of funding for North Korean imports of nuclear weapons technology. Ethnic Koreans hold a one-third share in the Japanese pachinko industry, and they often transfer Japanese currency to North Korea through front companies in Macau. Katsumi Sato, head of the Japanese think tank Modern Korea, admits that Japanese "tax authorities have been helping Pyongyang to make a bomb by their failure to get tough with the pachinko parlors."

Terry McCarthy, *Independent*, 7/7/94 (11819). Charles Smith, *Far Eastern Economic Review*, 7/7/94 (11819).

### 8/17/94

It is reported that U.S. Assistant Secretary of State Robert Gallucci will go to the capitals of South Korea, China, Russia, and Japan to raise \$4 billion needed to pay for the construction of light water reactors in North Korea, provided North Korea allows inspections of two undeclared nuclear facilities. South Korean officials say that the U.S. will not contribute to the cost of building the light water reactors because U.S. law prohibits financial exchanges with countries categorized as "hostile."

*Yonhap* (Seoul), *Washington Times*, 8/18/94, p. A13 (12001). *Washington Times*, 8/19/94, p. A16 (12001).

### 8/28/94

According to the Japanese daily newspaper, *Yomiuri Shimbun*, Japan is ready to contribute some funding for the North Korean light water reactors without pressuring North Korea to allow IAEA inspections of

its nuclear facilities. Some Japanese officials say that Japan will try to find other ways to solve the North Korean nuclear issue, and if possible, will ask the G-7 and other Asian countries to supply aid for the light water reactors.

Andrew Pollack, *New York Times*, 8/29/94, p. 2 (11998).

### 9/3/94

It is reported that U.S. Assistant Secretary of State Robert Gallucci will visit Japan and South Korea beginning on 9/12/94 to coordinate the policies of the U.S., Japan, and South Korea on the provision of light water nuclear reactors to North Korea. Officials must consult on which country will provide technology or financing for the North Korean reactors since North Korea has refused proposals for light water reactors based on South Korean technology.

Yonhap (Seoul), 9/3/94; in FBIS-EAS-94-172, 9/6/94, p. 59 (12015).

### 9/6/94

U.S. Vice President Al Gore asks Japan to help financially support the international effort [agreed to in 8/94 bilateral talks between the U.S. and North Korea] to redo North Korea's nuclear program by replacing its graphite-moderated nuclear reactors with Western-style light water reactors. Japanese Foreign Minister Yohei Kono indicates that Japan will entertain the U.S. request, provided that North Korea cooperate in resolving suspicions about its nuclear program.

Kyodo (Tokyo), 9/6/94; in FBIS-EAS-94-172, 9/6/94, p. 1 (11864). Kyodo (Tokyo), 9/6/94; in FBIS-EAS-94-173, 9/7/94, pp. 8-9 (11864).

### 9/13/94

According to the Japanese Kyodo news agency, it is reported that U.S. and Japanese officials agree to support the replacement of North Korea's graphite-moderated reactors with South Korean light water reactors. The agreement was reached at a meeting between U.S. Assistant Secretary of State Robert Gallucci and Japanese senior officials from its foreign, trade, and finance ministries.

Reuter, 9/13/94; in Executive News Service, 9/13/94 (11864).

### 9/21/94

According to the Japanese newspaper *Nihon Keizai Shimbun*, a U.S. Department of State official is quoted as saying that the U.S. is likely to ask Japan to contribute \$1 billion and technical aid for light water reactors to replace North Korea's graphite-moderated reactors.

Reuter, 9/21/94; in Executive News Service, 9/21/94 (11864).

## JAPAN WITH PAKISTAN

### 9/94

Pakistani news sources state that Pakistani Prime Minister Benazir Bhutto will formally report to Japanese Prime Minister Tomiichi Murayama that Pakistan does not have nuclear weapons. Bhutto's announcement is designed to assure the release of a 50 million yen aid package which the Japanese government suspended after former Pakistani Prime Minister Nawaz Sharif stated that Pakistan did indeed possess nuclear weapons.

Kyodo (Tokyo), 9/13/94 (11755).

## JAPAN WITH PRC

### 9/2/94

Japan's Chubu Electric Power Co. announces its intention to purchase a total of 250 short tons of uranium concentrate (yellowcake) from the China Nuclear Energy Industry Corporation from 1995 through 2000, at 50 short tons per year. Japan will ship the yellowcake to North American or European conversion plants.

Kyodo (Tokyo), 9/2/94; in FBIS-EAS-94-174, 9/8/94, p. 8 (11887). Japan Atomic Industrial Forum; in *ENS NucNet*, 9/7/94 (11512).

## JAPAN WITH RUSSIA AND UNITED KINGDOM

### 6/23/94

Russia and Japan sign an agreement to construct a processing facility near Vladivostok to extract radioactive materials from liquid nuclear wastes. The mobile barge-type facility — which will be completed in 1995 —

will process 1.5 cubic meters of polluted water per hour, which will purify accumulated wastes as well as those which will result from further utilization of nuclear-powered vessels in the next 10 years. The sides agree that actual construction should be open to international bidders. The project will be funded out of the \$70 million that Japan is providing to Russia for nuclear disarmament. In the two days prior to the signing, experts from Japan and the British consulting firm "Kram-Adjins" meet with representatives of the Pacific Fleet, the "Zvezda" nuclear submarine repair plant, the State Committee for Nuclear Safety, the Ministry of Environment and Natural Resources, and the "Morskoy Registr" as well as the Maritime Kray administration and scientists from Far Eastern Branch of Russian Academy of Sciences to discuss ways of solving the problem of accumulated liquid radioactive wastes.

Kyodo (Tokyo), 6/23/94; in FBIS-SOV-94-122, 6/24/94, pp. 16-17 (11811). Nikolay Litkovets, *Krasnaya Zvezda*, 7/16/94, p. 4 (11639). Yevgeniy Lents, *Itar-Tass* (Moscow), 6/24/94; in FBIS-SOV-94-119, 6/21/94, p. 14 (11639). "Pacific Ocean" Program, Vladivostok Radiostantsiya Tikhiiy Okean Maritime Network, 6/22/94; in FBIS-SOV-94-119, 6/24/94, p. 39 (11639).

## JAPAN WITH UKRAINE

### 5/6/94

The Japanese Embassy in Ukraine announces that \$16 million of the \$100 million Tokyo pledged for nuclear weapon dismantlement in Belarus, Kazakhstan, Russia, and Ukraine, will be allocated to Ukraine.

Kiev Radio Ukraine World Service, 5/6/94; in JPRS-TND-94-012, 6/7/94, p. 40 (11571).

### 9/26/94

In a meeting with Ukrainian Foreign Minister Hennadiy Udoenko, Japanese Foreign Minister Igiro Kono says Japan supports G-7 aid to Ukraine for disarmament, Chernobyl clean-up, and economic reforms.

Interfax (Moscow), 9/27/94; in FBIS-SOV-94-188, 9/28/94, pp. 42-43 (11717).

**JAPAN WITH UNITED KINGDOM**

**8/94**

British Nuclear Fuels Ltd. (BNFL) subsidiaries Pacific Nuclear Transport, Ltd. (PNTL) and Nuclear Transport, Ltd. safely transport over 400 tons of spent nuclear fuel in Japan and Europe. PNTL has contracts for transporting spent fuel with all 10 Japanese utilities.

*BNFL News*, 8/94, pp. 8-9 (11883).

**JAPAN WITH UNITED STATES**

**7/13/94**

The U.S. Nuclear Regulatory Commission grants final design approval for General Electric Nuclear Energy's 3,926 MWt Advanced Boiling Water Reactor (ABWR) design. Hitachi, Toshiba, and GE are incorporating 90 percent of the approved features in two ABWRs they are building for the Tokyo Electric Power Company's Kashiwazaki nuclear plant.

David Stellfox, *Nucleonics Week*, 7/21/94, pp. 1, 12-13 (11861).

**8/23/94**

Tokyo Electric Power Corporation (Tepco) installs the 890 ton reactor pressure vessel for Japan's Kashiwazaki-Kariwa-6, the world's first advanced boiling water reactor (ABWR) for commercial use. An international consortium including Toshiba and Hitachi of Japan and General Electric of the U.S. is building the nuclear unit for Tepco's ABWR.

Naoaki Usui, *Nucleonics Week*, 8/25/94, p. 14 (11869).

**9/94**

Japan Atomic Power Company (JAPC) contracts with Hitachi Zosen Corp. and NAC Services of the U.S. for the supply of casks for on-site dry storage of spent nuclear fuel at JAPC's Tsuruga-1 and Tokai-2 plants.

*Nuclear Engineering International*, 9/94, p. 63 (11887).

**9/8/94**

Greenpeace releases a report alleging that in supplying equipment to Japan's fast breeder reactor program, the U.S. violated

the U.S. Non-Proliferation Act and a 1987 agreement between the U.S. Department of Energy and Japan's Power Reactor & Fuel Development Corporation on the transfer of sensitive nuclear technologies. Much of the equipment transferred will be used at Japan's Recycle Equipment Test Facility (RETF) which is expected to annually produce 20 kg of plutonium with a greater than 96 percent content of Pu<sup>239</sup>.

Dave Airozo, *Nucleonics Week*, 9/8/94, pp. 1, 16-17 (11897).

**LIBYA**

**LIBYA WITH IAEA AND UNITED STATES**

**6/7/94**

The Secretariat of The Libyan General People's Committee for Foreign Liaison and International Cooperation releases a declaration refuting the concerns aired by the U.S. assistant secretary of state about Libya's nuclear activities. The statement, emphasizing comments made by IAEA Director General [Hans Blix] after a 1/93 visit to Libya, in which Blix confirmed "Libya's noninterest in possessing weapons of mass destruction," argues that the U.S. should stop criticizing Libya and should instead scrutinize its own relationship with "the Zionist entity" which has not signed the NPT.

Great Jamahiriya Radio Network (Tripoli), 6/7/94; in JPRS-TND-94-014, 7/13/94, p. 41 (11598).

**LIBYA WITH RUSSIA**

**8/94**

German Minister Bernd Schmidbauer discloses in an intelligence analysis that two nuclear experts from Russia turned down "official offers" from Libya, but that Libya may be employing a number of Russians in research institutes.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

**NORTH KOREA**

**INTERNAL DEVELOPMENTS**

**1989**

On 7/14/94, it is reported that the U.S. CIA estimates that North Korea shut down its 5 MWe (25 MWt) Yongbyon reactor for approximately 75 days in 1989, rather than for 100 days as previously believed. Thus, North Korea was probably only able to extract enough plutonium at that time to construct one bomb.

Frank Ching, *Far Eastern Economic Review*, 7/14/94, p. 32 (11821).

**2/22/90**

On 6/24/94 *Izvestia* publishes a memo written by former Russian KGB Head Vladimir Kryuchkov on 2/22/90 claiming that the KGB had learned from a "reliable source" that North Korea was continuing nuclear weapons research and had completed the development of an atomic nuclear device at the Yongbyon research center.

Warren Strobel, *Washington Times*, 7/5/94, pp. A1, A8 (11820).

**1992**

U.S. surveillance satellites reveal last-minute installation of electric turbines before the arrival of IAEA inspectors on the site of a 200 MW nuclear reactor under construction in North Korea. Apparently, the North Koreans are attempting to make it look as though the reactor will be used for generating electricity, but U.S. officials claim that North Korea has never made any effort to connect the reactor to the national power grid.

R. Jeffrey Smith, *Washington Post Service*; in *International Herald Tribune*, 7/8/94 (11622).

**6/1/94**

An IAEA official announces that North Korea has removed over 60 percent (5,000 of the 8,000) of the fuel rods from its Yongbyon 5 MW nuclear reactor.

Cha Man-sun, *KBS-1 Radio Network* (Seoul), 6/1/94; in JPRS-TND-94-014, p. 14 (11917).

**6/8/94**

IAEA officials announce that it is expected that North Korea will have discharged all of the fuel rods from its 5 MW Yongbyon reactor within a few days. IAEA officials also say that North Korea now appears to have the ability to reprocess the spent fuel by early 8/94, especially if worker safety is ignored. An IAEA official adds that the fuel rods contain enough plutonium for four or five nuclear weapons.

Stewart Stogel, *Washington Times*, 6/9/94, p. A13 (11832).

**6/13/94**

Director of South Korea's Agency for National Security Planning Kim Deok announces to the South Korean Parliament's Defense Committee that North Korea's "ultimate goal is to develop nuclear weapons and [that North Korea is] employing delaying tactics to earn time." Kim's announcement is a reversal of Seoul's earlier position that Pyongyang was using the nuclear issue simply to gain economic aid from South Korea and Japan and diplomatic recognition from the U.S. Kim says that North Korea will finish construction of its third reactor, a 50 MW reactor at Yongbyon, by 1995, and its fourth reactor, a 200 MW reactor at Taechon, by 1998 thus enabling North Korea to produce about 200 kg of plutonium a year. Kim adds that this is enough plutonium for North Korea to become a nuclear weapons exporter.

Shim Sung-won, Reuter, 6/13/94; in Executive News Service, 6/13/94 (11934). UPI, 6/13/94; in Executive News Service, 6/13/94 (11934). David E. Sanger, *New York Times*, 6/14/94, pp. A1, A5 (11934).

**6/14/94**

The IAEA announces that North Korea has successfully removed all of the fuel rods from the 5 MW Yongbyon nuclear reactor and will begin the process of reloading new fuel rods.

*Asahi Shimbun*, 6/15/94 (11934).

**6/14/94**

North Korean Ambassador to France Pak Dong-chun announces that North Korea neither wants nor currently has nuclear weapons, but indicates that its "vital interests" are being threatened by the possible

imposition of U.N. sanctions and that it will go to war to defend itself.

Barry James, *International Herald Tribune*, 6/15/94 (11926).

**6/15/94**

South Korean Defense Minister Yi Pyong-tae says there are indications that North Korea is testing nuclear bomb detonators. Yi therefore concludes that North Korea has developed "a nuclear explosive device at least to an elementary stage."

KBS-1 Radio Network (Seoul), 6/15/94; in JPRS-TND-94-014, 7/13/94, pp. 20-20 (11954).

**6/16/94**

Carnegie Endowment for International Peace scholar Selig Harrison reports that during his recent visit to North Korea, Kim Il-sung offered to freeze operation of a reprocessing plant and construction of a 200 MW reactor (due to be completed in 1996) in exchange for a foreign commitment to provide technology and financing for the construction of a light water reactor in North Korea.

Frank J. Murray, *Washington Times*, 6/17/94, pp. A1, A16 (11950). Paul F. Horvitz, *International Herald Tribune*, 6/17/94 (11950).

**Mid-6/94**

Russian Foreign Minister Andrei Kozyrev says that according to reliable intelligence sources, North Korea does not have a nuclear bomb and will need three to seven years before it could develop a nuclear weapon. It is also reported that experts from Russia's Ministry for Nuclear Power Engineering agree that North Korea does not possess nuclear weapons. One of the Ministry's leading experts says even though North Korea has "produced several dozens or hundreds of grams of plutonium [it is] not enough to make a nuclear bomb." Kozyrev says that even though North Korea does not have a nuclear bomb, there is a possibility that it could build one in the future.

John Burton, *Financial Times*, 6/20/94, p. 4 (11929). Veronika Romanenkova, Itar-Tass (Moscow), 6/21/94; in FBIS-SOV-94-120, 6/22/94, p. 7 (11943). Itar-Tass (Moscow), 6/21/94; in FBIS-SOV-94-120, 6/22/94, p. 8 (11943).

**6/22/94**

A letter to U.S. Assistant Secretary of State Robert Gallucci from North Korean Deputy

Foreign Minister Kang Sok-ju states that North Korea will not reprocess the spent fuel rods recently removed from its 5 MW nuclear reactor nor refuel the reactor.

Douglas Jehl, *New York Times*, 6/23/94, pp. A1, A4 (11951).

**7/12/94**

North Korean Deputy Permanent Representative to the U.N. Kim Su-man says that Kim Jong-il's government will maintain the freeze on North Korea's nuclear program as a condition for negotiations with the U.S., as promised by Kim Il-sung before his death on 7/8/94. Kim explains that North Korea will refrain from reprocessing the fuel rods removed from the 5 MW Yongbyon reactor and will not refuel the reactor. Experts in South Korea and the U.S. express concern that Kim Jong-il will have difficulty maintaining control of the North Korean armed forces, which could threaten successful negotiations with the U.S. on the nuclear issue. Several analysts agree that Kim Jong-il has had control over North Korea's nuclear activities for some time.

Reuter; in *International Herald Tribune*, 7/13/94 (11914). *Yomuri Shimbun*, 7/12/94 (11914). AP, WP, Reuter; in *International Herald Tribune*, 7/11/94, pp. 1, 4 (11945). Robert Guest, *Daily Telegraph*, 7/12/94 (11945).

**7/18/94**

CIA Director James Woolsey states at a conference at the Center for Strategic and International Studies that the fuel rods extracted from North Korea's 5 MW Yongbyon nuclear reactor in 6/94 contain enough plutonium for North Korea to build about five atomic bombs. Woolsey estimates that the North Koreans have the "technical competence" to produce at least one nuclear weapon.

AFP; in *Liberation*, 7/19/94 (11821).

**7/27/94**

North Korean defector Kang Myong-do announces in Seoul that North Korea has already developed five atomic bombs and that another five are scheduled to be completed by the end of the year. Kang, who claims to be a businessman and son-in-law of North Korean Prime Minister Kang Song-san, states that an operations chief at the Yongbyon nuclear plant told him about the

plans. Kang says that North Korean leader Kim Jong-il will build delivery systems for the bombs and will reveal the North Korean nuclear capability at the end of 1994 in order to have an advantage in talks with the U.S. and Japan and preempt any possibility of a U.S. attack. U.S. Defense Secretary William Perry says that the U.S. still holds to intelligence appraisals which assert that North Korea has built no more than two bombs. North Korea denies Kang's allegations about the nuclear weapons, as well as his claim to be the prime minister's son-in-law.

Michael Breen, *Washington Times*, 7/28/94, pp. A1, A12 (11947). James Sterngold, *New York Times*, 7/28/94, p. A5 (11947). Shim Sung-won, *Washington Times*, 7/29/94, p. A15 (11947). *Economist*, 7/30/94, p. 31 (11947).

### 7/28/94

South Korean government officials disown claims made by North Korean defector Kang Myong-do that North Korea has five nuclear bombs and plans to build more, saying that Kang was not directly involved in nuclear activities and therefore has no first-hand information. South Korean Foreign Ministry official Choi Won-son confirms that South Korea has no evidence that North Korea has "even one bomb." Russian Federation Foreign Ministry Deputy Director of the department for press and information Mikhail Demurin also states that North Korea does not possess nuclear weapons.

Shim Sung-won, *Washington Times*, 7/29/94, p. A15 (11947). Aleksandr Krylovich and Petr Cheremushkin, *Itar-Tass*, 7/28/94; in FBIS-SOV-94-146, 7/29/94, p. 4 (11947).

### 7/29/94

South Korea admits that North Korea has the necessary plutonium for nuclear weapons, but claims the North is unable to make it into bombs. Based on its own information regarding the amount of plutonium North Korea possesses, the IAEA rejects statements made by North Korean defector Kang Myong-do. South Korean Unification Ministry Spokesman Kim Hyong-ki also dismisses Kang's claims, noting the lack of concrete evidence.

*Financial Times*, 7/29/94, p. 4 (11947). Steve Pagani, *Washington Times*, 7/30/94, p. A9 (11947). AP; in *Wall Street Journal*, 8/1/94, p. A14 (11545).

### 8/6/94

A high-ranking South Korean government official estimates that North Korea extracted a total of 22 to 27 kg of plutonium—enough for three to four nuclear warheads—from its 5 MW Yongbyon nuclear reactor while operations were suspended for 71 days in 1989, for about 30 days in 1990, and for 50 days in 1991. Another South Korean government official states that although U.S. intelligence satellites have shown that North Korea suspended operations of the reactor three times from 1989-1991, U.S. intelligence authorities are skeptical that North Korea replaced and reprocessed nuclear fuel rods in either 1990 or 1991.

Kyong Yong-won, *Choson Ilbo* (Seoul), 8/7/94 p. 1; in FBIS-EAS-94-152, 8/8/94, p. 50 (11546).

### 8/31/94

North Korean Ambassador to Austria Kim Gwang-sop admits that North Korea has produced plutonium in the past, but states that its use was restricted to its civilian nuclear power plants.

Steve Pagani, *Reuter*, 8/31/94; in *Executive News Service*, 8/31/94 (12000).

### 9/14/94

U.S. Assistant Secretary of State Robert Gallucci warns that if construction of the two nuclear plants in Yongbyon and Taechon is not stopped, North Korea will be able to produce "hundreds and hundreds" of pounds of plutonium. Gallucci says that such levels of plutonium production will make North Korea "a strategic nuclear threat to South Korea, Japan, and the international community."

Willis Witter, *Washington Times*, 9/15/94, p. A1 (11901).

## NORTH KOREA WITH GERMANY

### 8/23/94

North Korea denies giving financial assistance to a German businessman who was recently arrested in Germany for trying to smuggle plutonium. The German newspaper *Cologne Express* reports that the German arrested had received financial assistance and held "credentials" from North Korea. North Korea's Korean Central News

Agency says the story was made up to create suspicion over the North Korean nuclear problem and to reverse any progress made at the recently concluded talks between North Korea and the U.S.

KCNA (Pyongyang), 8/23/94; in FBIS-EAS-94-164, 8/24/94, p. 25 (11964). KBS-1 (Seoul), 8/24/94; in FBIS-EAS-94-164, 8/24/94, p. 37 (11964).

## NORTH KOREA WITH GERMANY AND FRANCE

### 9/15/94

During bilateral technical talks with the U.S., North Korea expresses interest in replacing its [graphite-moderated] reactors with the European PWR (EPR)—being developed jointly by Siemens of Germany and the French company Framatome—or Russia's new reactor design, the VVER-650. It is reported that North Korean trade officials have already approached Siemens to talk about Germany's light water reactor technology.

AFP; in *Sueddeutsche Zeitung*, 9/12/94 (12010). *Nuclear News*, 10/94, pp. 18, 75 (12010).

## NORTH KOREA WITH IAEA

### 5/31/94

IAEA Director General Hans Blix announces that due to continued North Korean non-compliance with IAEA inspections, North Korea is "no longer in compliance with IAEA safeguards." The two IAEA inspectors at Yongbyon announce that North Korea has already removed from its 5 MW reactor some of the 300 key fuel rods that the IAEA had determined are essential for measuring to determine any past diversion of plutonium. North Korean chief representative to the IAEA Yun Ho-jin says that the refuelling of the reactor will continue despite the IAEA's appeal to North Korea to stop the process and adds that his country has removed 40 fuel rods under IAEA camera surveillance for storage until an inspection agreement can be reached. However, the IAEA announces that this proposed method of measurement is unacceptable because it does not allow for confirmation of the fuel rods' original position in the re-

actor, a vital piece of data for future measurements. The IAEA sends a telex to North Korea reiterating that it will accept two other methods of measuring the remaining fuel rods, although North Korea had refused the methods the previous week due to "political constraints."

*Washington Post*, 6/1/94, p. A22 (11917). Art Pine, *Los Angeles Times*, 6/1/94 (11917). Martin Walker, *Guardian*, 6/1/94 (11917). Yonhap (Seoul), 6/1/94; in JPRS—TND-94-014, 7/13/94, p. 15 (11917).

### 6/2/94

In a letter to the U.N. Security Council, IAEA Director General Hans Blix says that North Korea's unloading of spent fuel at the Yongbyon reactor has caused "irreversible" damage to IAEA inspection activities.

Ann Devroy and Julia Preston, *Washington Post*, 6/3/94, p. A1, A28 (11918).

### 6/3/94

Director General Hans Blix tells the Security Council that the IAEA is unable to verify whether North Korea has in the past extracted plutonium from spent fuel withdrawn from its Yongbyon reactor. However, U.S. Assistant Secretary of State Robert Gallucci states that although the IAEA's ability to substantiate the extent of North Korea's plutonium diversion has been "seriously eroded," it has not been "destroyed," and IAEA requirements can still be assured by the provision of further information by North Korea about its history of plutonium production.

Paul Lewis, *New York Times*, 6/4/94, p. A3 (11552). Thomas Lippman, *Washington Post*, 6/4/94, p. A14 (11552).

### 6/6/94

North Korean Atomic Energy Department Director Pak Yong-nam sends a letter to the IAEA claiming that North Korea is "preserving the technical possibility" that would allow the IAEA to determine whether North Korea has diverted nuclear material from its Yongbyon reactor. North Korea announces its intention to withdraw from the IAEA if the Agency pressures North Korea by once again referring the nuclear issue to the U.N. Security Council.

*Mainichi Shimbun*, 6/7/94 (11834). *Sankei Shimbun*, 6/7/94 (11834). *Washington Times*, 6/8/94, p. A10 (11919).

### 6/7/94

Director General Hans Blix tells the IAEA Board of Governors that because North Korea blocked inspections of spent fuel rods withdrawn from the Yongbyon reactor, inspections of the two suspected North Korean nuclear waste facilities are now "even more important" for establishing possible North Korean weapons development. Blix states that North Korea's "intention [in removing the fuel rods] must have been to destroy the possibility of the [IAEA] obtaining sufficient information about the history of the core [of the Yongbyon reactor] through independent measurements and thereby to maintain uncertainty about the amount of nuclear material, specifically plutonium, that may be present." North Korean delegate to the IAEA Yun Ho-jin announces that North Korea will "never allow special inspections" of the two suspected nuclear waste sites at Yongbyon, and adds that the IAEA can carry out "satisfactory" inspections by examining the removed fuel rods.

Cha Man-sun, KBS-1 Radio Network (Seoul), 6/7/94; in JPRS-TND-94-014, 7/13/94, p. 15 (11912). Kyodo (Tokyo), 6/8/94; in JPRS-TND-94-014, 7/13/94, p. 16 (11832). David Ottaway, *Washington Post*, 6/8/94; in Executive News Service, 6/8/94 (11919).

### 6/8/94

North Korea has removed almost 6,500 of the original 8,000 fuel rods from the core of its Yongbyon reactor and placed them in storage facilities, where two IAEA inspectors are monitoring them. However, according to IAEA spokesman David Kyd, North Korea will not allow the inspectors to take any samples from the rods. Kyd adds that if North Korea decides to reprocess the fuel, the IAEA will be unable to "physically stop" it from doing so. According to a Western diplomat, the ability to reconstruct North Korea's nuclear history "is now lost."

Douglas Hamilton, Reuter, 6/8/94; in Executive News Service, 6/8/94 (11832). *Mainichi Shimbun*, 6/8/94 (11912). Kyodo (Tokyo), 6/8/94; in JPRS-TND-94-014, 7/13/94, p. 16 (11832). Stewart Stogel, *Washington Times*, 6/9/94, p. A13 (11832). Raymond Whitaker, *Indian Times*, 6/9/94 (11924). *Nihon Keizai Shimbun*, 6/9/94 (11912).

### 6/10/94

The IAEA Board of Governors passes a resolution suspending technical aid to North Korea which cuts off approximately \$250,000 of technical aid and support that North Korea's civilian nuclear program receives from the Agency each year. Libya votes against the resolution, two countries are absent, and India, Lebanon, Syria, and China abstain, resulting in a 28 member vote in support of the resolution. North Korean representative to the IAEA Yun Ho-jin announces that due to the IAEA Board's decision to withdraw technical aid, the North Korean government has ordered the two IAEA inspectors at the Yongbyon reactor to leave and will prohibit further IAEA nuclear inspections. Director General Hans Blix announces that the resolution calls for continued IAEA inspections and that pressure by the IAEA to continue inspections will be upheld in spite of North Korea's declarations. Blix encourages North Korea to reconsider its decision.

Douglas Hamilton, Reuter, 6/9/94; in Executive News Service, 6/9/94 (11909). *Mainichi Shimbun*, 6/10/94 (11909). Adriana Pontieri, UPI, 6/10/94; in Executive News Service, 6/10/94 (11910). Steve Pagani, Reuter, 6/10/94; in Executive News Service, 6/10/94 (11910). Reuter, 6/11/94; in Executive News Service, 6/13/94 (11923).

### 6/11/94

An IAEA spokesman says that the North Korean government has not asked the two IAEA inspectors to leave, thus allowing them to continue to monitor fuel rods withdrawn from the Yongbyon reactor.

Michael R. Gordon, *New York Times*, 6/12/94, p. 1, 6 (11939).

### 6/13/94

The North Korean Foreign Ministry announces that North Korea will leave the IAEA immediately and that it will no longer allow IAEA inspectors in the country. IAEA spokesman Hans Meyer says that North Korea has not officially withdrawn from the IAEA because the Agency has not yet received written confirmation from North Korea or the U.S., which is the IAEA depository state.

Steve Pagani, Reuter, 6/13/94; in Executive News Service, 6/13/94 (11924). David E. Sanger, *New York Times*, 6/14/94, pp. A1, A5 (11924).

**6/14/94**

IAEA spokesman David Kyd says that even if North Korea pulls out of the IAEA, it is still obligated under the NPT to allow nuclear inspections in its country.

Steve Pagani, Reuter, 6/14/94; in Executive News Service, 6/14/94 (11924).

**6/15/94**

The IAEA Secretariat receives North Korea's official document announcing its withdrawal from the Agency. North Korean Defense Minister O Jin-u reiterates that as a "self-defensive measure," North Korea will no longer permit IAEA inspectors to continue monitoring the Yongbyon reactor, even though North Korea is still obligated under the NPT to allow IAEA safeguards inspectors to continue the monitoring. However, U.S. Assistant Secretary of State Robert Gallucci states that the two IAEA inspectors are continuing their inspections and have not been asked to leave, adding that the inspectors' work is "extremely important" in verifying that North Korea will not obtain any more plutonium. North Korea reiterates threats to withdraw from the NPT.

Cha Man-sun, KBS-1 Radio Network (Seoul), 6/15/94; in JPRS-TND-94-014, 7/13/94, p. 20 (11925). Steve Pagani, Reuter, 6/15/94; in Executive News Service, 6/15/94 (11925). Reuter, 6/15/94; in Executive News Service, 6/15/94 (11913). Reuter, 6/15/94; in Executive News Service, 6/15/94 (11926). Hugo Gurdon, *Daily Telegraph*, 6/16/94 (11916).

**6/16/94**

Although the IAEA has refused North Korea's offer of limited access to spent fuel rods in Yongbyon because inspectors would be unable to choose which rods to sample and because the North Korean system of indexing the rods is not accurate, a Western safeguards official claims it is still "theoretically possible" to recreate an inventory of North Korea's fissile material "within a 90-95 percent confidence level." This would require that North Korea provide the IAEA with improved operations records for the reactor, permission to sample two undeclared sites suspected of containing reprocessing wastes, and access to all of the removed fuel rods for examination. Former U.S. President Jimmy Carter, who met with the North Korean government on 6/15/94

and 6/16/94, says that North Korea has suggested other methods that the IAEA can use to verify the past history of the spent fuel rods. According to U.S. safeguards experts, the alternative means of measuring the 8,000 fuel rods is "expensive, time-consuming, and elaborate" and the IAEA "is less than enthusiastic" about having to implement these procedures.

Mark Hibbs, *Nucleonics Week*, 6/16/94, p. 14 (11948). David E. Sanger, *New York Times*, 6/17/94, p. A5 (11929). Mark Hibbs, *Nucleonics Week*, 6/18/94, p. 17 (11929).

**6/17/94**

North Korean Ambassador to the U.N. Pak Gil-yon announces that North Korea will not allow "so-called special inspections" [contrary to a statement made by U.S. Assistant Secretary of State Robert Gallucci on 6/16/94] by the IAEA of two North Korean sites that are suspected of being undeclared nuclear waste dumps but which North Korea claims are "military sites that are out of bounds." IAEA spokesman David Kyd says that the IAEA's main interest is to be able to monitor North Korea's seven declared nuclear facilities that the IAEA has been able to monitor in the past. Two IAEA inspectors report to the IAEA from Yongbyon that they are not being obstructed from observing the refuelling of North Korea's 5 MW reactor.

Steve Pagani, Reuter, 6/17/94; in Executive News Service, 6/17/94 (11949). David Brunnstrom, Reuter, 6/17/94; in Executive News Service, 6/17/94 (11929). David Brunnstrom, Reuter, 6/18/94; in Executive News Service, 6/21/94 (11929).

**6/21/94**

North Korea extends visas which were due to expire in early 7/94 for the two IAEA inspectors stationed at Yongbyon.

Steve Pagani, Reuter, 6/21/94; in Executive News Service, 6/21/94 (11949).

**6/23/94**

North Korea confirms that it will allow IAEA inspectors to remain in North Korea and maintain IAEA monitoring equipment in compliance with the NPT.

Yonhap (Seoul), 6/23/94; in JPRS-TND-94-014, 7/13/94, p. 20 (11949).

**Late 6/94**

Two IAEA inspectors arriving at the Yongbyon nuclear complex to replace the inspection team stationed there do not notice "any particular activity," according to an IAEA spokesman.

AFP; in *Times* (London), 7/5/94 (11618).

**7/6/94**

Director General Hans Blix states that because North Korea has removed fuel rods at the Yongbyon reactor, inspections cannot produce conclusive evidence of North Korea's plutonium levels unless Pyongyang makes a new declaration of plutonium in its possession and then presents it to the Agency. Blix says the IAEA cannot conduct accurate tests on the extracted fuel rods since it is now impossible to determine where they were located in the reactor and the North Korean records are not "sufficiently orderly."

Raymond Whitaker, *Independent*, 7/7/94, p. 13 (11818).

**7/12/94**

Following the death of Kim Il-sung [on 7/8/94], North Korean Deputy Permanent Representative to the U.N. Kim Su-man says that IAEA inspectors can remain at the nuclear complex in Yongbyon.

John Burton and Bruce Clark, *Financial Times*, 7/11/94 (11945). Reuter; in *International Herald Tribune*, 7/13/94 (11914).

**8/16/94**

IAEA spokesman David Kyd says that, as a result of the 8/12/94 U.S.-North Korean agreement, the two IAEA inspectors will stay at the 5 MW Yongbyon reactor to verify that the 8,000 nuclear fuel rods are not reprocessed, and will replace batteries and video tapes at the five other nuclear sites North Korea has allowed to be inspected.

KBS-1 Radio Network (Seoul), 8/16/94; in JPRS-TND-94-017, 9/8/94, p. 50 (11961). AFP (Paris), 8/16/94; in JPRS-TND-94-017, 9/8/94 (11961).

**9/5/94**

North Korea indicates to IAEA inspectors stationed at Pyongyang that it is willing to expand the scope of IAEA inspections.

Yonhap (Seoul), 9/13/94; in FBIS-EAS-94-177, 9/13/94 (12009).

**9/10/94-9/11/94**

North Korea allows IAEA inspectors to enter a fuel-fabrication plant and a fresh-fuel storage facility at the Yongbyon nuclear complex to which they were previously denied access. On 9/13/94, IAEA spokesman David Kyd says the inspectors report "nothing unusual." Kyd says the new inspections are a "modest step in the right direction," but that the IAEA is still unable to resume normal inspections and therefore cannot confirm if North Korea is complying with its safeguards agreement. The IAEA still wants to inspect two undeclared sites at Yongbyon that are suspected to be nuclear waste dumps.

AP, Reuter; in *International Herald Tribune*, 9/14/94 (12014).

**9/12/94**

The IAEA Board of Governors urges North Korea to fully comply with its nuclear safeguards agreement, which the Board agrees is still valid, regardless of North Korea's withdrawal from the Agency. Director General Hans Blix reports to the Board that nuclear samples taken from the radiochemical laboratory at Yongbyon during 3/94 and 5/94 inspections have yielded no evidence that plutonium has been extracted there since 2/93. However, there is suspicion that fuel rods were reprocessed at a second reprocessing line—under construction at Yongbyon during the spring of 1994—to which IAEA inspectors were not given access. Blix also indicates that North Korea has not yet reprocessed the spent fuel rods removed from the 5 MW Yongbyon reactor, but that there is no confirmation that new fuel rods have not been installed in the reactor.

KBS-1 Television Network (Seoul), 9/11/94; in FBIS-EAS-94-176, 9/12/94 (12009). Yonhap (Seoul), 9/13/94; in FBIS-EAS-94-177, 9/13/94 (12009). *Neue Zuercher Zeitung*, 9/15/94 (12009).

**9/16/94**

North Korea says it will never allow the IAEA to conduct special inspections of undeclared nuclear facilities because such inspections would infringe on North Korean sovereignty. A North Korean foreign ministry spokesman states that the "nuclear issue" can only be resolved through negotiations with the U.S.

Reuter, 9/16/94; in Executive News Service, 9/16/94 (12032).

**9/23/94**

The IAEA General Conference votes 76 to 1 (Libya voting 'no') with 10 abstentions to pass a resolution stating that North Korea should allow IAEA inspections of its two suspected nuclear facilities.

Reuter, AP, WP; in *International Herald Tribune*, 9/24/94 (12013).

#### NORTH KOREA WITH INDONESIA

**6/9/94**

The Indonesian Foreign Ministry's public affairs director announces that Indonesia, as head of the Non-Aligned Movement (NAM), wants to resolve the North Korean nuclear issue through "quiet diplomatic efforts" by maintaining communication with the parties who are directly involved in the dispute.

Radio Moscow, 6/9/94; in FBIS-SOV-94-112, 6/10/94, pp. 6-7 (11935).

#### NORTH KOREA WITH IRAN

**7/17/94**

According to sources in the U.S. Secret Service, North Korea may have agreed to accept high payments made in counterfeit dollars for the sale of nuclear technology to Iran. Iran is reportedly involved in counterfeiting U.S.\$ 100 bills, possibly in cooperation with North Korea.

Nick Rufford, *Sunday Times* (London), p. 18 (11851).

**8/94**

During a news conference, Iranian President Akbar Hashemi Rafsanjani says that even if North Korea has developed nuclear weapons, Iran does not want them. Rafsanjani was responding to the question of whether or not Iran is attempting to buy nuclear weapons from North Korea.

*Asian Defence Journal*, 8/94, p. 91 (11849).

#### NORTH KOREA WITH JAPAN

**6/1/94**

Japanese Prime Minister Tsutomu Hata warns North Korea that its deteriorating re-

lations with the U.N. Security Council could prove costly to North Korea. The warning stems from North Korea's rejection of the U.N. Security Council's 5/30/94 statement calling on North Korea to allow IAEA inspections of spent fuel rods at its Yongbyon complex.

Eugene Moosa, Reuter, 6/2/94; in Executive News Service, 6/2/94 (11953). Reuter, 6/2/94; in Executive News Service, 6/2/94 (11953).

**6/3/94**

Japan indicates that it does not support the immediate implementation of U.N. sanctions against North Korea.

Steve Pagani, Reuter, 6/3/94; in Executive News Service, 6/3/94 (11918).

**6/9/94**

The North Korean Foreign Ministry announces that if Japan joins the U.S. and South Korea in efforts to impose sanctions on North Korea, North Korea would consider this a "declaration of war" by Japan, and "Japan would be unable to evade a deserving punishment for it." Japanese officials respond to these threats by reiterating their continued support for the possible use of sanctions to alleviate the North Korean nuclear problem. However, Japanese officials have been hesitant to use any forceful action against North Korea, since Japan is vulnerable to North Korea's military and faces the possibility of terrorist attacks from North Korean residents in Japan.

David P. Hamilton, *Wall Street Journal*, 6/10/94, p. A7 (11911).

**6/10/94**

Japan offers its own three-step plan to deal with the North Korean nuclear issue: "a warning, sanctions on arms sales and technical cooperation, and then [sanctions] that include financial remittances" in order to avoid cutting off the money flow from North Koreans living in Japan to their relatives in North Korea. A cut-off would reduce North Korea's available foreign exchange and aggravate the increasing tension between Tokyo and Pyongyang.

Daniel Williams, Reuter, 6/10/94; in Executive News Service, 6/10/94 (11939).

**6/12/94**

Ichiro Ozawa, chief coalition strategist for Prime Minister Tsutomu Hata, says that Japan should implement economic sanctions against North Korea "after consulting South Korea and the [U.S.]," and not wait for a U.N. Security Council resolution to be passed to deal with the North Korean nuclear issue.

Reuter, 6/12/94; in Executive News Service, 6/13/94 (11941).

**6/13/94**

Japanese Foreign Minister Koji Kakizawa expresses Japan's and South Korea's agreement that the imposition of sanctions on North Korea should be intended to convince North Korea to continue allowing IAEA inspections, and should not be intended as "punitive."

UPI, 6/13/94; in Executive News Service, 6/13/94 (11942).

**6/19/94**

Japanese Foreign Minister Koji Kakizawa says that Japan is willing to help North Korea convert its nuclear facilities to light water reactors. Kakizawa says the offer was prompted by North Korea's acceptance [during talks held with former U.S. President Jimmy Carter on 6/15 and 6/16] of IAEA inspections of its nuclear facilities.

Peter Kenny, UPI, 6/19/94 (11874).

**7/94**

It is reported that from 1/94 to 5/94, Japan sold nuclear power plant equipment valued at 1.1 billion yen (U.S. \$11 million) to North Korea. These figures show a 3 percent increase over exports during the same period in 1993. Nuclear equipment is Japan's main export category to North Korea and includes reactors, boilers, and machines.

*Munwha Ilbo* (Seoul); in *PAC RIM Intelligence Report*, 7/14/94 (11549). BBC Monitoring Service, Summary of World Broadcasts, 7/16/94; in *Uranium Institute News Briefing*, 7/13/94-7/19/94, p. 3 (11549).

**7/7/94**

It is reported that ethnic Koreans running pachinko (pinball) parlors in Japan are annually filtering 375 to 500 million British pounds worth of Japanese currency earned

from the game into North Korea, where it has become an important source of funding for North Korean imports of nuclear weapons technology. Ethnic Koreans hold a one-third share in the Japanese pachinko industry, and they often transfer Japanese currency to North Korea through front companies in Macau. Katsumi Sato, head of the Japanese think tank Modern Korea, admits that Japanese "tax authorities have been helping Pyongyang to make a bomb by their failure to get tough with the pachinko parlours."

Terry McCarthy, *Independent*, 7/7/94 (11819). Charles Smith, *Far Eastern Economic Review*, 7/7/94 (11819).

**8/28/94**

According to the Japanese daily newspaper, *Yomiuri Shimbun*, Japan is ready to contribute some funding for the North Korean light water reactors without pressuring North Korea to allow IAEA inspections of its nuclear facilities. Some Japanese officials say that Japan will try to find other ways to solve the North Korean nuclear issue, and if possible, will ask the G-7 and other Asian countries to supply aid for the light water reactors.

Andrew Pollack, *New York Times*, 8/29/94, p. 2 (11998).

**9/6/94**

U.S. Vice President Al Gore asks Japan to help financially support the international effort [agreed to in 8/94 bilateral talks between the U.S. and North Korea] to redo North Korea's nuclear program by replacing its graphite-moderated nuclear reactors with Western-style light water reactors. Japanese Foreign Minister Yohei Kono indicates that Japan will entertain the U.S. request, provided that North Korea cooperate in resolving suspicions about its nuclear program.

Kyodo (Tokyo), 9/6/94; in FBIS-EAS-94-172, 9/6/94, p. 1 (11864). Kyodo (Tokyo), 9/6/94; in FBIS-EAS-94-173, 9/7/94, pp. 8-9 (11864).

**9/13/94**

According to the Japanese Kyodo news agency, it is reported that U.S. and Japanese officials agree to support the replacement of North Korea's graphite-moderated reactors with South Korean light water reactors. The agreement was reached at a meeting between U.S. Assistant Secretary

of State Robert Gallucci and Japanese senior officials from its foreign, trade, and finance ministries.

Reuter, 9/13/94; in Executive News Service, 9/13/94 (11864).

**9/21/94**

According to the Japanese newspaper *Nihon Keizai Shimbun*, a U.S. Department of State official is quoted as saying that the U.S. is likely to ask Japan to contribute \$1 billion and technical aid for light water reactors to replace North Korea's graphite-moderated reactors.

Reuter, 9/21/94; in Executive News Service, 9/21/94 (11864).

## NORTH KOREA WITH PRC

**6/6/94**

A spokesman for the Chinese Foreign Ministry says that China will "seriously" consider a Russian proposal to solve the North Korean nuclear problem through an international conference. However, the spokesman adds that China envisions bilateral talks between North Korea and the IAEA, North Korea and the U.S., and North Korea and South Korea as the best means to solve the dispute. According to diplomatic sources, China and North Korea will maintain an "active dialogue" with each other over the problem.

Pavel Spirin and Vyacheslav Tomilin, Itar-Tass (Moscow), 6/6/94; in FBIS-SOV-94-109, 6/7/94, p. 3 (11838).

**6/7/94**

It is reported that China will veto a U.N. Security Council decision to impose economic sanctions against North Korea. Chinese Minister-Counsellor at the Chinese Embassy in Moscow Sui Tsin says that any reports indicating possible Chinese support of U.N. sanctions are false, and adds that China supports negotiations and compromise as the means to resolve the problem.

Andrey Kirillov, Itar-Tass (Moscow), 6/7/94; in FBIS-SOV-94-109, 6/7/94, p. 3 (11835). Simon Long, *Guardian*, 6/7/94 (11835).

**6/9/94**

Chinese Foreign Ministry spokesman Shen Guofang announces that China does not want

U.N. sanctions to be imposed on North Korea because the sanctions will provoke a conflict between the states involved and cause undesirable repercussions. Shen notes the importance of "patience and time" for the solution of the North Korean nuclear issue, and encourages further negotiations. According to Western officials, China's stance reflects an attempt to maintain good relations with North Korea.

David Schlesinger, *Reuter*, 6/9/94; in *Executive News Service*, 6/9/94 (11836). Tony Walker, *Financial Times*, 6/10/94, p. 8 (11836).

### 6/13/94

Chinese Central Military Commission Vice-Chairman Lui Huaqing tells North Korean Army Chief of Staff Choi Gwang that China wants to resolve the North Korean nuclear issue through diplomatic means and negotiations between all parties involved, and that China's "basic goals for the Korean Peninsula [are] denuclearization, peace, and stability" and not the imposition of sanctions against North Korea.

*Reuter*, 6/13/94; in *Executive News Service*, 6/13/94 (11942).

### 9/25/94

According to South Korea's Ministry of Foreign Affairs, China has indicated that it would be willing to store North Korea's spent fuel rods if the process is financed by a source other than China. China had previously rejected a U.S. proposal of this nature.

KBS-1 Radio Network (Seoul), 9/25/94; in *FBIS-EAS-94-1865*, 9/25/94 (12011).

## NORTH KOREA WITH RUSSIA

### 3/94

Five North Koreans are forced to leave Moscow for "showing too much interest in nuclear components."

Warren Strobel, *Washington Times*, 7/5/94, pp. A1, A8 (11820).

### 6/7/94

North Korean Foreign Minister Kim Youngnam announces that North Korea is considering Russia's proposal for an international conference to discuss the North Korean nuclear issue and a nuclear-free zone on the

Korean Peninsula.

*Itar-Tass* (Moscow), 6/7/94; in *FBIS-SOV-94-110*, 6/8/94, p. 1 (11838).

### 6/15/94

Russian Federal Counter-Intelligence Service Chief Sergei Stepashin reveals that on 6/13/94, three North Koreans were arrested near the Russian-North Korean border in Primorskoye territory because they were believed to have been attempting to obtain nuclear weapons components. It is believed that Russian organized crime is involved in the transactions. Russia's Justice Minister Yuri Kalmykov says that Russia's organized criminals only have nuclear "spare parts," not core technology.

Alan Philips, Hugo Gurdon, and Robert Guest, *Daily Telegraph*, 6/16/94 (11927). Warren Strobel, *Washington Times*, 7/5/94, pp. A1, A8 (11820).

### 6/17/94

Valentin Stepanov, head of the main directorate for space rocket technology of the Russian State Committee on the Defense Industry, describes how, at the end of 1991, Russia was able to prevent a mass exodus of Russian missile researchers and their families to North Korea. Stepanov says that he does not know whether there were nuclear scientists among the group.

Sergei Pulzhnikov and Sergei Sokolov, *Komsomolskaya Pravda*, 6/17/94-6/20/94; in *FBIS-SOV-94-117*, 6/17/94, p. 1 (11698).

### 7/5/94

It is reported that *Komsomolskaya Pravda* recently published an article citing claims that Russian scientists working on Pyongyang's nuclear program are now able to avoid risky border crossings into North Korea by sending their nuclear-related calculations through unmonitored computer mail.

Warren Strobel, *Washington Times*, 7/5/94, pp. A1, A8 (11820).

### 7/8/94

Georgi F. Kunadze, Russia's Ambassador to Seoul, announces that Russia is prepared to provide a light water nuclear reactor to North Korea to replace its graphite-moderated reactor once Pyongyang complies with international nuclear safeguards under the NPT.

*International Herald Tribune*, 7/9/94-7/10/94 (11855).

### 8/5/94

It is reported that during a meeting in Moscow, representatives of the Russian Ministry of Atomic Energy and U.S. Assistant Secretary of State Robert Gallucci discussed the idea of replacing the Soviet-origin gas-graphite nuclear reactor in North Korea. Viktor Sidorenko, deputy Minister of Atomic Energy, informed Gallucci of Russia's willingness to deliver a new reactor. The idea for the replacement, suggested by the U.S. earlier in 1994, was discussed with Japan and South Korea as a possible means to settle the nuclear crisis. The reactor delivery could be funded either by Japan or South Korea. According to the Ministry of Atomic Energy's preliminary estimates, payments for the project could exceed \$1.5 billion and would partially alleviate the financial problems the Russian nuclear industry is experiencing. During the meeting, the U.S. also raised the possibility of reprocessing and storing North Korean spent fuel in Russia.

Alexander Platkovskiy, *Izvestiya*, 8/5/94, p. 3 (11728).

### 8/9/94

It is reported that Russian Ministry for Nuclear Power Engineering specialists, in accordance with the Russian-North Korean Agreement, have discussed the possibility of replacing a North Korean nuclear facility capable of producing weapon-grade plutonium with three 640 MW reactors. The feasibility of the deal is dependent on finding a means to finance the project. *Itar-Tass* was told by "reliable sources" in Tokyo that Japan is unofficially considering a finance package whereby North Korea would receive a Russian-made light water reactor to replace the current North Korean facility.

Marina Barinova, *Itar-Tass* (Moscow), 8/9/94; in *FBIS-SOV-94-117*, 8/10/94, pp. 10-11 (11798). Marina Barinova, *Itar-Tass* (Moscow), 8/9/94; in *FBIS-SOV-94-154*, 8/9/94; in *FBIS-SOV-94-154*, 8/10/94, p. 11 (11798).

### 9/94

It is reported that Russia prefers to update the Russian-North Korean agreement and supply three 660 MW VVERs [as reported] — the 1985 agreement gives Russia a contract to build four 440 MW VVERs — which would cost approximately \$4 billion. Rus-

sia insists that other countries must pay for the reactors.

*Foreign Report*, 9/29/94 (12019).

**9/20/94**

Russian Deputy Foreign Minister Alexander Panov travels to North Korea for bilateral discussions on Russian participation in the replacement of North Korea's nuclear reactors. Russia proposes replacing North Korea's graphite-moderated reactors with 640 MW light water VVER reactors. Panov says the North Koreans are interested in the Russian reactor, but that further discussion at U.S.-North Korean bilateral talks scheduled for 9/23/94 is required. Russia reached an agreement with North Korea in 1985 to modernize North Korea's reactors with four 440 MW VVER reactors on credit, but the deal was called off in 1992 when North Korea withdrew its part of the funding for the project.

Andrey Smirnov, *Kommersant Daily*, 9/2/94; in FBIS-USR-94-105, 9/2/94, p. 4 (11899). Reuter, 9/20/94; in Executive News Service, 9/20/94 (11899). Aleksandr Valiyev, Itar-Tass, 9/22/94; in FBIS-SOV-94-185, 9/23/94, p. 14 (11899). Frances Williams, *Financial Times*, 9/29/94, p. 4 (12037). *Izvestiya* (Moscow), 9/28/94, p. 3; in FBIS-SOV-94-189, 9/29/94, p. 21 (12037).

**9/29/94**

Mikhail Demurin, spokesman for the Russian Foreign Ministry, denies the validity of statements made by North Korean defector Lee Chung-kuk that North Korea tested three nuclear bombs in Ukraine and Russia in 1992.

Interfax (Moscow), 9/29/94; in FBIS-SOV-94-190, 9/30/94, p. 13 (11694).

#### **NORTH KOREA WITH RUSSIA AND UNITED NATIONS**

**6/2/94**

Russian President Boris Yeltsin acknowledges his country's concern over the North Korea nuclear issue, but says that Russia will not support U.N. economic sanctions. However, Yeltsin adds that if North Korea leaves the NPT, Russia will support the implementation of gradual sanctions against North Korea.

Itar-Tass (Moscow), 6/2/94; in FBIS-SOV-94-106, 6/2/94, p.7 (11918). Ann Devroy and Julia Preston, *Washington Post*, 6/3/94, p. A1, A28 (11918).

**6/7/94**

Russian Foreign Minister Andrei Kozyrev emphasizes that in attempting to resolve the North Korean nuclear issue, economic sanctions cannot be implemented until other "possibilities have been exhausted," and should then only be implemented in stages and by "the U.N. Security Council alone."

Radio Rossii Network (Moscow), 6/7/94; in FBIS-SOV-94-110, 6/8/94, p. 5 (11835).

**6/10/94**

Russian Parliament's Lower House Foreign Affairs Committee Chairman Vladimir Lukin says that if North Korea is using negotiations to stall the resolution of its nuclear issue in order to allow more time for its nuclear weapons development, the "countries concerned should resort to collective resolute sanctions."

Pavel Kuznetsov, Itar-Tass (Moscow), 6/10/94; in FBIS-SOV-94-113, 6/13/94, p. 4 (11922).

**9/27/94**

Head of the North and South Korean section of the first Asian department of the Russian Foreign Ministry, Valentin Moiseyev, states that an international conference on Korean peninsula nuclear safety remains a Russian diplomatic objective, but that preparations for the conference will have to wait until the conclusion of bilateral U.S.-North Korean talks in Geneva.

RIA (Moscow), 9/27/94; in FBIS-SOV-94-189-A, 9/27/94 (11610).

#### **NORTH KOREA WITH SOUTH KOREA**

**6/6/94**

South Korean President Kim Young-sam warns North Korea that "reckless adventurism" [referring to North Korea's declaration that a war will begin if the U.N. implements sanctions against it] will lead Pyongyang to self-destruction, and adds that he is determined to prevent North Korea from getting a nuclear bomb. North Korean Foreign Minister Kim Young-nam says that the only way to solve the nuclear problem on the Korean Peninsula is to hold direct talks between South Korea and North Korea.

Interfax (Moscow), 6/6/94; in FBIS-SOV-94-109, 6/7/94, p. 44 (11834). Paul Shin, *Washington Times*, 6/7/94, p. A18 (11837).

**6/10/94**

A South Korean government spokesman says that South Korea wants to see agreement at the earliest possible date on a U.N. sanctions resolution to pressure North Korea into cooperating on the nuclear issue.

Reuter, 6/10/94; in Executive News Service, 6/10/94 (11939).

**6/15/94**

South Korean officials say that during his visit to North Korea, former U.S. President Jimmy Carter is delivering an informal message from South Korea stating that if North Korea takes action to eliminate the doubts surrounding its nuclear arms program, then South Korea will cooperate with diplomatic and economic measures.

Reuter, 6/15/94; in Executive News Service, 6/16/94 (11913).

**6/24/94**

It is reported that the South Korean government will initiate a program to construct light water reactors for North Korea when a bilateral or multilateral agreement for nuclear power aid for North Korea is signed between South Korea, the U.S., and Japan. The construction of one light water reactor for North Korea is estimated to cost \$1-\$1.5 billion over a 10-year period [other sources estimate a cost of \$2 billion].

Carol Giacomo, Reuter, 6/23/94; in Executive News Service, 6/23/94 (11936). Kim Chae-mok, *Munhwa Ilbo* (Seoul), 6/24/94; in JPRS-TND-94-014, 7/13/94, p. 6 (11936).

**6/28/94**

At a preparatory meeting in Panmunjom, North Korea and South Korea agree to hold a three-day summit meeting between their presidents in Pyongyang beginning on 7/25/94. The place and time for an additional summit is to be determined during the first summit and the agenda remains ambiguous. South Korean President Kim Young-sam is expected to suggest during the summit that North Korea and South Korea consider resuming the 1991 declaration on the denuclearization of the Korean peninsula, which provides for mutual monitoring of their nuclear programs.

David E. Sanger, *New York Times*, 6/29/94, pp. A1, A6 (11952). Shim Jae-hoon, *Far Eastern Economic Review*, 7/14/94 (11915).

**7/11/94**

North Korea announces the indefinite postponement of the North-South Korean summit scheduled for 7/25/94-7/27/94 due to the death of President Kim Il-sung. South Korean Foreign Minister Han Sung-joo responds to the delay by saying the "spirit of the agreement [to hold a summit remains] very much valid," and emphasizing that a North-South summit is not possible until the new leadership in North Korea is consolidated.

Hugo Gurdon and Robert Guest, *Daily Telegraph*, 7/12/94 (11857). Cameron W. Barr, *Christian Science Monitor*, 7/12/94 (11857). T.R. Reid, Washington Post Service; in *International Herald Tribune*, 7/12/94 (11857).

**8/15/94**

South Korean President Kim Young-sam offers North Korea the technology and capital to build light water reactors if North Korea allows IAEA inspections of its nuclear facilities. North Korean Deputy Foreign Minister Kang Sok-ju neither agrees to the South Korean offer nor rejects it.

Andrew Pollack, *New York Times*, 8/15/94, p. A1 (11960). *Washington Times*, 8/15/94, p. A11 (11960).

**8/16/94**

South Korean Foreign Minister Han Sung-joo says that North Korea is obliged to accept South Korean-style light water reactors because there is no other realistic solution. South Korean officials say that no other country besides South Korea has offered to finance as much of the cost, and that construction of a South Korean light water reactor for North Korea will increase cooperation in inter-Korean affairs.

Reuter, 8/18/94; in Executive News Service, 8/18/94 (11962). *Washington Times*, 8/19/94, p. A17 (11962).

**8/18/94**

South Korean President Kim Young-sam says that any nuclear reactor accepted by North Korea must be a South Korean-style light water reactor using the South's capital and technology.

Reuter, 8/18/94; in Executive News Service, 8/18/94 (11962).

**8/20/94**

North Korea rejects South Korea's proposed exchange of light water reactors for full IAEA inspections of its nuclear facilities. North Korea's Foreign Ministry states that inspections of its nuclear facilities comes at the expense of North Korea's sovereignty, but adds that North Korea "is willing to involve [itself] in clearing up 'nuclear suspicion' in the future." South Korean Deputy Prime Minister Lee Hong-koo says that South Korea will offer to help North Korea build a light water reactor and supply it with electricity only if North Korea allows full inspections of all its nuclear sites as required by the NPT. Lee also maintains that the U.S. and Japan should help pay for the light water reactors, which will cost about U.S.\$1 billion. According to South Korean officials, South Korea wants the light water reactors to be a South Korean design and manufacture.

AP; in *New York Times*, 8/21/94 (12012).

**NORTH KOREA WITH SOUTH KOREA  
AND UNITED STATES**

**7/21/94**

After a meeting in Seoul between U.S. Assistant Secretary of State Robert Gallucci and South Korean Foreign Minister Han Sung-joo, the U.S. and South Korea repeat an offer of economic and diplomatic aid for North Korea if the government of North Korea will halt its nuclear weapons program. The U.S. and South Korea are willing to carry the "financial or other burdens" necessary to convert North Korean graphite-moderated nuclear reactors to light water reactors. South Korea prefers to cooperate with the U.S. and Japan to finance and build light water reactors—for which South Korea has reportedly developed 95 percent of the necessary technology—rather than have Russia provide the technology as previously proposed by the U.S.

Reuter; in *International Herald Tribune*, 7/22/94 (11946). *Korea Newsreview*, 7/30/94, p. 5 (11946).

**7/25/94**

A North Korean Foreign Ministry spokesman warns that "if the improvement of North-South [Korean] relations is set as a

'precondition' for the improvement of the DPRK-U.S. relations at the DPRK-U.S. talks for the solution to the nuclear issue, a fatal roadblock would be erected in the way of the solution to the nuclear issue."

*Washington Times*, 7/26/94, p. 5 (11858).

**8/9/94**

It is reported that the South Korean government is studying a plan whereby the U.S. and North Korea will conclude a contract for South Korea to build a light water reactor for the North. An international consortium will try to pay for the construction and the South Korean government may try to supplement the construction through unification funds. North Korea does not want to use a South Korean-type reactor, but has not been as opposed to the idea as it was during talks on 8/5/94.

*Hanguk Ilbo* (Seoul), 8/10/94, p. 5; in FBIS-EAS-94-154, 8/10/94, p. 48 (11957).

**8/14/94**

South Korean officials express approval of the agreement reached between the U.S. and North Korea on 8/12/94 at bilateral talks in Geneva, saying that the Korean Peninsula's nuclear problem is now closer to a resolution.

*Observer*, 8/14/94 (11963).

**8/17/94**

South Korean officials say that the U.S. will not contribute to the cost of building light water reactors in North Korea because U.S. law prohibits financial exchanges with countries categorized as "hostile." South Korean President Kim Young-sam and President Clinton agree that North Korea must allow the IAEA to inspect two undeclared nuclear sites before North Korea is provided with light water reactors.

Reuter, 8/18/94; in Executive News Service, 8/18/94 (11962). Yonhap (Seoul), *Washington Times*, 8/18/94, p. A13 (12001). *Washington Times*, 8/19/94, p. A16 (12001).

**8/27/94**

A North Korean radio broadcast announces that the problem concerning which country should provide the light water reactor to North Korea should be solved between the U.S. and North Korea, and that South Korea should not get involved. North Korea

indicates that it will stop its current nuclear program if the U.S. supplies North Korea with the light water reactors.

Andrew Pollack, *New York Times*, 8/29/94, p. 2 (11998).

9/7/94

South Korean Foreign Minister Han Sung-joo and U.S. Secretary of State Warren Christopher meet in Washington to discuss the North Korean nuclear issue. Christopher encourages South Korea to support an inter-Korean summit, stating that the North Korean nuclear dispute cannot be solved without direct dialogue between the North and the South. South Korea wants the bilateral talks which started on 7/8/94 between the U.S. and North Korea to be linked to the progress made in inter-Korean relations. Han also wants to verify that unless North Korea is committed to replacing its nuclear technology [graphite-moderated reactors] with South Korean-type light water reactors, South Korea will not help finance the improvements to North Korea's nuclear energy program.

Lee Su-wan, *Reuter*, 9/5/94; in *Executive News Service*, 9/5/94 (11902). T.R. Reid, *Washington Post*, 9/6/94; in *Executive News Service*, 9/5/94 (11902). R. Jeffrey Smith, *Washington Post*, 9/8/94, p. A33 (11902).

#### NORTH KOREA WITH UKRAINE

9/29/94

Mikhail Demurin, spokesman for the Russian Foreign Ministry, denies the validity of statements made by North Korean defector Lee Chung-kuk that North Korea tested three nuclear bombs in Ukraine and Russia in 1992.

Interfax (Moscow), 9/29/94; in *FBIS-SOV-94-190*, 9/30/94, p. 13 (11694).

#### NORTH KOREA WITH UNITED NATIONS

6/2/94

North Korea warns that it will leave the NPT if U.N. sanctions are implemented.

Ann Devroy and Julia Preston, *Washington Post*, 6/3/94, p. A1, A28 (11918).

6/3/94

The U.N. Security Council begins discussions to seek a solution to North Korea's defiance of IAEA nuclear inspections.

Paul Lewis, *New York Times*, 6/4/94, p. A3 (11552).

6/6/94

North Korea's Committee for Peaceful Reunification of the Fatherland, its principle organization overseeing inter-Korea affairs, responds to the possibility of U.N. sanctions against Pyongyang by declaring that "sanctions mean outright war."

Paul Shin, *Washington Times*, 6/7/94, p. A18 (11837).

#### NORTH KOREA WITH UNITED NATIONS AND UNITED STATES

5/31/94

U.S. Secretary of State Warren Christopher, Secretary of Defense William Perry, and other top officials—anticipating continued North Korean non-compliance in allowing IAEA inspectors to verify fuel rod removal from the Yongbyon reactor—outline a plan that will be submitted to the U.N. Security Council proposing the implementation of economic sanctions against North Korea.

*Washington Post*, 6/1/94, p. A22 (11917).

6/2/94

President Clinton announces plans to seek U.N. economic sanctions against North Korea as a result of North Korea's non-compliance with IAEA inspections.

Ann Devroy and Julia Preston, *Washington Post*, 6/3/94, p. A21, A28 (11918).

6/3/94

U.S. Representative to the U.N. Madeleine K. Albright announces that the U.S. supports the "consideration of sanctions" to deal with the North Korean nuclear issue and that it is looking for support in the Security Council.

Paul Lewis, *New York Times*, 6/4/94, p. A3 (11552).

6/5/94

U.S. Secretary of Defense William Perry says that if the attempt to impose sanctions on North Korea through the U.N. fails due to lack of consensus in the Security Council,

then the U.S. may implement sanctions unilaterally or with U.S. allies to try to pressure North Korea into accepting international inspections of its [Yongbyon] nuclear reactor. Perry adds that the aim of imposing sanctions against North Korea would be both to gain North Korean acceptance of IAEA nuclear inspections and to "modify [North Korea's] behavior [regarding] the future development of nuclear weapons."

Bill Gertz, *Washington Times*, 6/6/94, p. A4 (11833). Sharon LaFraniere, *Washington Post*, 6/6/94, p. A13 (11833).

6/9/94

U.S. Assistant Secretary of State Robert Gallucci announces to a House Foreign Affairs Subcommittee that discussion by the U.N. Security Council on the possible implementation of U.N. sanctions on North Korea will "continue over the next few weeks." The U.S. administration calls for an initial set of sanctions to be implemented by the Security Council, to be followed by "tougher sanctions" if North Korea continues its nuclear program.

Michael R. Gordon, *New York Times*, 6/10/94, p. A1 (11938).

6/11/94

Taking into consideration diplomatic pressures, U.S. officials decide to push for less stringent sanctions on North Korea in order to prevent Pyongyang from taking further steps toward developing its nuclear weapons program. The less stringent plan will ask the U.N. Security Council to impose a block on U.N. technical aid and to terminate scientific and cultural exchanges. An oil embargo, implementation of a cut-off in remittances from Japan to North Korea, and other harsher measures will be postponed. Tougher sanctions would be implemented if North Korea continued to develop its nuclear program after the milder sanctions are implemented.

Michael R. Gordon, *New York Times*, 6/12/94, pp. 1, 6 (11939).

6/12/94

North Korean President Kim Il-sung, facing possible U.N. sanctions, is said "to be ready to suspend plutonium processing in exchange for American diplomatic recognition and assistance" in building its nuclear

energy program and gaining recognition from the international community.

Ian Brodie, *Times* (London), 6/13/94 (11939).

### 6/13/94

U.S. Ambassador to the U.N. Madeleine K. Albright announces that the first draft of a resolution calling for sanctions to be implemented against North Korea will be ready within one day for presentation to the U.N. Security Council.

David E. Sanger, *New York Times Service*; in *International Herald Tribune*, 6/14/94 (11942).

### 6/16/94

President Clinton says that the call for sanctions against North Korea will be dropped and a third round of talks on the nuclear issue between the U.S. and North Korea can take place if North Korea is prepared to put "a freeze on any nuclear activity." Clinton's statement is in response to reports from former President Jimmy Carter, on an unofficial visit to North Korea, that North Korean President Kim Il-sung has reversed his decision to expel two IAEA inspectors from North Korea. Clinton will request that Kim elaborate on promises he made to Carter; meanwhile, the U.S. will continue to pursue sanctions against North Korea in the U.N. Security Council until the U.S. can be sure that North Korea has really changed its position.

Frank J. Murray, *Washington Times*, 6/17/94, pp. A1, A16 (11950). Reuter, 6/16/94; in *Executive News Service*, 6/17/94 (11950).

### 6/19/94

White House Press Secretary Dee Dee Myers clarifies confusion caused by former President Jimmy Carter's statement on 6/18/94 that the U.S. was no longer pressing for sanctions against North Korea by explaining that in fact, the U.S. is still consulting on possible U.N. sanctions.

Laurence McQuillan, Reuter, 6/18/94; in *Executive News Service*, 6/21/94 (11951).

### 6/22/94

After receiving a letter from North Korean Deputy Foreign Minister Kang Sok-ju confirming that North Korea is willing to freeze its nuclear program, President Clinton states that the U.S. will discontinue its campaign for economic sanctions against North Ko-

rea once talks begin.

Douglas Jehl, *New York Times*, 6/23/94, pp. A1, A4 (11951).

## NORTH KOREA WITH UNITED STATES

### 6/9/94

U.S. Secretary of Defense William Perry states that a U.S. pre-emptive strike against North Korea's nuclear facilities continues to be a viable U.S. option in resolving the North Korean nuclear issue.

Quentin Hardy, *Wall Street Journal*, 6/9/94, p. A10 (11911).

### 6/15/94-6/16/94

Former President Jimmy Carter holds talks with the North Korean government. U.S. diplomatic envoys say that the purpose of Carter's visit is to clearly explain the U.S. position on North Korea's suspected nuclear arms program and on its decision to leave the IAEA.

Reuter, 6/15/94; in *Executive News Service*, 6/16/94 (11913). James Pringle, *Times* (London), 6/16/94 (11913).

### 6/16/94

President Clinton says that if North Korea's statements [presented to Carter during the 6/15-6/16 talks] that it will end its nuclear weapons program are sincere and verifiable, the U.S. will be willing to proceed with high-level bilateral talks. Carter says that during the talks President Kim Il-sung voiced two conditions that North Korea would like to achieve with the help of the U.S.: the conversion of North Korea's nuclear reactors from graphite-moderated to light water, and an agreement between South Korea and the U.S., "of an official nature... that there would be no nuclear weapons deployed or used against anyone on [the] entire Korean Peninsula." Clinton says the U.S. is prepared to help North Korea convert its nuclear program to one which uses light water reactors. Clinton will request that Kim elaborate on promises he made to Carter.

UPI, 6/16/94; in *Executive News Service*, 6/17/94 (11929). Lee Su-wan, Reuter, 6/17/94; in *Executive News Service*, 6/17/94 (11929). Frank J. Murray, *Washington Times*, 6/17/94, pp. A1, A16 (11950).

### 6/17/94

It is reported that senior U.S. officials say that high-level bilateral negotiations between the U.S. and North Korea will be feasible only if North Korea allows IAEA inspectors to continue monitoring its nuclear facilities and refrains from reactivating its Yongbyon reactor and reprocessing the spent fuel rods recently unloaded from the reactor.

Robert S. Greenberger, *Wall Street Journal*, 6/17/94, p. A6 (11929).

### 6/18/94

It is reported that President Kim Il-sung will not halt North Korea's nuclear program until North Korea is given a guarantee that it will receive light water reactors.

David Brunnstrom, Reuter, 6/18/94; in *Executive News Service*, 6/21/94 (11929).

### 6/19/94

White House Press Secretary Dee Dee Myers states that confirmation from North Korea that it will put a freeze on its nuclear program must include a commitment to allow IAEA inspections to continue, a willingness to convert to [light water reactor] technology to reduce its production of plutonium, and compliance with obligations under the NPT.

Laurence McQuillan, Reuter, 6/18/94; in *Executive News Service*, 6/21/94 (11951).

### 6/20/94

White House Press Secretary Dee Dee Myers says that the U.S. will not respond to North Korean President Kim Il-sung's demand for a formal no-first-strike promise.

Frank J. Murray, *Washington Times*, 6/21/94, pp. A1, A10 (11930).

### 6/21/94

President Clinton states that there are "hopeful signs" for renewed talks with North Korea in promises made by North Korea to former President Carter, but he emphasizes that the U.S. must confirm that Pyongyang is willing to freeze its nuclear program. U.S. Assistant Secretary of State Robert Gallucci sends a letter to North Korean Deputy Foreign Minister Kang Sok-ju offering negotiations with North Korea if Pyongyang will confirm it will freeze its nuclear weapons program.

AP, Reuter; in *International Herald Tribune*, 6/21/94 (11951). Douglas Jehl, *New York Times*, 6/23/94, pp. A1, A4 (11951).

#### 6/22/94

After receiving a letter from North Korean Deputy Foreign Minister Kang Sok-ju confirming that North Korea is willing to freeze its nuclear program, President Clinton states that the U.S. and North Korea will hold talks in Geneva, which are likely to begin on 7/8/94. According to Clinton, the U.S. agreement to hold talks provides a "basis for seeking a solution" to the North Korean nuclear problem. Clinton states that the U.S. is prepared to include "the full range of security, political, and economic issues that affects North Korea's relationship with the international community" during the talks in Geneva.

Douglas Jehl, *New York Times*, 6/23/94, pp. A1, A4 (11951). Robert S. Greenberger, *Wall Street Journal*, 6/23/94, p. A11 (11951).

#### 6/23/94

U.S. State Department spokesman Michael McCurry says that the U.S. and North Korea will meet on 6/24/94 at the U.N. to formalize the agenda for high-level bilateral diplomatic talks to be held between the two countries on 7/8/94.

Carol Giacomo, Reuter, 6/23/94; in *Executive News Service*, 6/23/94 (11936).

#### 6/27/94

U.S. State Department spokesman Michael McCurry says that it is the U.S. understanding that North Korea has frozen "the major elements" of its nuclear program. North Korea has only offered a short-term nuclear freeze, which will just last through the bilateral meetings between North Korea and the U.S. set to begin on 7/8/94 in Geneva. The U.S. is concerned about the long-term monitoring of North Korea's spent fuel rods and fears that after the 7/94 talks are over, North Korea may reprocess the rods to extract the plutonium.

Michael R. Gordon, *New York Times*, 6/28/94, p. A4 (11932).

#### 6/29/94

It is reported that the U.S. will require North Korea to turn the 8,000 spent fuel rods removed from its 5 MW reactor in Yongbyon over to a third country or to bury them in-

definitely as a prerequisite to resolving the nuclear issue.

Paul Lewis, *New York Times*, 6/30/94, p. A4 (11948).

#### 6/30/94

During the bilateral talks scheduled for 7/8/94, the U.S. will offer North Korea economic and diplomatic gains if North Korea halts its nuclear weapons program, ends its ballistic missile development effort, and adheres to obligations under the Missile Technology Control Regime (MTCR). The U.S. has prepared a set of incentives to offer North Korea which may include the organization by the U.S. of an international effort to provide Pyongyang with light water reactors, U.S. diplomatic recognition through new diplomatic liaison offices, and possible aid and investment from South Korea and Japan.

Warren Strobel, *Washington Times*, 6/30/94, p. A16 (11933).

#### 7/8/94

It is reported that the U.S. is prepared to offer aid for North Korea to build more modern [light water] nuclear reactors for peaceful purposes if North Korea agrees to stop construction on its 200 MW [graphite-moderated] reactor and dismantle its [5 MWe] 25 MWt [Yongbyon] reactor and a plutonium reprocessing laboratory. U.S. Defense Department officials feel that reducing North Korea's capability to produce plutonium in the future should take priority over uncovering plutonium it may have separated in the past.

R. Jeffrey Smith, *Washington Post Service*; in *International Herald Tribune*, 7/8/94 (11622).

#### 7/8/94

Assistant Secretary of State Robert Gallucci and North Korean Deputy Foreign Minister Kang Sok-ju meet in Geneva to begin the third round of high-level U.S.-North Korean negotiations on the nuclear issue. Gallucci reports that the talks are "productive," but have not reached the level of making commitments. Kang is optimistic about prospects for compromise. The talks were expected to continue on 7/9/94 before pausing to allow negotiators to communicate with their governments; however, the death of North Korean President Kim Il-sung on the

first day of talks interrupts the negotiations and North Korea postpones their continuation.

Kevin Rafferty, *Guardian*, 7/8/94 (11944). Warren Strobel, *Washington Times*, 7/8/94, pp. A1, A12 (11944). John Burton, *Financial Times*, 7/8/94 (11944). Alan Riding, *New York Times*, 7/9/94, p. 3 (11944). John Burton and Bruce Clark, *Financial Times*, 7/11/94 (11945).

#### 7/11/94

Chief North Korean negotiator Kang Sok-ju tells senior U.S. representative Robert Gallucci that North Korea will be ready to resume negotiations regarding nuclear issues after the funeral of former North Korean President Kim Il-sung on 7/17/94. President Clinton says it appears North Korea will relaunch the nuclear dialogue following an "appropriate period" of mourning and will suspend reprocessing of the fuel rods removed from the 5 MW Yongbyon reactor.

*New York Times*, 7/11/94, p. A3 (11856). John Burton and Quentin Peel, *Financial Times*, 7/12/94 (11856).

#### 7/13/94

A senior official at the North Korean U.N. mission in New York states that North Korea's nuclear policies will remain unchanged under the leadership of Kim Jong-il and that pledges made by the late Kim Il-sung to former President Jimmy Carter will be honored by the new North Korean government. Radio Pyongyang reports that the U.S. and North Korea will convene talks in New York during the week of 7/17/94 to discuss a resumption of negotiations.

Kyodo (Tokyo), 7/14/94; in *FBIS-EAS-94-135*, 7/14/94, p. 8 (11856). *Washington Times*, 7/14/94, p. A1 (11856).

#### 7/22/94

A North Korean Foreign Ministry spokesman announces that North Korea and the U.S. agreed during a working-level talk on 7/21/94 to resume talks on nuclear issues in Geneva on 8/5/94.

Lim Yun-suk, Reuter; in *Washington Times*, 7/23/94, p. 48 (11858).

#### 8/5/94

The U.S. and North Korea resume talks in Geneva on North Korea's nuclear program. The negotiations are led by U.S. Assistant

Secretary of State Robert Gallucci and North Korean First Deputy Foreign Minister Kang Sok-ju. North Korea claims that it must start reprocessing 8,000 spent nuclear fuel rods—which are being stored in a cooling tank at the Yongbyon nuclear complex under IAEA supervision—by the end of 8/94 to avoid a radiological contamination of the storage site. The U.S. says storage of the fuel rods can be prolonged by chemically treating the water in the holding tanks. The North Korean government opposes the U.S. idea that the spent fuel rods be transported to a third country for reprocessing, but offers to reprocess the rods and accept outside control over the extracted plutonium in exchange for diplomatic ties with the U.S. and assistance in making the transition to light water reactor technology. The U.S. demands that North Korea allow IAEA inspections of two sites suspected to be nuclear waste dumps to determine if North Korea has extracted plutonium from its 5 MW reactor in the past. The U.S. offers to help North Korea build four light water nuclear reactors financed by South Korea and Japan. North Korea wants to continue construction on its 50 MW and 200 MW reactors until a light water reactor is installed, and the U.S. responds with an offer to furnish an alternative power facility if North Korea will suspend the construction of the new reactors. North Korea suggests it will need economic support during the ten years required to construct a light water reactor. The U.S. and North Korea will meet again on 8/8/94 after a two-day break for negotiators to consult with the home governments.

Peter James Spielmann, *Washington Times*, 8/5/94, p. A13 (11611). John Burton, *Financial Times*, 8/5/94, p. 3 (11611). Alan Riding, *New York Times*, 8/6/94, p. 7 (11955). Edward Luce, *Guardian*, 8/6/94 (11955). Yonhap (Seoul), 8/6/94; in FBIS-EAS-94-152, 8/8/94, p. 47 (11955). *Yomuri Shimbum* (Tokyo), 8/6/94, p. 5; in FBIS-EAS-94-153, 8/9/94, p. 1 (11955).

### 8/8/94

During bilateral talks with the U.S., North Korea proposes to put the approximately 8,000 fuel rods that it removed from the Yongbyon reactor in dry storage instead of sending them abroad for reprocessing. North Korea says that it should “at least get

Russian-design VVER’s,” since they could be easier to finance than U.S. LWR’s, and since Russia carried out some site selection work in North Korea in the 1980s. Deputy Foreign Minister Kong Sok-ju says that if North Korea could receive LWR’s for free and be compensated for stopping work on its two graphite reactors, it will be willing to switch to the LWR technology. Although North Korea has claimed that the fuel discharged from its 5 MW reactor at Yongbyon in 5/94 and 6/94 “must be reprocessed immediately to avoid corrosion,” U.S. officials have said that steps can be taken to store the fuel safely for at least a year. The 50 metric tons of fuel taken from the reactor was placed in a storage pool under IAEA surveillance, and although the IAEA was not allowed to tag and sample a section from the core during refuelling, the IAEA and the U.S. believe that none of the fuel has been removed from the storage site. Within the last few weeks, the U.S. and North Korea had discussed the possibility of “advanced nuclear countries in Europe and elsewhere” providing assistance for the long-term storage and processing of spent fuel from Yongbyon. This could involve long-term concrete dry storage; initial stop-gap measures could involve short-term wet storage of the fuel. One proposal is to transfer North Korean spent fuel to China, but this proposal was eventually discarded. North Korea claims that problems with the integrity of the fuel cladding makes it risky to store the fuel for more than a few weeks. The U.S. has downplayed these problems, while the IAEA has indicated that these problems may be more serious. According to U.S. officials, the IAEA has told Robert Gallucci, the head of the U.S. negotiating team, that the Agency will be required to allow North Korea to reprocess the spent fuel, as long as the material is subject to safeguards, unless the U.S. can persuade North Korea not to do so.

Mark Hibbs, *Nucleonics Week*, 8/11/94, p. 6 (12003). Philippe Naughton, *Washington Times*, 8/10/94, p. A11 (12003).

### 8/9/94

North Korea and the U.S. approach an agreement to extend the safekeeping of spent nuclear fuel rods in temporary storage at the facility in Yongbyon by sending a U.S.

team of experts to provide the technical assistance required to prolong storage. North Korean Deputy Foreign Minister Kang Sok-ju says during the Geneva talks that if North Korea is provided with a light water reactor and “proper and appropriate” economic compensation, it would stop its graphite-moderated nuclear reactor program.

Yonhap (Seoul), 8/9/94; in FBIS-EAS-94-153, 8/9/94, p. 38 (11958).

### 8/12/94

The U.S. and North Korea reach an agreement on the North Korean nuclear issue which calls for North Korea to stop the construction of a graphite-moderated reactor in exchange for a light water reactor, which will cost as much as \$2 billion. The U.S. agrees to supply North Korea with alternative sources of energy during the estimated six years it will take to build the reactor. North Korea agrees that the 8,000 spent fuel rods removed from the Yongbyon reactor will stay in their cooling pond and will not be reprocessed. North Korean Deputy Foreign Minister Kang Sok-ju says North Korea will employ methods to prolong the storage of the fuel rods under IAEA supervision, in accordance with the NPT. The U.S. and North Korea also agree to move toward normalizing their political and economic relations by establishing liaison offices in each other’s capitals and reducing barriers to trade and investment, and to continue to pursue a nuclear-free zone on the Korean Peninsula. The U.S. will also offer assurances that it will not threaten to use nuclear weapons against North Korea. The U.S. and North Korea agree to meet again in Geneva on 9/23/94 to resume bilateral talks.

KBS-1 Radio Network (Seoul), 8/12/94; in FBIS-SOV-94-157, 8/15/94, p. 30 (11959). Clare Nullis, *Washington Times*, 8/13/94, p. A1 (11959). *Salzburger Nachrichten*, 8/16/94 (11959).

### 8/25/94

The U.S. State Department and the North Korean Mission to the U.N. meet at the U.N. headquarters in New York to discuss the agenda for high-level bilateral talks in 9/94.

KBS-1 Radio Network (Seoul), 8/25/94; in FBIS-EAS-94-166, 8/26/94, p. 32 (11965).

**9/10/94-9/15/94**

U.S. and North Korean representatives meet in Berlin for technical talks centering on the replacement of North Korea's graphite-moderated reactors with light water reactors (LWRs), an issue which the U.S. and North Korea agreed upon in principle during the 8/94 bilateral talks in Geneva. The U.S. team is lead by the senior aide to Assistant Secretary of State Robert Gallucci, Gary Saymore. The North Koreans are represented by top foreign trade official Kim Jong-u. A leader from North Korea's delegation says that Pyongyang wants \$4 billion in financing to build two 1000 MW light water reactors, as well as \$1.2 billion to cover investments it had made in its indigenous reactor development program. It is reported that during the talks North Korea rejects the idea of South Korean help in replacing the North's nuclear reactors and expresses more interest in the European PWR (EPR)—being developed jointly by Siemens of Germany and the French company Framatome—or Russia's new reactor design, the VVER-650. North Korea and the U.S. are holding simultaneous talks, also starting on 9/10/94, in Pyongyang to discuss diplomatic relations between the two countries.

Robert Evans, Reuter, 9/10/94; in Executive News Service, 9/13/94 (12010). AFP; in *Sueddeutsche Zeitung*, 9/12/94 (12010). Patrick Worsnip, Reuter, 9/13/94; in Executive News Service, 9/13/94 (12033). AP; in *Washington Post*, 9/10/94, p. A24 (12033).

**9/23/94**

The U.S. and North Korea resume high-level bilateral talks in Geneva. Before leaving for Geneva, Assistant Secretary of State Robert Gallucci says that "recognizing that [special inspection] is a sensitive political issue for all, particularly for the North, [the U.S.] is prepared to defer the conduct of the [IAEA] inspections until somewhat into the settlement process." During the talks, U.S. officials will attempt to convince North Korea that it should allow South Korea to play the key role in the light water reactor project. South Korea has said that it will fund 60 percent of the effort, but will only do so if it can provide its own technology. Gallucci says that the U.S. will also attempt to come to an agreement with North Korea

over transferring the spent fuel rods [at Yongbyon] to another country. Gallucci explains that the rods will remain at Yongbyon for an interim period of storage before they are transferred. North Korea has threatened to retract its agreement to stop its nuclear program [reached during the talks on 8/12/94] if the U.S. continues to pressure North Korea to allow the IAEA inspections of its two suspected nuclear sites. The North Korea Central News Agency quotes a North Korean Foreign Ministry spokesman as saying "if the dishonest forces create difficulties in the provision of [light water reactors], insisting on 'special inspections', [North Korea] would not feel the need to freeze its independent graphite-moderated reactor programme."

R. Jeffrey Smith, *Washington Post*, 9/23/94, p. A32 (12038). Reuter, 9/23/94; in Executive News Service, 9/23/94 (12038). Steve Pagani, *Washington Times*, 9/24/94, p. A7 (12013).

**9/24/94**

North Korean chief negotiator Kang Sok-ju tells reporters that North Korea "has never recognized special inspections. In [the] future when both sides have built up trust and confidence, [North Korea] would be prepared to demonstrate the transparency of [its] nuclear program." Pyongyang's demand for \$2 billion in financial compensation for stopping its graphite-moderated nuclear program and insistence that the light water reactors come from Germany or Russia have complicated the bilateral talks.

Steve Pagani, *Washington Times*, 9/24/94, p. A7 (12013). Reuter, 9/24/94; in Executive News Service, 9/27/94 (12013).

**9/29/94**

After seven days of meetings, bilateral talks between the U.S. and North Korea are suspended, with Assistant Secretary of State Robert Gallucci announcing that the talks will resume on 10/5/94. The two sides were unable to agree on key issues concerning financial compensation, North Korean demands, and special inspections. On 9/27, a North Korean spokesman for the Ministry of the People's Armed Forces had threatened that North Korea might leave the negotiations due to the recent deployment of U.S. naval carriers to the Sea of Japan, adding that North Korea will not continue dia-

logue with the U.S. if the discussion is "accompanied by pressure."

Reuter, 9/26/94; in Executive News Service, 9/26/94 (12034). *Washington Times*, 9/27/94, p. A20 (12034). Philippe Naughton, Reuter, 9/27/94; in Executive News Service, 9/27/94 (12035). Frances Williams, *Financial Times*, 9/29/94, p. A4 (12036). R. Jeffrey Smith, *Washington Post*, 9/30/94, p. A36 (12037). Alan Riding, *New York Times*, 9/30/94, p. A3 (12037).

**NORTH KOREA WITH UNITED STATES AND IAEA**

**6/8/94**

North Korean Foreign Minister Kim Youngnam announces that North Korea will comply with IAEA inspections and allow "testing, measuring, and the preservation of nuclear fuel" if the U.S. agrees to a third-round of bilateral talks. The U.S. does not accept the offer and reiterates that North Korea must comply with IAEA inspections before the U.S. will consider reopening bilateral talks.

Rostislav Khotin, Reuter, 6/8/94; in Executive News Service, 6/9/94 (11920).

**6/15/94**

North Korean Ambassador to France Pak Dong-chun states that if the U.S. continues to support the use of sanctions against North Korea to resolve the North Korean nuclear issue, the North Korean government may quit the NPT and order the last two IAEA inspectors to leave the country. Pak adds that "with the current situation, we believe the inspectors will not have anything left to do. We are following very closely how the situation develops, and especially the attitude of the [U.S.]." Senior officials from the U.S. State Department and Pentagon say that if IAEA inspectors are forced to leave North Korea or are prevented from determining the status of the 8,000 fuel rods North Korea removed from its Yongbyon reactor in 5/94, the U.S. will consider conducting a pre-emptive airstrike on North Korea's reprocessing facility before the fuel rods can be moved there.

John Follain, Reuter, 6/15/94; in Executive News Service, 6/15/94 (11926). Sid Balman Jr., UPI, 6/15/94; in Executive News Service, 6/16/94 (11928).

**6/16/94**

Former President Jimmy Carter announces that during talks he held with the North Korean government, North Korean President Kim Il-sung "committed himself to maintain the [IAEA] inspectors on site in the disputed [Yongbyon] nuclear reactor and to guarantee [IAEA] surveillance equipment to stay in good operating order." U.S. Assistant Secretary of State Robert Gallucci states that during talks with Carter, North Korea "expressed its willingness to return to full compliance with NPT and IAEA safeguards, including special inspections, as part of an overall settlement of the [North Korean nuclear] issue."

UPI, 6/16/94; in Executive News Service, 6/17/94 (11929). David Brunnstrom, Reuter, 6/17/94; in Executive News Service, 6/17/94 (11929).

**6/17/94**

It is reported that senior U.S. officials say that one condition for high-level bilateral negotiations between the U.S. and North Korea is that North Korea allow IAEA inspectors to continue monitoring its nuclear facilities.

Robert S. Greenberger, *Wall Street Journal*, 6/17/94, p. A6 (11929).

**6/21/94**

North Korean Ambassador to Russia Son Song-pil says that North Korea will not allow international inspections of its nuclear program until a comprehensive agreement is reached with the U.S.

Yonhap (Seoul), 6/21/94; in FBIS-SOV-94-119, 6/21/94, p. 6 (11916).

**6/22/94**

A letter to U.S. Assistant Secretary of State Robert Gallucci from North Korean Deputy Foreign Minister Kang Sok-ju states that North Korea will not reprocess the spent fuel rods recently removed from its 5 MW nuclear reactor nor refuel the reactor, and that international inspectors will be allowed to continue monitoring activity at the Yongbyon nuclear complex. This commitment to freeze the North Korean nuclear program applies only to the 5 MW reactor in Yongbyon and excludes assurances that North Korea will maintain evidence from its previous nuclear activities so that inspectors can reconstruct the history of plutonium

reprocessing in North Korea. It is reported that North Korea may be willing to discuss allowing full safeguards inspections as specified in the NPT as part of an "overall solution" during negotiations with the U.S.

Douglas Jehl, *New York Times*, 6/23/94, pp. A1, A4 (11951). Frank J. Murray, *Washington Times*, 6/23/94, pp. A1, A11 (11951).

**8/31/94**

North Korean Ambassador to Austria Kim Gwang-sop says that full inspections of North Korea's nuclear facilities should be forthcoming following the recent accord between the U.S. and North Korea in Geneva.

Steve Pagani, Reuter, 8/31/94; in Executive News Service, 8/31/94 (12000).

**9/9/94**

Assistant Secretary of State Robert Gallucci announces at a news conference that "special" inspections of undeclared nuclear sites in North Korea can be implemented after a full settlement is reached between the U.S. and North Korea on the North Korean nuclear program. Gallucci states that North Korea will not be provided with light water reactors unless it agrees to fully comply with its safeguards agreement (including special inspections), but that the inspections could be delayed for months or years until the light water reactors are ready to be installed in North Korea.

AP; in *Washington Post*, 9/10/94, p. A24 (12033).

**9/25/94**

A North Korean Foreign Ministry spokesman announces that his country "resolutely reject[s] the recent [IAEA General Conference] 'resolution', regarding it as the same attempt as the previous 'resolutions', adopted by the IAEA to infringe on the sovereignty and security of [North Korea]." The official adds that "the adoption of another 'resolution' . . . at a time when the [North Korean]-U.S. dialogue is in progress, is an open challenge aimed at laying artificial obstacles in the way of a negotiated solution to the nuclear issue."

Reuter, 9/25/94; in Executive News Service, 9/25/94 (12013). Robert Evans, Reuter; in *Washington Times*, 9/26/94, p. A12 (12013).

## **NORTH KOREA WITH UNITED STATES, SOUTH KOREA, AND RUSSIA**

**8/5/94**

North Korea rejects the U.S. offer to supply North Korea with a South Korean light water reactor and renews its request for a Russian-model reactor. The request is based on North Korea's technical experience with the Russian model, tensions between North and South Korea, and claims that the Russian reactor costs less.

Yonhap (Seoul), 8/6/94; in FBIS-EAS-94-152, 8/8/94, p. 47 (11955).

## **NORTH KOREA WITH UNITED STATES, SOUTH KOREA, RUSSIA, JAPAN, AND PRC**

**8/17/94**

It is reported that U.S. Assistant Secretary of State Robert Gallucci will go to the capitals of South Korea, China, Russia, and Japan to raise \$4 billion needed to pay for the construction of light water reactors in North Korea, provided North Korea allows inspections of two undeclared nuclear facilities. South Korean officials say that the U.S. will not contribute to the cost of building the light water reactors because U.S. law prohibits financial exchanges with countries categorized as "hostile."

*Washington Times*, 8/18/94, p. A13 (12001). *Washington Times*, 8/19/94, p. A16 (12001).

**9/3/94**

It is reported that U.S. Assistant Secretary of State Robert Gallucci will visit Japan and South Korea beginning on 9/12/94 to coordinate the policies of the U.S., Japan, and South Korea on the provision of light water reactors to North Korea. Officials must consult on which country will provide technology or financing for the reactors since North Korea has refused proposals for light water reactors based on South Korean technology.

Yonhap (Seoul), 9/3/94; in FBIS-EAS-94-172, 9/6/94, p. 59 (12015).

## PAKISTAN

### INTERNAL DEVELOPMENTS

5/94

Former Pakistani Army Chief General Mirza Aslam Beg reveals that Pakistan's nuclear arsenal is controlled by the National Nuclear Command Authority (NNCA). Beg alleges that the NNCA, created in the 1970s, is operated by the Joint Operations Center out of the General Headquarters of the army in Rawalpindi and is led by the "chief executive." According to Beg, the Nuclear Command Committee, composed of the prime minister, the president, the army chief, and three unspecified individuals, makes all NNCA decisions.

Ahmed Rashid, *Far Eastern Economic Review*, 5/5/94, p. 23 (11758).

6/14/94

Pakistani Foreign Minister Sardar Aseff Ahmad Ali states that Pakistan cannot "give up the nuclear option" until its disputes with India over Kashmir are resolved. Ali denies a claim made by the opposition party that Pakistan has agreed unilaterally to sign the NPT because of U.S. pressure.

UPI, 6/14/94; in Executive News Service, 6/14/94 (11603).

6/23/94

At an annual conference of scientists held in Nathiagali, Pakistan, Pakistani President Farooq Leghari says that his country would like to attract private investment for building nuclear power plants so that it can confront its power shortage. Farooq states that all new nuclear power plants will be placed under IAEA safeguards and that he hopes the U.S. and other countries advanced in nuclear technology will reevaluate Pakistan's nuclear program and give it "credit for the tremendous self-restraint" that it has shown and remove restrictions against it.

Anwar Iqbal, UPI, 6/23/94; in Executive News Service, 6/23/94 (11750).

8/23/94

Former Pakistani Prime Minister Nawaz Sharif states at a public rally in Kashmir, "I confirm that Pakistan possesses the atomic bomb." On 8/24/94, Prime Minister Benazir Bhutto responds to Sharif's claim by declaring that Sharif's statement was "irresponsible." Other Pakistani government officials also quickly deny Sharif's claims and Foreign Minister Sardar Assef Ahmad Ali states, "I want to say categorically and finally that Pakistan has not made nuclear weapons." Some analysts view Sharif's statement as an attempt to embarrass Bhutto publicly in order to bring down her government before its five-year term is over. Sharif, however, says that his remark was "a well thought out statement," which was designed to keep Prime Minister Bhutto from compromising Pakistan's nuclear program in the face of recent U.S. pressure. The IAEA says it is not able to confirm or deny that Pakistan has nuclear weapons, since Pakistan is not a signatory of the NPT, which would allow comprehensive international inspections of Pakistan's nuclear facilities.

Rauf Siddiqi and Shahid-ur-Rehman Khan, *Nucleonics Week*, 9/1/94, p. 16 (11751). Reuter; in *New York Times*, 8/25/94, p. A5 (11751). Ben Barber, *Washington Times*, 8/24/94, pp. A1, A18 (11751). Ahmed Rashid, *Daily Telegraph*, 8/26/94 (11751). Kyodo (Tokyo), 8/24/94 (11751).

### PAKISTAN WITH GERMANY

Fall 1993

In 6/94 a prosecutor's office in Stuttgart reveals that in the fall of 1993 the German Federal Customs Criminal Office (ZKA) interdicted a shipment of 1,000 preforms for scoops in gas centrifuges at the Stuttgart Airport; the preforms were en route to Pakistan from the German firm Team GmbH. ZKA officials say that evidence shows that prior to the raid, Team GmbH successfully shipped similar preforms, labelled as ball point pen bodies, to Pakistan. Investigative sources say Pakistan may have received several thousand preforms and has the capability to manufacture them into scoops based on centrifuge design information stolen from Urenco in the 1970s. Western officials say the discovery of the preforms shows Pakistan is replacing its oldest centrifuges on a

machine-by-machine basis, which would not be done in an advanced centrifuge program. A German export official notes that Pakistan and other proliferant nations are now targeting "small metalworking firms with no experience in nuclear component manufacturing" which may not be aware of the buyers' intended end-use for their products.

Mark Hibbs, *NuclearFuel*, 6/20/94, pp. 9-11 (11896).

8/3/94

At a press briefing in New Delhi, a German official of the External Affairs Ministry says that the German government has taken action against German firms covertly supplying nuclear technology to Pakistan and has deported two Pakistani diplomats who were involved in the transactions.

*Asian Recorder*, 8/27/94-9/2/94, pp. 24201-24202 (11757).

### PAKISTAN WITH INDIA

8/94

It is reported that India has proposed two nuclear arms control measures to Pakistan: the expansion of an existing agreement not to attack one another's nuclear facilities to encompass the civilian population and economic centers, and a "no-first-use" doctrine. Indian analysts argue that Pakistan can no longer justify not responding to India's offer now that "the Pakistani bomb has come out of its closet."

*Asian Age*, 8/31/94; in *International Security Digest*, 9/94, p. 5 (11748). K. Subrahmanyam, *Economic Times* (New Delhi), 9/14/94 (11748).

8/25/94

Indian Junior Foreign Minister Salman Khursheed says in a statement to the Indian parliament that India will recommend an international response to former Pakistani Prime Minister Nawaz Sharif's declaration that Pakistan possesses a nuclear weapon. According to Khursheed, reports that Pakistan is smuggling nuclear material prove that Islamabad is secretly procuring material for its weapons program by any means possible.

Alistair Lyon, Reuter, 8/25/94; in Executive News Service, 8/25/94 (11752). K.K. Katyal, *Hindu* (International Edition), 9/3/94, p. 5 (11752). *Asiaweek*, 9/14/94, p. 32 (11752).

9/1/94

It is reported that India has rejected a Pakistani proposal to issue a joint declaration denouncing the use of nuclear weapons.

*Daily Telegraph*, 9/1/94 (11748).

#### PAKISTAN WITH IRAN

Mid-9/94

Iranian officials say the U.S. "exerted heavy pressure on Pakistan" to block the visit of Iranian engineers and technicians to the construction site of Pakistan's Chinese-origin Chashma pressurized water reactor.

Mark Hibbs, *NuclearFuel*, 9/26/94, pp. 9-10 (11993).

#### PAKISTAN WITH JAPAN

9/94

Pakistani news sources state that Pakistani Prime Minister Benazir Bhutto will formally report to Japanese Prime Minister Tomiichi Murayama that Pakistan does not have nuclear weapons. Bhutto's announcement is designed to assure the release of a 50 million yen aid package which the Japanese government suspended after former Pakistani Prime Minister Nawaz Sharif stated that Pakistan did indeed possess nuclear weapons.

Kyodo (Tokyo), 9/13/94 (11755).

#### PAKISTAN WITH MULTI-COUNTRY GROUP

7/94

It is reported that the European Nuclear Research Centre (CERN), an organization based in Geneva which studies high energy sub-nuclear physics, has offered to cooperate with Pakistan. CERN Director General Llewellyn Smith assured Pakistan Atomic Energy Commission (PAEC) Chairman Ishfaq Ahmad of CERN's intent to cooperate when Ahmad recently visited Geneva.

*Pakatom*, 7/94 (11754).

#### PAKISTAN WITH PRC

6/94

China refuses a Pakistani request for Chinese scientists to "correct" Pakistan's nuclear weapons program and denies a Pakistani request to use China's Lop Nor test range.

Aleksandr Sychev, *Izvestiya* (Moscow), 8/20/94, p. 3; in FBIS-SOV-94-162, 8/22/94, p. 16 (11895).

7/94

A group of 61 Pakistani engineers and scientists are undergoing formal training in China in the operation and maintenance of a nuclear plant.

*PakAtom*, 7/94 (11753).

#### PAKISTAN WITH RUSSIA, GERMANY, AND POLAND

8/17/94

A plutonium smuggling operation involving a Pakistani, a German, and two Poles is uncovered in Berlin. Based on documents seized from the dealers, German authorities assert that the intended recipient for the plutonium is Pakistan; Russia is named as the origin point for the fissile material.

J. N. Dixit, *Indian Express* (New Delhi), 8/30/94 (12017). *Jansatta* (New Delhi), p. 6; in JPRS-TND-94-017, 9/8/94, p. 21 (12017). *Indian Express* (New Delhi), 8/20/94, p. 8; in JPRS-TND-94-017, 9/8/94, p. 20 (12017). Aleksandr Sychev, *Izvestiya*, 8/20/94, p. 3 (12017). Press Association (London), 8/18/94; JPRS-TND-94-017, 9/8/94, p. 47 (11587).

#### PAKISTAN WITH RUSSIA AND INDIA

8/24/94

It is reported that during an official visit to Moscow in 8/94, Indian Home Minister S. B. Chavan plans to discuss the migration of Russian nuclear specialists to Pakistan with Russian leaders.

All India Radio (Delhi), 8/24/94; in FBIS-SOV-94-167, 8/29/94, p. 12 (11640).

#### PAKISTAN WITH SAUDIA ARABIA

Early 1970s

Saudi Arabia begins funding Pakistan's budding nuclear program in the early 1970s in exchange for a nuclear guarantee, according to claims made in 7/94 by former Saudi diplomat Mohammed al-Khilewi, who defected in 5/94. According to the agreement signed by the two countries, Pakistan would use its nuclear arsenal to respond to any nuclear attack against Saudi Arabia.

Marie Colvin, *Sunday Times* (London), 7/24/94 (11996). Paul Lewis, *New York Times*, 8/7/94, p. 20 (11995).

1985

After seeking to obtain nuclear weapons from Pakistan and Iraq, Saudi Arabia begins "to think seriously about starting its own nuclear weapons program", according to former Saudi diplomat Mohammed al-Khilewi.

Paul Lewis, *New York Times*, 8/7/94, p. 20 (11995).

#### PAKISTAN WITH UNITED STATES

7/94

Pakistani President Farooq Leghari states in an interview that recent bilateral talks with the U.S. have succeeded in abating U.S. pressure on Pakistan to roll back its nuclear program. Farooq says that Pakistani officials have told the U.S. that Pakistan will not allow unilateral inspections of its nuclear facilities.

Radio Pakistan Network (Islamabad), 6/19/94; in JPRS-TND-94-014, 7/13/94, p. 31 (11604).

9/9/94

U.S. Ambassador to Delhi Frank Wisner states in an interview with the *Times of India* that the U.S. will not supply F-16 aircraft to Pakistan, even though Pakistan has already purchased the planes. Wisner says that the decision not to supply the planes will contribute to halting the arms race between India and Pakistan. The Clinton administration has considered supplying the planes to Pakistan in exchange for Pakistan committing to end its nuclear program.

*Guardian*, 8/10/94 (11761).

9/24/94

U.S. Secretary of Energy Hazel O'Leary says the U.S. and Pakistan are considering a co-operation agreement for nuclear power safety. O'Leary says she has spoken with Pakistan Atomic Energy Commission (PAEC) Chairman Ishfaq Ahmad about possible cooperation and adds that she is "open to continue the discussions."

Shahid-ur-Rehman Khan, *Nucleonics Week*, 9/29/94, pp. 6-7 (12005).

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## PEOPLE'S REPUBLIC OF CHINA

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### INTERNAL DEVELOPMENTS

6/94

It is reported that officials in both the PRC and South Korea are rethinking plans for fast breeder reactors (FBRs).

Peter McKillop, *Newsweek* (International Edition-Atlantic), 6/13/94, pp. 20-25 (11884).

6/8/94

U.S. government officials announce that China will conduct an underground nuclear test within days at the Lop Nor site in Xinjiang Province. One official states that the Chinese are currently sealing a nuclear device in a test shaft using concrete and can carry out the test as soon as the sealing is complete.

*Washington Times*, 6/9/94, p. A15 (11509).

6/10/94

China's Foreign Ministry announces that China conducted an underground nuclear test hours earlier. China does not divulge the site of the test nor the size of the explosion, but London's Verification Technology Information Center (VERTIC) identifies the location as the Lop Nor test site in Xinjiang province and estimates the force at between 10 and 60 kilotons of TNT. The U.S. and Japan release statements expressing disapproval of the test. VERTIC has stated that China will try to conduct five or six more

nuclear tests before it halts its testing program. The tests are allegedly designed to develop MIRVed missiles, and improve mobile ICBMs and submarine-launched ballistic missiles. China says that the U.S. has conducted 25 times as many nuclear tests as China and claims its efforts to improve its nuclear technology are not for offensive military purposes.

John Leicester, *Washington Times*, 6/11/94, pp. A1, A9 (11974). *Program for Promoting Nuclear Non-proliferation Newsbrief*, 2nd Quarter 1994, p. 10 (11974).

7/7/94

A group of geophysical experts from Russia, Kazakhstan, and Kyrgyzstan report that China's 6/10/94 underground nuclear test resulted in a discharge of nuclear particles in regions west of China. Russia's Ministry of Atomic Energy, however, states that the test was an "ideally clean explosion."

Boris Mainayev, *Itar-Tass*, 7/7/94; in *JPRS-TEN-94-019*, 8/5/94, p. 69 (11878). Beronika Romanenkova, *Itar-Tass*, 7/7/94; in *JPRS-TEN-94-019*, 8/5/94, p. 5 (11878).

7/19/94

Chinese newspapers report that Chinese Premier Li Peng invites foreign companies to participate in its nuclear program.

*Reuter*, 7/19/94 (11876).

9/4/94

At a press conference in Moscow, Chinese Foreign Minister Qian Qichen neither denies nor confirms rumors of Chinese plans to conduct a nuclear test in 10/94.

*Itar-Tass*, 9/4/94; in *FBIS-SOV-94-172*, 9/6/94, pp. 19-20 (11605).

9/6/94

At an IAEA conference in Vienna, Deputy Director of China's Bureau of Nuclear Power Shen Wen Quan states that the PRC plans to attract foreign investment and expertise and import equipment and technology for its nuclear program.

Steve Pagani, *Reuter*, 9/6/94; in *Executive News Service*, 9/6/94 (11826).

### PRC WITH CANADA

5/30/94

A spokesperson for Canadian Minister of Trade Roy MacLaren states that Canadian government officials have a mandate from the Ministers of Trade, External Affairs, and Natural Resources to negotiate a nuclear cooperation agreement with the China National Nuclear Corp. (CNNC) as a precursor to nuclear trade. The spokesperson adds that the Canadian government has already worked with its embassy in Beijing and Atomic Energy of Canada Ltd. (AECL) in completing a market assessment of China and hopes to finalize a bilateral agreement in summer 1994. AECL sees the potential to sell up to 10 Candu reactors to China. China is paying attention to a joint feasibility study by the U.S. Department of Energy, Canada's AECL, and South Korea's Atomic Energy Research Institute on the reuse of spent pressurized water reactor fuel to fuel Candus. China also views favorably the performance of South Korea's Candu reactor.

Ray Silver and Margaret Ryan, *Nucleonics Week*, 6/2/94, p. 16 (11904).

### PRC WITH FRANCE

4/94

Using French technology, China begins fabricating fuel at its Yibin plant for its 900 MWe reactors. France also trained Chinese technicians at its Franco-Belge de Fabrication des Combustible's Roman plant to work at Yibin.

*Nuclear News*, 6/94, p. 52 (11510).

9/7/94

China Nuclear Energy Industrial Corporation (CNEIC) signs a letter of intent to purchase parts for the nuclear islands of two Chinese-designed 600 MW blocks at Qinshan from Framatome of France. CNEIC plans to begin constructing the units in 1995. France and CNEIC had signed a cooperation agreement in 7/92 that allows China to import French technology to upgrade its indigenous 300 MW pressurized water reactors (PWRs) to 600 MW PWRs. It is reported that China plans to extend its

Daya Bay (Guangdong) nuclear project with as many as four 1000 MW plants. A final decision on the extension is expected by early 1996. Since Framatome built the islands for the first two units at Daya Bay, it is in a good position to be involved in the extension.

*ENS NucNet News*, 9/15/94 (11877). Framatome; in *La Correspondance Nucleaire* (Societe Francaise d'Énergie Nucleaire), 9/7/94 (11877).

## PRC WITH GERMANY

6/28/94

*Westdeutsche Allgemeine Zeitung* reports that a 7/94 visit to Germany by Chinese Premier Li Peng will include discussion of Germany's disposal of radioactive waste in China. Federal Environment Minister Klaus Toepfer and officials from Germany's nuclear industry deny that such a discussion is planned.

*DPA* (Hamburg), 6/28/94; in JPRS-TEN-94-018, 7/12/94, p. 52 (11976).

7/94

Officials accompanying Chinese Premier Li Peng on a visit to Germany state that China is interested in receiving spent fuel storage technology from German industry. In anticipation of a technology transfer agreement between Germany and China to be signed in 7/94, the German Federal Ministry of Economics had looked at plans from German industries to provide China with technology for interim and long-term waste disposal. German officials stated that the Economics Ministry was satisfied the technology would not be used to develop nuclear weapons.

Mark Hibbs, *Nucleonics Week*, 7/7/94, pp. 1, 13-14 (11976).

8/24/94

The German Office of Foreign Information prints a brochure, "Foreign Trade Opportunities," which includes an offer from China to sell 5 kg of metallic lithium at \$1.71 million per kg for Li-6 and \$1.81 million per kg for Li-7. The seller is listed as China Harbin National Medicines and Health Products. According to a nuclear expert, Li-6 is only used for nuclear weapons.

*Kurier*, 8/24/94 (11602).

## PRC WITH IRAN

Mid-6/94

Iran's Interior Ministry acknowledges the 6/7/94 kidnapping of a Chinese nuclear engineer working with a group of Chinese experts for the Iranian Atomic Energy Organization (IAEO). The Chinese experts are assisting with the construction of uranium enrichment plants at Rudan in Shiraz.

*Intelligence News Letter*, 6/23/94, p. 5 (11850).

## PRC WITH JAPAN

9/2/94

Japan's Chubu Electric Power Co. announces its intention to purchase a total of 250 short tons of uranium concentrate (yellowcake) from the China Nuclear Energy Industry Corporation from 1995 through 2000, at 50 short tons per year. Japan will ship the yellowcake to North American or European conversion plants.

Kyodo (Tokyo), 9/2/94; in FBIS-EAS-94-174, 9/8/94, p. 8 (11887). Japan Atomic Industrial Forum; in *ENS NucNet*, 9/7/94 (11512).

## PRC WITH KYRGYZSTAN

7/94

Following the PRC's 6/10/94 nuclear test at Lop Nor—the third such test in less than two years—Kyrgyz Deputy Foreign Minister A. Aytmatov delivers a message of concern to China's ambassador in Bishkek, Pan Ranglin. Kyrgyzstan opposes nuclear testing on the grounds that it threatens the health of the region's inhabitants and undermines negotiations on a comprehensive test ban treaty. China expresses its willingness to ban all nuclear testing if a corresponding international treaty is signed prior to 1997.

Vladimir Berezovskiy, *Rossiyskaya Gazeta* (Moscow), 7/21/94, p. 6; in FBIS-SOV-94-142, 7/25/94, p. 59 (11566).

## PRC WITH NORTH KOREA

6/6/94

A spokesman for the Chinese Foreign Ministry says that China will "seriously" consider a Russian proposal to solve the North

Korean nuclear problem through an international conference. However, the spokesman adds that China envisions bilateral talks between North Korea and the IAEA, North Korea and the U.S., and North Korea and South Korea as the best means to solve the dispute. According to diplomatic sources, China and North Korea will maintain an "active dialogue" with each other over the problem.

Pavel Spirin and Vyacheslav Tomilin, *Itar-Tass* (Moscow), 6/6/94; in FBIS-SOV-94-109, 6/7/94, p. 3 (11838).

6/7/94

It is reported that China will veto a U.N. Security Council decision to impose economic sanctions against North Korea. Chinese Minister-Counsellor at the Chinese Embassy in Moscow Sui Tsin says that any reports indicating possible Chinese support of U.N. sanctions are false, and adds that China supports negotiations and compromise as the means to resolve the problem.

Andrey Kirillov, *Itar-Tass* (Moscow), 6/7/94; in FBIS-SOV-94-109, 6/7/94, p. 3 (11835). Simon Long, *Guardian*, 6/7/94 (11835).

6/9/94

Chinese Foreign Ministry spokesman Shen Guofang announces that China does not want U.N. sanctions to be imposed on North Korea because the sanctions will provoke a conflict between the states involved and cause undesirable repercussions. Shen notes the importance of "patience and time" for the solution of the North Korean nuclear issue, and encourages further negotiations. According to Western officials, China's stance reflects an attempt to maintain good relations with North Korea.

David Schlesinger, *Reuter*, 6/9/94; in Executive News Service, 6/9/94 (11836). Tony Walker, *Financial Times*, 6/10/94, p. 8 (11836).

6/13/94

Chinese Central Military Commission Vice-Chairman Lui Huaqing tells North Korean Army Chief of Staff Choi Gwang that China wants to resolve the North Korean nuclear issue through diplomatic means and negotiations between all parties involved, and that China's "basic goals for the Korean Peninsula [are] denuclearization, peace, and stability" and not the imposition of sanctions against North Korea.

Reuter, 6/13/94; in Executive News Service, 6/13/94 (11942).

**8/17/94**

It is reported that U.S. Assistant Secretary of State Robert Gallucci will go to the capitals of South Korea, China, Russia, and Japan to raise \$4 billion needed to pay for the construction of light water reactors in North Korea, provided North Korea allows inspections of two undeclared nuclear facilities. South Korean officials say that the U.S. will not contribute to the cost of building the light water reactors because U.S. law prohibits financial exchanges with countries categorized as "hostile."

Yonhap (Seoul), *Washington Times*, 8/18/94, p. A13 (12001). *Washington Times*, 8/19/94, p. A16 (12001).

**9/25/94**

South Korea's Ministry of Foreign Affairs reports to its National Assembly that China has indicated that it would be willing to store North Korea's spent fuel rods if the process is financed by a source other than China. China had previously rejected a U.S. proposal of this nature.

KBS-1 Radio Network (Seoul), 9/25/94; in FBIS-EAS-94-1865, 9/25/94 (12011).

**PRC WITH RUSSIA**

**1994**

Sun Guangdi, chief engineer for nuclear power at the China National Nuclear Corporation, confirms that the design of two VVER-1000s — which will be supplied by Russia to Liaoning, China's northeast industrial province — has begun. The plant will be located at Wafangdian.

*Nuclear Europe Worldscan*, 5-6/94, p. 25 (11695).

**6/94**

Russia and China are jointly carrying out technical and economic feasibility studies to build two VVER-1000s in China's Liaoning province for a barter exchange worth \$2.5 billion.

Chuanying Wang, *Nuclear Europe Worldscan*, 7/94-8/94, pp. 46, 48 (11876). Chen Zhaobo; in *ENS NucNet*, 6/21/94 (11876).

**8/94**

German Minister Bernd Schmidbauer discloses in an intelligence analysis that in 1992, the PRC's Army General Staff published plans for locating and recruiting Russian nuclear experts.

Heinz Vielain, *Welt Am Sonntag* (Hamburg), 8/21/94, pp. 1-2; in JPRS-TND-94-017, 9/8/94, pp. 43-44 (11732).

**8/23/94**

It is reported that the Russian representative from Sverdlovsk Oblast, Vitaliy Mashkov, sent a letter to the Russian government protesting a plan by the Ministry of Atomic Energy to help China construct a centrifuge enrichment plant. Mashkov believes that the Chinese will use the technology to narrow the gap between Russian and Chinese science and will, in turn, eventually dominate the market for such technology. In return for the assistance on the centrifuge plant, China will place an order with the Ministry of Atomic Energy for construction of a nuclear power plant.

Aleksandr Pashkov, *Izvestiya*, 8/23/94, p. 2 (11805).

**9/2/94**

Chinese President Jiang Zemin begins talks with Russian leaders in Moscow; the talks are to culminate in the signing of a bilateral agreement under which China and Russia will detarget their nuclear missiles.

G. Hutchings, *Daily Telegraph*, 9/2/94 (11511).

**PRC WITH SAUDIA ARABIA**

**1/10/89**

The China Nuclear Energy Industry Corporation (Beijing) reportedly sends a letter to Saudi Prince Abdel Rahman, offering to sell the Saudis miniature neutron source reactors for an unspecified price, and to give the Prince five percent in commission, according to a document produced in 7/94 by former Saudi diplomat Mohammed al-Khilewi, who defected in 5/94.

Paul Lewis, *New York Times*, 8/7/94, p. 20 (11995).

**2/5/89**

Saudi Prince Abdel Rahman, returning from a visit to China's nuclear industries, writes to King Khalid University's dean of research

that Saudi Arabia needs a "nuclear reactor and training program" and sends him documents on the reactor project, according to an English translation of a letter produced by former Saudi diplomat Mohammed al-Khilewi. Khilewi claims that Saudi Arabia purchased at least two of the research reactors as part of its secret effort to acquire nuclear weapons.

Marie Colvin and Peter Sawyer, *Sunday Times* (London), 8/7/94, p. 17 (11995). Paul Lewis, *New York Times*, 8/7/94, p. 20 (11995).

**PRC WITH SOUTH KOREA**

**4/11/94**

It is reported that the PRC and India will each supply South Korea with 100 metric tons of heavy water, to be used in three 600 MW Candu-type reactors under construction at Wolsung, while Canada will supply the remaining heavy water requirements. The deal with India is worth \$23 million.

BBC World Service, 4/11/94; in *Programme for Promoting Nuclear Nonproliferation Newsletter*, 2nd Quarter 1994, p. 11 (11871). *Nuclear Engineering International*, 6/94, p. 10 (11614).

**6/2/94**

It is reported that as part of a two-year maintenance and operations contract signed in 12/93 between the Korea Electric Power Corp. (Kepeco) and the management of the PRC's Daya Bay (Guangdong) nuclear plant, six Kepeco nuclear experts visited the Guangdong plant. Chinese engineers are to visit Kepeco stations in 6/94.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

**PRC WITH UKRAINE**

**6/30/94**

PRC Ambassador to Ukraine Zhang Zhen and Ukrainian Supreme Council Chairman Oleksandr Moroz discuss the benefits of expanding technical, scientific, and economic relations between their two countries. Zhen and Moroz agree that cooperation in these areas has yet to reach its potential.

UT-1 Television Network (Kiev), 6/30/94; in FBIS-SOV-94-127, 7/1/94, p. 41 (11658).

**PRC WITH UNITED STATES**

**9/30/93**

The U.S. Department of Energy authorizes B&W Nuclear Service Co. to exchange nuclear plant operation safety information between the B&W Owners Group and the Framatome Owners Group; the PRC and South Africa are members of the latter group.

*NuclearFuel*, 7/4/94, p. 14 (11824).

**6/94**

According to the Piers import record system of the Journal of Commerce, U.S. Nuexco Trading Corp. imports 207,400 pounds of low-enriched uranium from China.

Nuclear Energy Industry Corp. *NuclearFuel*, 8/29/94, p. 17 (11907).

**8/94**

The U.S. Defense Intelligence Agency produces a report for the U.S. Senate Intelligence Committee which indicates that China continues to make questionable transfers of nuclear technology.

Bill Gertz, *Washington Times*, 8/18/94, p. A3 (11873).

**8/4/94**

In a speech before the U.N. Conference on Disarmament, which is currently negotiating a comprehensive test ban treaty (CTBT), U.S. Arms Control and Disarmament Agency Director John Holum urges China to join other nuclear weapons states in a moratorium on nuclear tests. China wants to include a no-first-use clause in the CTBT, but also wants to conduct additional tests before it will fully support a treaty.

*Washington Times*, 8/6/94, p. A11 (11906). *Inside the Pentagon*, 7/15/94, pp. 1-2 (11906). Evan S. Medeiros, *Christian Science Monitor*, 6/21/94, p. 16 (11906).

**SOUTH AFRICA**

**INTERNAL DEVELOPMENTS**

**3/94**

A group of 16 scientists laid off from South Africa's nuclear weapons program accuses the South African government of not fully disclosing all aspects of Pretoria's nuclear program. The group also believes South Africa has not completely disposed of all of its nuclear capability.

*Programme for Promoting Nuclear Nonproliferation Newsletter*, 2nd Quarter 1994, p. 19 (11823).

**6/27/94**

South Africa's intelligence service chief Mike Louw testifies before the South African Parliament that there is an increase in foreign spies seeking South Africa's nuclear weapons technology.

*Washington Times*, 6/30/94, p. A18 (11606).

**8/18/94**

South Africa's Atomic Energy Corporation (AEC) Chief Executive Waldo Stumpf testifies before South Africa's Parliament that AEC needs outside investment to construct a molecular laser isotope separation (MLIS) pilot plant. AEC plants to build a 10,000 SWU/year capacity pilot plant at Pelindaba, but Stumpf says construction will depend in part on the "export possibilities" of the plant's enrichment services. Stumpf adds that cooperation could involve building a laser enrichment plant based on South Africa's technology in another country. Stumpf reports that AEC is negotiating with a large Western firm to establish a joint venture with AEC for the construction of the pilot plant, and that the firm's home government has approved of the deal.

Ann MacLachlan, *NuclearFuel*, 8/29/94, pp. 1-2 (11825). *Nuclear News*, 10/94, p. 65 (11825).

**SOUTH AFRICA WITH FRANCE, GERMANY, AND UNITED KINGDOM**

**3/94**

A group of 16 scientists laid off from South Africa's nuclear weapons program alleges that the equipment used to produce the weapons was obtained from France, Germany, and the U.K.

*Programme for Promoting Nuclear Nonproliferation Newsletter*, 2nd Quarter 1994, p. 19 (11823).

**SOUTH AFRICA WITH IAEA**

**Late 9/94**

The IAEA General Conference reinstates South Africa to a permanent seat on the Board of Governors by designating it the most advanced nuclear country in Africa. In 1976 the African Group of nations at the IAEA had removed South Africa from this position due to Pretoria's apartheid policies.

Mark Hibbs, *Nucleonics Week*, 9/29/94, p. 6 (12007).

**SOUTH AFRICA WITH ISRAEL**

**7/94**

Armaments Corporation of South Africa (ARMSCOR) head Tielman de Waal denies allegations that South Africa developed nuclear weapons in conjunction with Israel.

Channel Africa Radio; in *Africa Intelligence Report*, 7/14/94 (11544).

**SOUTH AFRICA WITH UNITED STATES**

**9/30/93**

The U.S. Department of Energy authorizes B&W Nuclear Service Co. to exchange nuclear plant operation safety information between the B&W Owners Group and the Framatome Owners Group; South Africa and the PRC are members of the latter group.

*NuclearFuel*, 7/4/94, p. 14 (11824).

**4/8/94**

The U.S. Department of Energy issues authorization, valid for three years, for two nuclear reactor specialists to train operators

at South Africa's Koeberg nuclear reactor facility.

*NuclearFuel*, 8/15/94, pp. 14-15 (11826).

#### 6/21/94

The U.S. Department of Energy issues authorization for Westinghouse to provide South Africa's Eksom with support for "operation, maintenance, repair, and servicing" for the reactors and nuclear fuel at its Koeberg nuclear facility.

*NuclearFuel*, 8/15/94, pp. 14-15 (11826).

#### 8/29/94

The U.S. removes Argentina, Brazil, Chile, and South Africa from a list of countries (Section 810.8(a) list of 10 CFR Part 810) requiring specific authorization before U.S. firms can assist with nuclear power reactors.

Kathleen Hart, *NuclearFuel*, 8/29/94, p. 5 (11607).

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## SOUTH KOREA

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### INTERNAL DEVELOPMENTS

#### 6/94

It is reported that officials in both South Korea and the PRC are rethinking plans for fast breeder reactors (FBRs).

Peter McKillop, *Newsweek* (International Edition-Atlantic), 6/13/94, pp. 20-25 (11884).

#### 6/2/94

It is reported that the first attempts at exporting South Korean nuclear technology are underway, and that South Korean officials are discussing openly when and how South Korea should penetrate the nuclear export market. South Korea has already begun the process of creating export partnerships with vendors who have formerly sold pressurized water reactor and pressurized heavy water reactor technology to Korean industry.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

#### Early 6/94

South Korean Minister for Unification Lee Hong-koo states that South Korea should weigh the benefits of developing its own plutonium separation infrastructure given that North Korea is engaged in clandestine reprocessing operations and that the U.S. may be softening its commitment to prevent the DPRK from obtaining nuclear weapons.

Mark Hibbs, *NuclearFuel*, 6/6/94, pp. 6-7 (11968).

#### SOUTH KOREA WITH CANADA AND TURKEY

#### 6/2/94

It is reported that Atomic Energy of Canada Ltd. (AECL) is considering working with the Korea Power Engineering Corp. (Kopec) and Korea Heavy Industries (KHIC) in its planned bid for Turkey's Akkuyu nuclear reactor project.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

#### SOUTH KOREA WITH FRANCE

#### Mid-4/94

Korea Atomic Energy Research Institute (Kaeri) Vice President of Nuclear Power Projects Lee Byung-ryung signs a contract with Framatome for a joint study of the possibility of applying French instrumentation and control (I & C) systems in Korean units.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

#### 7/25/94

Framatome announces that two of its subsidiaries, Framema and FBFC, have been awarded contracts by the Korean Nuclear Fuel Company (KNFC) to build a UF<sup>6</sup> to UO<sup>2</sup> conversion plant that will use the French company's dry path process.

*AFP Sciences*, 7/28/94, p. 20; in JPRS-TND-94-017, 9/8/94, pp. 50-51 (11666).

#### SOUTH KOREA WITH INDIA, PRC, AND CANADA

#### 4/11/94

It is reported that the PRC and India will each supply South Korea with 100 metric tons of heavy water, to be used in three 600 MW Candu-type reactors under construction at Wolsung, while Canada will supply the remaining heavy water requirements. The deal with India is worth \$23 million.

BBC World Service, 4/11/94; in *Programme for Promoting Nuclear Nonproliferation Newsletter*, 2nd Quarter 1994, p. 11 (11871). *Nuclear Engineering International*, 6/94, p. 10 (11614).

#### SOUTH KOREA WITH NORTH KOREA

#### 6/6/94

South Korean President Kim Young-sam warns North Korea that "reckless adventurism" [referring to North Korea's declaration that a war will begin if the U.N. implements sanctions against it] will lead Pyongyang to self-destruction, and adds that he is determined to prevent North Korea from getting a nuclear bomb. North Korean Foreign Minister Kim Young-nam says that the only way to solve the nuclear problem on the Korean Peninsula is to hold direct talks between South Korea and North Korea.

Interfax (Moscow), 6/6/94; in FBIS-SOV-94-109, 6/7/94, p. 44 (11834). Paul Shin, *Washington Times*, 6/7/94, p. A18 (11837).

#### 6/10/94

A South Korean government spokesman says that South Korea wants to see agreement at the earliest possible date on a U.N. sanctions resolution to pressure North Korea into cooperating on the nuclear issue.

Reuter, 6/10/94; in *Executive News Service*, 6/10/94 (11939).

#### 6/15/94

South Korean officials say that former U.S. President Jimmy Carter is delivering an informal message from South Korea stating that if North Korea takes action to eliminate the doubts surrounding its nuclear arms program, then South Korea will cooperate with diplomatic and economic measures.

Reuter, 6/15/94; in *Executive News Service*, 6/16/94 (11913).

**6/24/94**

It is reported that the South Korean government will initiate a program to construct light water reactors for North Korea when a bilateral or multilateral agreement for nuclear power aid for North Korea is signed between South Korea, the U.S., and Japan. The construction of one light water reactor for North Korea is estimated to cost \$1-\$1.5 billion over a 10-year period [other sources estimate a cost of \$2 billion].

Carol Giacomo, *Reuter*, 6/23/94; in *Executive News Service*, 6/23/94 (11936). Kim Chae-mok, *Munhwa Ilbo* (Seoul), 6/24/94; in *JPRS-TND-94-014*, 7/13/94, p. 6 (11936).

**6/28/94**

At a preparatory meeting in Panmunjom, North Korea and South Korea agree to hold a three-day summit meeting between their presidents in Pyongyang beginning on 7/25/94. The place and time for an additional summit is to be determined during the first summit and the agenda remains ambiguous. South Korean President Kim Young-sam is expected to suggest during the summit that North Korea and South Korea consider resuming the 1991 declaration on the denuclearization of the Korean peninsula, which provides for mutual monitoring of their nuclear programs.

David E. Sanger, *New York Times*, 6/29/94, pp. A1, A6 (11952). Shim Jae-hoon, *Far Eastern Economic Review*, 7/14/94 (11915).

**7/11/94**

North Korea announces the indefinite postponement of the North-South Korean summit scheduled for 7/25/94-7/27/94 due to the death of President Kim Il-sung. South Korean Foreign Minister Han Sung-joo responds to the delay by saying the "spirit of the agreement [to hold a summit remains] very much valid," and emphasizing that a North-South summit is not possible until the new leadership in North Korea is consolidated.

Hugo Gurdon and Robert Guest, *Daily Telegraph*, 7/12/94 (11857). Cameron W. Barr, *Christian Science Monitor*, 7/12/94 (11857). T.R. Reid, *Washington Post Service*; in *International Herald Tribune*, 7/12/94 (11857).

**8/15/94**

South Korean President Kim Young-sam offers North Korea the technology and capi-

tal to build light water reactors if North Korea allows IAEA inspections of its nuclear facilities. North Korean Deputy Foreign Minister Kang Sok-ju neither agrees to the South Korean offer nor rejects it.

Andrew Pollack, *New York Times*, 8/15/94, p. A1 (11960). *Washington Times*, 8/15/94, p. A11 (11960).

**8/16/94**

South Korean Foreign Minister Han Sung-joo says that North Korea is obliged to accept South Korean-style light water reactors because there is no other realistic solution. South Korean officials say that no other country besides South Korea has offered to finance as much of the cost, and that construction of a South Korean light water reactor for North Korea will increase cooperation in inter-Korean affairs.

Reuter, 8/18/94; in *Executive News Service*, 8/18/94 (11962). *Washington Times*, 8/19/94, p. A17 (11962).

**8/18/94**

South Korean President Kim Young-sam says that any nuclear reactor accepted by North Korea must be a South Korean-style light water reactor using the South's capital and technology.

Reuter, 8/18/94; in *Executive News Service*, 8/18/94 (11962).

**8/20/94**

North Korea rejects South Korea's proposed exchange of light water reactors for full IAEA inspections of its nuclear facilities. North Korea's Foreign Ministry states that inspections of its nuclear facilities comes at the expense of North Korea's sovereignty, but adds that North Korea "is willing to involve [itself] in clearing up 'nuclear suspicion' in the future." South Korean Deputy Prime Minister Lee Hong-koo says that South Korea will offer to help North Korea build a light water reactor and supply it with electricity only if North Korea allows full inspections of all its nuclear sites as required by the NPT. Lee also maintains that the U.S. and Japan should help pay for the light water reactors, which will cost about U.S.\$1 billion. According to South Korean officials, South Korea wants the light water reactors to be a South Korean design and manufacture.

AP; in *New York Times*, 8/21/94 (12012).

## SOUTH KOREA WITH NORTH KOREA AND UNITED STATES

**7/21/94**

After a meeting in Seoul between U.S. Assistant Secretary of State Robert Gallucci and South Korean Foreign Minister Han Sung-joo, the U.S. and South Korea repeat an offer of economic and diplomatic aid for North Korea if the government of North Korea will halt its nuclear weapons program. The U.S. and South Korea are willing to carry the "financial or other burdens" necessary to convert North Korean graphite-moderated nuclear reactors to light water reactors. South Korea prefers to cooperate with the U.S. and Japan to finance and build light water reactors—for which South Korea has reportedly developed 95 percent of the necessary technology—rather than have Russia provide the technology, as previously proposed by the U.S.

Reuter; in *International Herald Tribune*, 7/22/94 (11946). *Korea Newsreview*, 7/30/94, p. 5 (11946).

**7/25/94**

A North Korean Foreign Ministry spokesman warns that "if the improvement of North-South [Korean] relations is set as a 'precondition' for the improvement of the DPRK-U.S. relations at the DPRK-U.S. talks for the solution to the nuclear issue, a fatal roadblock would be erected in the way of the solution to the nuclear issue."

*Washington Times*, 7/26/94, p. 5 (11858).

**8/5/94**

North Korea rejects the U.S. offer to supply North Korea with a South Korean light water reactor and renews its request for a Russian-model reactor. The request is based on North Korea's technical experience with the Russian model, tensions between North and South Korea, and claims that the Russian reactor costs less.

Yonhap (Seoul), 8/6/94; in *FBIS-EAS-94-152*, 8/9/94, p. 47 (11955).

**8/9/94**

It is reported that the South Korean government is studying a plan whereby the U.S. and North Korea will conclude a contract for South Korea to build a light water reactor for the North. An international consor-

tium will try to pay for the construction and the South Korean government may try to supplement the construction through unification funds. North Korea does not want to use a South Korean-type reactor, but has not been as opposed to the idea as it was during talks on 8/5/94.

*Hanguk Ilbo* (Seoul), 8/10/94, p. 5; in FBIS-EAS-94-154, 8/10/94, p. 48 (11957).

#### 8/14/94

South Korean officials express approval of the agreement reached between the U.S. and North Korea on 8/12/94 at bilateral talks in Geneva, saying that the Korean Peninsula's nuclear problem is now closer to a resolution.

*Observer*, 8/14/94 (11963).

#### 8/17/94

It is reported that U.S. Assistant Secretary of State Robert Gallucci will go to the capitals of South Korea, China, Russia, and Japan to raise \$4 billion needed to pay for the construction of light water reactors in North Korea, provided North Korea allows inspections of two undeclared nuclear facilities. South Korean officials say that the U.S. will not contribute to the cost of building the light water reactors because U.S. law prohibits financial exchanges with countries categorized as "hostile." South Korean President Kim Young-sam and U.S. President Bill Clinton agree that North Korea must allow the IAEA to inspect two undeclared nuclear sites before North Korea is provided with light water reactors.

Reuter, 8/18/94; in Executive News Service, 8/18/94 (11962). *Yonhap* (Seoul), *Washington Times*, 8/18/94, p. A13 (12001). *Washington Times*, 8/19/94, p. A16 (12001).

#### 8/27/94

A North Korean radio broadcast announces that the problem concerning which country should provide the light water reactor to North Korea should be solved between the U.S. and North Korea, and that South Korea should not get involved. North Korea indicates that it will stop its current nuclear program if the U.S. supplies North Korea with the light water reactors.

Andrew Pollack, *New York Times*, 8/29/94, p. 2 (11998).

#### 9/3/94

It is reported that U.S. Assistant Secretary of State Robert Gallucci will visit Japan and South Korea beginning on 9/12/94 to coordinate the policies of the U.S., Japan, and South Korea on the provision of light water nuclear reactors to North Korea. Officials must consult on which country will provide technology or financing for the North Korean reactors since North Korea has refused proposals for light water reactors based on South Korean technology.

*Yonhap* (Seoul), 9/3/94; in FBIS-EAS-94-172, 9/6/94, p. 59 (12015).

#### 9/7/94

South Korean Foreign Minister Han Sung-joo and U.S. Secretary of State Warren Christopher meet in Washington to discuss the North Korean nuclear issue. Christopher encourages South Korea to support an inter-Korean summit, stating that the North Korean nuclear dispute cannot be solved without direct dialogue between the North and the South. South Korea wants the bilateral talks which started on 7/8/94 between the U.S. and North Korea to be linked to the progress made in inter-Korean relations. Han also wants to verify that unless North Korea is committed to replacing its nuclear technology [graphite-moderated reactors] with South Korean-type light water reactors, South Korea will not help finance the improvements to North Korea's nuclear energy program.

Lee Su-wan, Reuter, 9/5/94; in Executive News Service, 9/5/94 (11902). T.R. Reid, *Washington Post*, 9/6/94; in Executive News Service, 9/5/94 (11902). R. Jeffrey Smith, *Washington Post*, 9/8/94, p. A33 (11902).

#### SOUTH KOREA WITH PRC

#### 6/2/94

It is reported that as part of a two-year maintenance and operations contract signed in 12/93 between the Korea Electric Power Corp. (Kepco) and the management of the PRC's Daya Bay (Guangdong) nuclear plant, six Kepco nuclear experts visited the Guangdong plant. Chinese engineers are to visit Kepco stations in 6/94.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

#### SOUTH KOREA WITH RUSSIA

#### 6/3/94

At a meeting with South Korea's Minister for Trade, Industry, and Energy Kim Chol-su, Russian First Vice Premier Oleg Soskovets announces that Russia is ready to increase the annual amount of LEU supplied to South Korea from 40 tons to 100 tons.

Interfax (Moscow), 6/3/94; in FBIS-SOV-94-109, 6/7/94, p. 7 (11690).

#### 6/14/94

In parliamentary hearings, Chairman of the Russian State Committee on Atomic Energy Uriy Vishnevskiy confirms a statement by Chang Chung-Cheing, Chairman of Taiwan Energy Company, that negotiations have taken place over the possibility of storing Taiwanese nuclear waste on Russian territory. According to Chang, the Russian Research Center, which own 10 nuclear waste storage sites, agreed to reprocess and store Taiwan's nuclear waste if the two parties could settle the cost of the anticipated job. Vishnevskiy added that Russia held similar discussions with South Korean representatives, although no final agreement was signed in either of the two cases.

*Spaseniye*, 6/94, No. 12(13) (11709).

#### SOUTH KOREA WITH TURKEY

#### 4/26/94

The Korea Atomic Energy Research Institute (Kaeri) bids to help the Turkish national utility TEK with bid-document preparation and the evaluation of tenders for Turkey's planned Akkuyu nuclear station.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

#### SOUTH KOREA WITH UNITED STATES

#### 6/2/94

It is reported that according to an official of the Korea Atomic Energy Research Institute (Kaeri), Kaeri officials have talked with Southwest Research Institute and other U.S. non-destructive examination (NDE) firms concerning possible collaboration between

U.S. and South Korean NDE experts. The Southwest Research Institute has already carried out "pre- and in-service inspections" at Korean units.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

#### 6/27/94

Westinghouse says that 80 of its Vantage-5h fuel assemblies suffer from a design flaw which may cause a departure from nucleate boiling and could lead to damage to the fuel assemblies' metal surface. Both South Korea's Yonggwang-1 and Kori-3 reactors are currently using Westinghouse fuel with this design flaw. Operators of the South Korean units will have to return the fuel to the vendor, change their fuel buying plans, or revise existing reactor operations.

Wilson Dizard III, *NuclearFuel*, 7/4/94, pp. 3-4 (11870).

#### 7/94

It is reported that South Korea selects the team of Stone and Webster Engineering Corp., Battelle Pacific Northwest Labs, and Daewoo Engineering to design a fuel test loop for a research reactor near Seoul.

*Nuclear News*, 7/94, p. 53 (11593).

#### 7/8/94

At the Pentagon, U.S. Commander Joe Gradisher confirms that the withdrawal of tactical nuclear weapons from South Korea was completed in 7/92.

Michael Binyon, *Times* (London), 7/9/94 (11840).

### SOUTH KOREA WITH UNITED STATES AND CANADA

#### 6/2/94

It is reported that specialists from the Korea Atomic Energy Research Institute (Kaeri) have traveled to ABB-Combustion Engineering's office in Connecticut and to Atomic Energy of Canada's (AECL's) Ontario office to learn about Nuclear Steam Supply Systems technology.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

### SOUTH KOREA WITH UNITED STATES AND TAIWAN

#### 6/2/94

It is reported that the U.S. company ABB-Combustion Engineering, if successful in its bid for the two-unit Taiwan Power Co. [Lungmen] nuclear power plant, will work in conjunction with engineers from the Korea Atomic Energy Research Institute (Kaeri) for the design of the nuclear steam supply systems and with the Korea Power Engineering Corp. (Kopec) for the balance-of-plant work.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).

### SPAIN

#### INTERNAL DEVELOPMENTS

#### 9/94

A group of Spanish utilities with nuclear interests forms a trade association which plans to undertake research, development, and technical support on a domestic and international level. The group is exploring cooperation on several projects in Eastern Europe.

Spanish Atomic Forum; in *ENS NucNet*, 9/29/94 (11791).

#### SPAIN WITH UNITED STATES

#### 7/94

It is reported that Gamma-Metrics of the U.S. was selected to upgrade the nuclear instrumentation system at Union Electrica Fenosa's Jose Cabrera Nuclear Plant.

*Nuclear News*, 7/94, p. 55 (11593).

### TAIWAN

#### INTERNAL DEVELOPMENTS

#### 6/94

It is reported that certain officials in Taiwan believe that a fast breeder reactor (FBR) program would be a good idea, although Taiwan currently has no plans for FBR development.

Peter McKillop, *Newsweek* (International Edition-Atlantic), 6/13/94, pp. 20-25 (11884).

#### 6/23/94

It is reported that Taiwan is waiting to award contracts for its Lungmen Nuclear Power Station pending parliamentary approval of the construction budget. The Taiwanese Parliament is scheduled to vote within the week on the budget.

Donald Shapiro and Margaret Ryan, *Nucleonics Week*, 6/23/94, pp. 2-3 (11616). *Enferprese*, 6/23/94 (11550).

#### 6/28/94

Taiwan Power Company (Taipower) announces it will postpone for several months the selection of a supplier for the two nuclear reactors to be used at Lungmen, Taiwan's fourth nuclear power plant. Taipower had originally planned to announce the winning bid on 7/1/94.

Reuter, 6/28/94; in *Executive News Service*, 6/28/94 (11786).

#### 7/12/94

The Taiwanese legislature approves the NT\$112.5 billion (U.S.\$4.25 billion) budget for the completion of the Lungmen nuclear power plant. Companies bidding on the project expect contracts will be awarded in fall 1994.

Donald Shapiro, *Nucleonics Week*, 7/21/94, p. 2 (11789). Don Shapiro, *Nucleonics Week*, 7/7/94, p. 3 (11789).

## TAIWAN WITH FRANCE

7/5/94

Taiwan's Vice Minister of Economy Yang Shih-Chien and Framatome's General Director Dominique Degot sign a letter of intent for future nuclear cooperation. It is reported that Taiwan and Framatome are proposing a "strategic alliance" to penetrate the Asian nuclear technology market.

*Enerpresse*, 7/6/94 (11596).

9/94

It is reported that Framatome signed a contract with Taiwan Power Company (Taipower) to design, manufacture, and install new spent fuel racks for two pressurized water reactors at the Maanshan nuclear power station.

*Nuclear Engineering International*, 9/94, p. 2 (11615).

## TAIWAN WITH RUSSIA

6/14/94

In parliamentary hearings, Chairman of the Russian State Committee on Atomic Energy Yuri Vishnevskiy confirms a statement by Chang Chung-Cheing, Chairman of Taiwan Energy Company, that negotiations have taken place over the possibility of storing Taiwanese nuclear waste on Russian territory. According to Chang, the Russian Research Institutes, which own 10 nuclear waste storage sites, agreed to reprocess and store Taiwan's nuclear waste if the two parties could settle the cost of the anticipated job. Vishnevskiy added that Russia held similar discussions with South Korean representatives, although no final agreement was signed in either of the two cases.

*Spaseniye*, 6/94, No. 12(13) (11709).

## TAIWAN WITH UNITED KINGDOM

6/8/94

The Taiwan Nuclear Energy Society and the British Nuclear Industry Forum sign a cooperation agreement on nuclear fuel cycle services, nuclear reactor safety and service, control and instrumentation, and waste management. The agreement sets up a frame-

work for future technology transfer, cooperative development projects, technical training, information sharing, and consulting assistance.

*Nuclear Engineering International*, 9/94, p. 63 (11547).

7/94

The British Nuclear Industry Forum presents a report to the British government that cites the Taiwanese Lungmen nuclear power plant project as a prime example of export opportunities for British nuclear technology and service firms.

Pearl Marshall, *Nucleonics Week*, 7/28/94, pp. 14-15 (11790).

## TAIWAN WITH UNITED STATES

6/94

Taiwan Power Company (Taipower) awards Teledyne Brown Engineering-Engineering Services a contract to evaluate the safety-related Motor Operated Valves (MOV) at three of its nuclear power plants.

*Nuclear News*, 6/94, p. 69 (11548).

7/26/94

The U.S. Nuclear Regulatory Commission (NRC) grants final design approval to ABB-Combustion Engineering's (ABB-CE) System 80+ reactor design, an important step in ABB-CE's bid to Taiwan Power Company for the construction of two reactors [at the Lungmen site].

Dave Airozo, *Nucleonics Week*, 7/28/94, pp. 1, 10 (11788).

## TAIWAN WITH UNITED STATES AND SOUTH KOREA

6/2/94

It is reported that the U.S. company ABB-Combustion Engineering, if successful in its bid for the two-unit Taiwan Power Co. [Lungmen] nuclear power plant, will work in conjunction with engineers from the Korea Atomic Energy Research Institute (Kaeri) for the design of the nuclear steam supply systems and with the Korea Power Engineering Corp. (Kopec) for the balance-of-plant work.

Margaret L. Ryan, *Nucleonics Week*, 6/2/94, pp. 1, 10-16 (11872).