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Russian Missile Technology and Nuclear Reactor Transfers to Iran

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ABSTRACT

This report examines Russian ballistic missile and nuclear reactor technology transfers to Iran and U.S. responses to those transfers. The report analyzes Iran's ballistic missile and nuclear power programs, the significance of Russia's contributions to those programs, resulting U.S. security concerns, and Russian-Iranian cooperation from the perspectives of Moscow, Tehran, and Washington. The report describes bills in the 105th Congress that address Russian transfers of sensitive technologies to Iran, including H.R. 2709, Title I of which is the "Iran Missile Proliferation Sanctions Act." The report also summarizes existing U.S. legislation relevant to the Russian technology transfers to Iran, such as the Arms Export Control Act (P.L. 90-629), the Export Administration Act (P.L. 96-72), the Iran-Iraq Arms Nonproliferation Act of 1992 (P.L. 102-484), and the current Foreign Operations Appropriations Act (P.L. 105-118, Title II). This report builds upon CRS Report 95-641, *Russian Nuclear Reactor and Conventional Arms Transfers to Iran*, May 25, 1995 and will be further updated after Congress has completed action on relevant legislation.

Russian Missile Technology and Nuclear Reactor Transfers to Iran

Summary

Many in Congress and the Clinton Administration charge that Russian entities are assisting Iran in developing ballistic missiles. Russia is also building a nuclear power station in, and is furnishing other nuclear services to, Iran. Congress has passed legislation requiring the president to impose sanctions for missile technology transfers, arms sales, nuclear technology transfers, and large-scale investments in Iran. H.R. 2709, which includes the "Iran Missile Proliferation Sanctions Act of 1997," is one of several bills designed to tighten existing sanctions law. It was amended and passed by the Senate on May 22, 1998 and by the House on June 9 by very large bipartisan majorities. Nevertheless, President Clinton vetoed the bill on June 23 and said he would work to sustain the veto. The Administration opposes unilateral sanctions because it doubts their effectiveness on this issue and believes they could harm U.S.-Russian relations and Russia's post-Soviet transition. A veto-override attempt was postponed following president Clinton's July 15 imposition of sanctions on Russian entities suspected of missile technology transfers. However, an override vote might be affected by Iran's July 22 test of a new medium-range ballistic missile. The Administration says it gives Russian missile technology and nuclear reactor transfers high priority, but many Members of Congress are likely to cite the missile test as evidence of lack of progress on the issue.

Moscow has indirectly acknowledged that there have been missile technology transfers to Iran by Russian entities, but the Russian Government denies its own involvement and says it is upholding its commitments under the Missile Technology Control Regime (MTCR). Russian assistance appears to have significantly accelerated Iran's missile program, which reportedly is developing medium-range ballistic missiles that could threaten U.S. forces and allies throughout the region, including Israel. This threat is compounded by Iran's reported pursuit of nuclear, biological, and chemical weapons. The Administration, spurred on by strong pressure from Congress and the concerns of the Israeli Government, has made curbing Russian missile technology transfer a high priority.

Russia's 1995 decision to construct a large nuclear power station in Iran and to provide related nuclear facilities and services has also drawn sharp criticism from the Administration and the Congress, which fear an Iranian nuclear weapons program. Moscow appears determined to go ahead with this project despite the threat of U.S. economic sanctions. U.S.-Russian commercial relations might also be threatened by sanctions, and they are far more important to Russia than its commercial relations with Iran. U.S. assistance to Russia would also be threatened, but the reactor project could provide Russia with billions of dollars of hard currency earnings, far more than the amount of direct U.S. aid threatened by sanctions.

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Russian Missile Technology and Nuclear Reactor Transfers to Iran

The Issues

Many in Congress and the Clinton Administration charge that the Russian Government is directly or indirectly involved in assisting Iran to develop medium-range ballistic missiles. At the same time, Russia is building a nuclear power station in Iran and has agreed to furnish Iran with a wide range of other nuclear services.

The current issue is whether or not Russian entities should be sanctioned for transferring missile technology to Iran (as would be required by H.R. 2709), or whether such sanctions would be detrimental to U.S. efforts to dissuade Russians from transferring missile technology to Iran (as President Clinton contended in his veto of H.R. 2709). Congress may soon face this issue on a vote to override the President's veto.

Congress has expressed strong opposition to, and passed legislation requiring the president to impose sanctions for missile technology transfers, arms sales, nuclear technology transfers, and large-scale investments in Iran. On November 12, 1997, the House passed H.R. 2709 (Title I of which is the "Iran Missile Proliferation Sanctions Act"), sponsored by Representative Gilman, that would require the Administration to impose additional unilateral economic sanctions on foreign entities that contribute to Iran's efforts to develop ballistic missiles. The Administration failed to persuade the Senate to reject the bill¹, which was approved by that body with an amendment on May 22, 1998 by a vote of 90-4. On June 9, the House passed the Senate version of the bill by a vote of 392-22. Despite these apparently "veto-proof" majorities, President Clinton vetoed the bill on June 23 and said he would work to sustain the veto. His veto message said that the bill would make it harder to achieve the nonproliferation goals it is intended to serve. A veto-override attempt is expected after the July 4th recess and the president's return from China. Russian officials and news media reacted sharply to congressional passage of the bill, with newspapers warning that new economic sanctions reduce the likelihood of Duma ratification of

¹On May 20, Stephen Sestanovich, the president's special adviser on the former Soviet Union, told the Senate Foreign Relations subcommittee on Europe that sanctions would be "profoundly counterproductive to U.S. national interest with respect to Russia." Although he acknowledged that Russia had not yet succeeded in stopping the leakage of missile technology to Iran, he warned that sanctions could "risk inadvertently undermining our efforts to stop Russia's support of Iran's missile programs." President Clinton conveyed a similar message in a White House meeting with a group of Senators on the evening of May 20. Reuters; AP, May 21, 1998.

START II.² The bill's supporters question whether Moscow can or will stop the missile technology transfers without additional pressure. An effort to override the veto, scheduled for July 17, was postponed indefinitely when the Administration announced that it would impose trade sanctions on the Russian entities identified by Moscow as being investigated for possible violation of Russian export controls. On July 28, President Clinton issued an executive order that tightens U.S. restrictions on proliferation of weapons of mass destruction and their means of delivery, including Russian missile technology transfers to Iran. (See p. 22-23, below.) A White House press release that day said that pursuant to this executive order, all U.S. assistance to and trade with seven Russian entities under investigation by Russian authorities was being terminated. (See p. 11, below.)

The supplemental appropriation bill (H.R. 3579/P.L. 105-174) provides funds to enhance theater missile defense systems largely in response to Russian cooperation with Iran on missile development. The FY1998 foreign aid bill (H.R. 2159/P.L. 105-118) provides for cuts in aid to the Russian Government if it does not terminate its nuclear projects and missile technology transfers to Iran. Sanctions for improper missile technology transfers under the Arms Export Control Act, Export Administration Act, and Iran-Iraq Arms Nonproliferation Act of 1992 may also be applicable to the Russia-Iran transfers. Russia's giant gas monopoly, Gazprom, was threatened with economic sanctions under the Iran and Libya Sanctions Act (ILSA, P.L. 104-172), which penalizes foreign firms that invest in Iran's energy sector.³ The Administration, however, after a long assessment, decided in May 1998 not to impose ILSA sanctions against participants in the Iranian South Pars development project.

The Administration says it has made the missile technology transfer issue a very high priority in official and unofficial dealings with Russian officials, including the recent talks between Vice President Al Gore and former Premier Viktor Chernomyrdin⁴ in Washington (March 10-11, 1998).

Although there are recent signs of change in Iran and in U.S. policy toward Iran, there has been a strong consensus in Congress and the executive branch, shared by many foreign governments, that Iran is still "the world's leading sponsor of state terrorism," and a potential threat to U.S. and western interests. Hence, the United States has sought to keep military and weapons of mass destruction technology from Iran as part of a policy of "dual containment" of Iran and Iraq. Russia's military, political, and economic cooperation with Iran may undermine this policy and is a major source of tension in U.S.-Russian relations.

²*Russia, United States: Moscow Condemns Senate Vote on Sanctions*, FBIS, Foreign Media Note, May 26, 1998.

³*Washington Post*, March 6, 1998, p. A11. After joining the South Pars project, Gazprom turned down previously offered U.S. Ex-Im Bank credits in apparent anticipation of U.S. sanctions.

⁴President Yeltsin dismissed Chernomyrdin and his entire cabinet in a surprise move on March 23, 1998.

The Clinton Administration has made repeated high-level representations to the Russian Government to persuade it to end missile technology and nuclear reactor transfers to Iran — with mixed success. The Administration considers cooperation with post-Communist Russia, sometimes expressed in terms of “partnership,” and assistance in Russia’s transition toward democracy and a market economy to be very important U.S. goals, despite the fact that U.S.-Russian relations have soured lately, not only over Iranian issues but also because of Russian opposition to U.S. policy toward Iraq, Serbia, and NATO enlargement. Thus, the U.S. objectives of containing Iran and cooperating with Russia appear to be in conflict. Critics of the Administration are likely to point to Iran’s July 22 test of an 800-mile range missile, apparently constructed with Russian assistance, as evidence that the Administration’s approach is not succeeding.

The Clinton Administration takes the general position that while it strongly opposes some of Russia’s dealings with Iran, unilateral U.S. sanctions will not change Russian policy and, furthermore, U.S.-Russian relations are too important to be put at risk over disagreements on Iran. Sanctions have rarely been imposed against post-Soviet Russia, in part because of President Clinton’s exercise of national security waiver authority included in the FY1996 and FY1997 foreign aid appropriations bills’ sanctions focused on the nuclear reactor deal.

Russian Missile Technology Transfer to Iran

In 1987, at U.S. urging, the G-7 countries established the Missile Technology Control Regime (MTCR), aimed at limiting the proliferation of missiles and missile technology. The MTCR is an informal arrangement consisting of guidelines for transfers of missiles and related technology, and an annex listing items to be controlled. Nations that join the regime adopt the guidelines as national policy and undertake to restrain missile transfers through their export control systems. Twenty-nine countries have become partners in the MTCR, including Russia (1995).

In January 1997, an Israeli delegation told White House officials and Members of Congress that Russian firms and institutes were providing critical assistance to Iran’s missile development program. Within a short time, they said, Russian equipment and technology would help Iran overcome obstacles it had encountered in developing medium-range ballistic missiles that could deliver chemical weapons throughout the Middle East. U.S. intelligence reportedly confirmed the Israeli conclusions. The government of Israel raised the alarm in strong terms to the United States and Russia because it would be threatened by these new missiles. The transfers became a central issue of U.S.-Russian relations and have been discussed at numerous high-level bilateral meetings.⁵ The Russian transfers apparently were in violation of the MTCR guidelines and the U.S.-Russian agreement to ban new arms sales to Iran. Under certain circumstances, such transfers would trigger statutory U.S. economic sanctions. But as months passed and more details of the transfers appeared in the press, many Members of Congress questioned Russia’s

⁵*Defense News*, February 10-16, 1997, pp. 1, 40.

denials and lack of effective U.S. or Russian action to stop the flow of missile technology to Iran.

For the past few years, some Members of Congress have been frustrated by the Administration's decisions not to impose sanctions against Russian and Chinese firms that exported sensitive missile or nuclear technology. The Administration has often been able to avoid implementing the missile sanctions provisions of the Arms Export Control Act (AECA, P.L. 90-629), the Export Administration Act of 1979 (EAA, P.L. 96-72), the Iran-Iraq Arms Nonproliferation Act of 1992 (IIANA), the Foreign Assistance Act of 1961 (FAA, P.L. 87-195), and the annual Foreign Operations Appropriations Act because of exclusions, waivers, definitions that allow for broad interpretation, and the lack of certain binding requirements in the laws. These sanctions had been legislated largely during previous Administrations to put teeth into U.S. nonproliferation policy and the multilateral nonproliferation regimes, but some Members concluded they were not sufficiently rigorous and introduced bills to tighten the requirements for sanctions.

Mr. Gilman introduced The Iran Missile Proliferation Sanctions Act of 1997 (H.R. 2709; see also H.R. 2930, and S.1311) which would require the President to identify to Congress "every foreign person with respect to whom there is credible information indicating that that person" has transferred missile technology to Iran and to impose economic sanctions against that person unless the President can rebut the information or justify a waiver on grounds of national security. (See the last section of this report for a summary and status of pending legislation.) This language would close two loopholes of the AECA (sec. 73(a) and (b)) and EAA (sec. 11B(b)(1) and (2)): the first of these ties statutory sanctions to a presidential determination that the President is not required to make; the second makes sanctions inapplicable against most exporters in a country, such as Russia, that is an "adherent" to the MTCR. The proposed bill would also apply sanctions to all persons who have exported missile technology to Iran, unlike the IIANA, which ties statutory sanctions to a presidential determination that transfers are of "destabilizing numbers and types of advanced conventional weapons," and that does not explicitly include ballistic missiles in the law's definition of advanced conventional weapons. The bill might also block foreign assistance to any proliferating entity, whereas sections 498A, 620G and 620H of the FAA and Title II of the annual Foreign Operations Appropriations Acts have not been successful in blocking such assistance. The bill does, however, include authority for a presidential waiver on national security grounds.

When President Clinton vetoed H.R. 2709 on June 23, 1998, he wrote that his Administration is committed to "an unceasing effort to halt the transfer of missile technology to nations that conduct or condone terrorism and otherwise violate international norms. The stated purpose of H.R. 2709 ... is to further this effort. To the contrary, if enacted, it would damage the U.S. national interest, making it harder to achieve goals it is intended to serve." He further wrote that, "The battle against proliferation is most effective as a cooperative enterprise," implying that unilateral economic sanctions are less effective. He also said that the standard of evidence in H.R. 2709 for establishing that a person or entity had wrongly transferred missile technology is "unworkably low" and that the sanctions "are also disproportionate." He argued that the imposition of unilateral American sanctions would make it more difficult to win Russian government cooperation on the important missile

proliferation issue and perhaps on other issues such as "arms control, law enforcement, counter-narcotics and combating transnational crime."

There appears to be support in various departments of government and in the Congress for the view that sanctions have contributed to U.S. nonproliferation policies in some other situations. There is also a view (as expressed in S. 1413 and H.R. 2708, Enhancement of Trade, Security, and Human Rights through Sanctions Reform Act) that the government and Congress have, at least in some cases, used sanctions inconsistently and ineffectively. If Congress votes to override the President's veto of H.R. 2709, it would apparently indicate that Congress holds the view that sanctions would make a contribution to the U.S. effort of discouraging Russian transfers of missile technology to Iran.

Mr. Weldon introduced a bill (H.R. 2786) "to authorize additional appropriations for the Department of Defense for ballistic missile defenses and other measures to counter the emerging threat posed to the United States and its allies in the Middle East and Persian Gulf region by the development and deployment of ballistic missiles by Iran." This bill, as passed by the House, would authorize \$147 million for theater missile defense programs, including \$10 million to improve interoperability of the Israeli Arrow missile defense system with U.S. systems. Senator Kyl sponsored a similar bill (S. 1387), then proposed an amendment that was included in the Senate emergency supplemental appropriation bill (amendment 2079 to S. 1768) as it was passed by the Senate. This bill would appropriate \$151 million to support theater missile defense, including \$10 million for interoperability of the Israeli Arrow with U.S. missile defenses and \$45 million to purchase radar for a third Israeli Arrow battery. (See p. 20-21, below.)

Details of the Russian Transfers

During the Iran-Iraq War (1980-1988), Iran reportedly acquired Soviet-made Scud-B missiles from Libya and manufactured variants of the Scud-B acquired from North Korea. In the meantime, the Soviet Union sold over 800 Scud-Bs directly to Iraq. These missiles gave Iraq a big advantage in the deadly missile exchange known as the War of the Cities (March-April 1988) and helped force Iran to end the war before achieving its goals. Neither side used chemical warheads on their missiles during the war, but since then both reportedly have developed such warheads.⁶

After the war, Iran bought additional missiles and missile production technology from North Korea and reportedly subsidized North Korean development of the Nodong missile (1,300 km range) and perhaps longer-range missiles. Although the Nodong could reach all of Iraq from Iran, it is unclear whether it could reach Israel. Pyongyang reportedly agreed in 1993 to supply Iran up to 150 Nodong missiles, but the United States persuaded North Korea not to deliver them.⁷ Iran has apparently not acquired a significant number of Nodong missiles. Tehran then broadened its search for missile technology in support of its own missile development programs.

⁶Carus, Seth, *Ballistic Missiles in Modern Conflict*, New York, Praeger, 1991, p. 1-9, 35-48.

⁷*Flight International*, October 23-29, 1996, p. 17.

Iran reportedly encountered numerous technical problems with its ambitious missile programs and sought Russian help with guidance systems, engines, advanced materials, electronics, testing equipment, and other systems that it could not develop indigenously. Despite pledges by Soviet leaders in 1990 and by various Russian leaders since then to ban missile exports, President Yeltsin's 1994 agreement to refrain from new arms sales to Iran, and Russia's entry into the MTCR in October 1995, there are recurring reports that Russian companies are selling missile technology to Iran and other countries.

On February 6, 1997, Vice President Gore issued a diplomatic warning to then-Premier Chernomyrdin regarding Russian transfers to Iran of parts and technology associated with SS-4 medium-range ballistic missiles.⁸ Over the next several months, press reports indicated that Russian enterprises provided Iran specialty steels and alloys, tungsten coated graphite, wind tunnel facilities, gyroscopes and other guidance technology, rocket engine and fuel technology, laser equipment, machine tools, and maintenance manuals. U.S. and Israeli concerns have focused on Russian help in the development of two liquid-fuel, medium range missiles — the Shahab 3 and the Shahab 4. (See table below.) Israeli and U.S. officials believe the Shahab missiles are further improvements on the North Korean Nodong, and, according to press reports, U.S. officials estimate Iran could deploy the Shahab 3 within a year or two, and could deploy the Shahab 4 within 3 years. One article cited a “classified U.S. intelligence report” as predicting Iran would field prototypes of both missiles within 18 months. Analysts believe that the integration of a nuclear, biological, or chemical warhead, development of a sophisticated guidance system, and a system to separate the warhead from the missile body will take Iran more than several months. Israeli intelligence also reported the development of two other unnamed Iranian missiles with ranges of 5,500 km and 10,000 km (the latter is the distance from Iran to Alaska or to the northeastern portion of the United States).⁹ A report from a congressionally-mandated commission headed by former Defense Secretary Rumsfeld, released in July 1998, estimated that Iran could demonstrate an ICBM similar to North Korea's Taepo Dong 2 (up to 10,000 km range) within five years of a decision to proceed. In addition, the report said Iran is seeking and has acquired components that can be combined to produce missiles capable of reaching the United States.¹⁰

Russian assistance has apparently helped Iran overcome a number of obstacles and advance its missile development program faster than expected. The Rumsfeld

⁸*Los Angeles Times*, February 12, 1997, and *Komersant-Daily*, February 14, 1997, p. 4, as reported in FBIS-SOV-97-032, February 14, 1997. The SS-4, developed in the 1950s, had a one-stage, liquid-fuel engine and a range of 1,800 to 2,000 km. It was being phased out of the Soviet inventory when it was eliminated under the INF Treaty in the 1980s.

⁹*Defense News*, April 14-20, 1997, pp. 1, 26; October 6-12, 1997, p. 4; February 2-8, 1998, p. 8; *International Herald Tribune*, December 9, 1997, p. 1; *Jane's Intelligence Review Pointer*, December 1997, p. 5; *New York Times*, August 22, 1997, p. 1; *Washington Post*, December 31, 1997, p. A1; *Washington Times*, October 2, 1997, p. A 11; October 10, 1997, pp. A1, A11, and January 20, 1998, p. A12.

¹⁰*Report of the Commission to Assess the Ballistic Missile Threat to the United States, Executive Summary*, July 15, 1998, p. 13-14.

Commission said, "The ballistic missile infrastructure in Iran is now more sophisticated than that of North Korea and has benefitted from broad, essential assistance from Russia and important assistance from China as well." Many analysts believe continued Russian technical assistance would enable Iran to make further strides that would otherwise require years of research, development, testing, and evaluation. The Director of Central Intelligence reported to Congress that Iran is using goods and technology acquired from Russia, China, and North Korea to achieve its goal of becoming self-sufficient in producing medium-range ballistic missiles.¹¹ This progress was confirmed by Iran's July 22 test of the Shahab-3 missile, although it is not known whether or not the test was successful.

¹¹*Unclassified Report on Proliferation-Related Acquisition in 1997*, Director of Central Intelligence, p. 2,3.

Table 1. Selected Iranian Ballistic Missile Programs

Missile	Type	Range (km)	Payload (kg)	Motor	Status
Nodong	MRBM	1,300	1,000	Liquid	
Shahab-3	MRBM	1300-1500	750	Liquid	In Development
Shahab-4	MRBM	2000	1000	Liquid	In Development
Zelzal-1 (Earthquake)	SRBM	100-150	?	Solid	Produced since 1991
Zelzal-2	SRBM	350-400	?	Solid	-
Zelzal-3	MRBM	1000-1500	?	Solid?	-
Two unnamed programs	ICBM?	5,500/ 10,000	750	?	In Development, Unconfirmed

SRBM: Short Range Ballistic Missile, 70-1000 km (43-620 mi.)

MRBM: Medium Range Ballistic Missile, 1001-3000 km (621-1860 mi.)

ICBM: Intercontinental Ballistic Missile, 5001+ km (3101+ mi.)

Sources: This table is based on information derived from numerous recent press reports.

Various Russian entities are alleged to have been assisting Iran's missile programs.¹² In March 1998, the State Department listed (but did not make public) 20 Russian entities suspected of transferring missile technology to Iran. On July 15, 1998, Russian authorities announced that nine Russian entities were being investigated for suspected violation of laws governing export of dual-use technologies. The nine include the Inor NPO, Polyus Research Institute, and Baltic State Technical University cited earlier, plus the Grafit Research Institute, Tikhomirov Institute, the MOSO Company, the Komintern plant (Novosibirsk), Europalace 2000, and Glavcosmos.¹³

Iran has an extensive network of research institutes and factories engaged in the development of missiles, many of which reportedly have received assistance from

¹²According to early western press reports, the Kuznetsov NPO (Scientific Production Association), Inor NPO, Energ mash NPO, Ployus Research Institute, the Central Aerohydrodynamic Institute (TSAGI), the Bauman Institute, the Russian Space Agency, and Rosvoorouzhnie (Russian Government arms export agency) all helped Iranian missile development. *Defense News*, October 6-12, 1997, p.4; *Washington Post*, December 31, 1997, p. A1; *Washington Times*, October 2, 1997, p. A1 October 20, 1997, pp. A1, A1.

¹³*Itar-Tass*, July 15, 1998. Glavcosmos was incorrectly identified in a New York Times article as "the Russian equivalent of NASA," implying that hastily applied sanctions against Glavcosmos could adversely affect the international space station project. Steven Erlanger, "U.S. Imposes Curbs on 9 Russian Concerns," *New York Times*, July 16, 1998, p. 10. During the Soviet period, Glavcosmos was roughly analogous to NASA, but it has been superseded in that role by the Russian Space Agency, which is not in the group of nine suspect entities. Glavcosmos now has a vague middle-man status and is not believed to be involved in the space station project.

Russia. These are dispersed about the country and some are probably hardened against aerial bombardment.¹⁴

Role of the Russian Government

It is not clear whether the Russian government has allowed or encouraged this assistance or merely been unable to detect or prevent it. Initially, Moscow denied that its missiles or missile technology had been transferred to Iran, but in September 1997, Russian officials reportedly stated that such transfers were being made without the consent of the government. In January 1998, after repeated detailed complaints by numerous U.S. officials, Yuri Koptev, head of the Russian space agency, said of 13 cases raised by the U.S. Government, 11 had no connection to technology transfers related to weapons of mass destruction (nuclear, biological, or chemical) that were banned under a 1996 agreement. Two cases “which could be interpreted as an attempt to transfer dual-purpose technology,” were stopped and the government was investigating one of them.¹⁵ Koptev reportedly was irate that an Israeli intelligence report said he was involved in the transfers.¹⁶

The Russian government has taken some steps to stop the flow of missile technology and resolve the issue with the United States. In November 1997, nine months after Vice President Gore first raised the issue, Russia expelled an Iranian diplomat for trying to buy missile engine blueprints. He was reportedly the lead figure in Iran’s quest for Russian nuclear, chemical, biological, and missile technology.¹⁷ On January 22, 1998, Premier Chernomyrdin issued a decree prohibiting any Russian entity from exporting materials or services that it knows will be used to develop weapons of mass destruction or their delivery systems, and requiring government approval for exports that might be used for such purposes, whether or not they are included on Russia’s export control list, “... if the Russian foreign trade participants have grounds to believe that the products and services might be used...” for such purposes.¹⁸ The decree, which authorizes the Russian government to block exports and to penalize companies that make unapproved exports, reportedly was prompted by a telephone call from Gore to Chernomyrdin.¹⁹

¹⁴Center for Nonproliferation Studies database abstract of *Jane’s Defence Weekly*, April 23, 1997, p. 4 and related articles, and abstract of Iran Brief, September 9, 1996, pp. 1-2; *Washington Times*, February 24, 1998, p. A3.

¹⁵*Philadelphia Inquirer*, September 26, 1997, p. 3; Associated Press, Russia Halts Missile-technology Sales to Iran, January 30, 1998.

¹⁶*Washington Times*, October 20, 1997, pp. A1, A11.

¹⁷*International Herald Tribune*, December 9, 1997, p. 1.

¹⁸*Tightening Control Over Exports of Dual-Use Products and Services Related to Weapons of Mass Destruction and their Means of Delivery*, Russian Space Agency, Executive Letter No. 53, February 23, 1998, implementing the January 22, 1998 decree.

¹⁹*Nucleonics Week*, January 29, 1998, p. 14; Radio Free Europe/Radio Liberty (RFE/RL) *Newsline*, January 23, 1998.

Since then, there have been conflicting reports about the implementation of the decree and new allegations have arisen.

In February 1998, the *Washington Times* reported that Russia's Federal Security Service (FSB, a successor to the KGB) was still working with Iran's intelligence service to pass technology through a joint research center, Persepolis, with facilities in St. Petersburg and Tehran. In March, The *Washington Post* and a Moscow newspaper ran stories detailing years of FSB complicity in recruiting and transporting Russian missile scientists to work in Iran, although neither claimed the practice was ongoing.²⁰ According to the Russian Space Agency, the following steps have recently been taken: the Ministry of Education has instructed all universities and institutes to stop training Iranian students in missile technology and related subjects; the Central Aerohydrodynamic Institute has terminated cooperation with Iran on wind tunnel tests; NPO Energmash has stopped delivering special fire-fighting equipment to Iran; all activities of the Iranian firm SANAM in Russia have been terminated; and all contracts of the Ramensky aviation design bureau and of NPO Lavochkin with Iran have been terminated. Nevertheless, according to U.S. press reports, Russian firms continue to supply missile technology to Iran. A truckload of Russian stainless steel that would be particularly useful in constructing missile fuel tanks was intercepted as it was about to cross the border from Azerbaijan into Iran. Another shipment of Russian missile-related material on its way to Iran was seized in Austria. And the Moscow Aviation Institute is reportedly still training Iranian missile technicians.²¹ In addition, Yeltsin's March 23 dismissal of Chernomyrdin raises questions about the future efficacy of the Gore-Chernomyrdin Commission mechanism, which, according to the White House, relied in large part on the personal rapport and trust built up between Gore and Chernomyrdin over five years. The government shake-up also raises concerns about the new government's ability to enforce export controls.²² U.S. and Russian officials indicate that a Gore-Kirienko Commission will succeed its predecessor and continue the same work.

On May 14, 1998, a few days before the G-8 meeting in Birmingham, England, Yeltsin's spokesman announced additional measures to tighten control over the export of missile and nuclear technology. He declared that: supervisory bodies will be established at all enterprises dealing with those technologies; the Russian Space Agency will play a greater role in overseeing exports of missile technologies; and stricter licensing requirements will be implemented.²³ After the G-8 meeting, President Clinton said that he and Yeltsin had discussed the issue "in some significant detail" and that they had reached understandings that "will bear fruit." Yeltsin said that he was creating a new government commission to improve control

²⁰Daniel Williams, "Russian Spy Agency Linked to Iran," *Washington Post*, March 23, 1998, p. A14, and conversation with Mr. Williams; Yevgeniya Albats, "Our Man in Tehran," *Novaya Gazeta Ponedelnik* [Moscow], March 16-22, 1998, p. 4-5, cited in FBIS-TAC-98-076, March 17, 1998.

²¹*New York Times*, April 25, 1998, pp. 1, 24; *Washington Times*, June 23, 1998, pp A1, A14.

²²*Defense News*, April 6-12, 1998, p. 4.

²³*Jamestown Monitor*, May 19, 1998.

over high-tech exports, including those to Iran. U.S. Deputy Secretary of State Strobe Talbott, present during the Yeltsin-Clinton talks, said that Yeltsin had "reaffirmed in the clearest and most unambiguous terms" his commitment to ending the flow of missile technology to Iran.²⁴

On July 15, the newly created Russian export control commission, headed by Economics Minister Yakob Urinson, announced criminal investigations of nine Russian entities for suspected violations "of the established state system of export control and of attempts to export dual-purpose goods and services connected with weapons of mass destruction and their means of delivery by missile." Most of the nine are state-owned entities. The commission also announced that it was drafting a bill to strengthen export controls over private companies not subject to direct state oversight.²⁵ On the same day, the Clinton Administration announced that it would, where appropriate, end assistance to and trade with the Russian entities under investigation.²⁶ A White House statement said that the Russian commission's actions "demonstrate the growing effectiveness of U.S.-Russian cooperation in halting the proliferation and transfer of dangerous weapons technology and materials."²⁷ At an international conference in Manila on July 28, Secretary of State Albright and Foreign Minister Primakov reportedly agreed that in light of the Indian and Pakistani nuclear tests and Iran's recent missile test, proliferation was "the premier security issue of the post-Cold War period."²⁸ Officials on both sides have cautioned earlier, however, that it might be difficult to halt all unauthorized or illegal missile technology transfers, especially by individual scientists and small private enterprises. Some Russian officials also continue to argue that many U.S. and Israeli allegations of illicit missile technology transfers to Iran are unrelated to missile technology.²⁹

Significance

Threat to U.S. Interests in the Middle East. The Russian transfers of missile technology are of importance because they have apparently accelerated Iran's ability to produce missiles that could reach U.S. troops and friendly countries throughout the Middle East — as well as southern Russia and perhaps Greece — and deliver weapons of mass destruction. Iran produces chemical weapons for delivery of blister,

²⁴Ibid.

²⁵*Jamestown Monitor*, July 16, 1998. The nine Russian entities are named on p.8, above.

²⁶A July 28 White House press release announced trade sanctions against seven Russian entities. According to the State Department, the United States has no information about two of the nine Russian entities under investigation in Russia, the Tikhomirov Institute and the Komintern plant. Under U.S. laws and regulations, they are excluded from U.S. sanctions at this time. Conversation with State Department official, July 29, 1998.

²⁷*U.S. Newswire*, July 15.

²⁸Carol Giacomo, "U.S., Russia Will Discuss Ending the Spread of Nuclear Weapons," *Washington Times*, July 29, 1998, p. 15.

²⁹An official of the Russian Foreign Ministry's export control department was quoted as saying on July 17, 1998 that, "[M]ost of these allegations simply are U.S. rhetoric aimed at undercutting Moscow's trade." Simon Saradzhyan, "Alleged Missile Sales to Iran Divide Russia's Leadership," *Defense News*, July 27-August 2, 1998, p. 3, 20.

blood, and choking agents and might have the ability to fit chemical warheads to ballistic missiles. Iran is also conducting research on biological and nuclear weapons but it is not known when the country might have such weapons that could be delivered by a ballistic missile. U.S. intelligence estimates that Iran could produce an atomic bomb — though perhaps not a nuclear missile warhead — by the middle of the next decade.³⁰

Russia as a Proliferator. The Russian missile technology transfers are also important as an indicator of Russia's willingness and ability to control exports of dangerous technology to countries that are trying to acquire weapons of mass destruction and have a history of belligerence. The United States has taken great efforts to establish and win Russian participation in nonproliferation regimes for nuclear, biological, and chemical weapons and missile delivery systems. The United States has given Russia technical assistance on operating an effective export control system and, through the Nunn-Lugar Comprehensive Threat Reduction initiative, has also helped Russia with the safe and secure transportation, storage, and dismantlement of its weapons of mass destruction. Because Russia has large inventories of weapons of mass destruction, large quantities of equipment and material to produce such weapons, and large numbers of underemployed scientists and technicians, it is critical to U.S. nonproliferation goals that Russia maintain strict control of these resources.

Russian-Iranian Nuclear Cooperation

Iran's Nuclear Power Program

Iran's efforts to add nuclear power generation to its electric power grid began in 1974, when it contracted with the West German nuclear firm Kraftwerk Union (KWU) to build two large pressurized water reactors (PWRs) at Bushehr, near Kharg Island. At one point 10,000 workers were reported at the construction site.³¹ Following the 1979 revolution, the Islamic government canceled the project, but a few years later changed its mind and asked KWU to finish the plants. However, the West German government prohibited KWU from sending nuclear components and personnel to Bushehr because of Iran's war with Iraq. In fact, Iraqi air raids and missile attacks damaged the project. Although at the time it was canceled in 1979 the two plants were said to be 70% and 50% complete, essentially no components of the nuclear steam supply system had been shipped to Iran.

Even after the Iraq-Iran war ended, Germany and Iran could not agree on a plan to finish the project, and Iran turned to Russia for help. In January, 1995, the Russian nuclear agency MINATOM signed a contract to finish one unit of the Bushehr project

³⁰Ibid; Office of the Secretary of Defense, Proliferation: Threat and Response, November 1997, p. 27; Reuters, Nov. 18, 1997.

³¹"Possibility Raised for Resuming Iranian Nuclear Project." *Nucleonics Week*, December 22, 1983, p. 1. The number may be exaggerated, but it is not impossible. In U.S. nuclear construction projects at their peak construction workers numbered in the thousands.

for \$800 million, with a projected 55-month construction schedule.³² The Russian agency later decided not to try to finish the German plant, but to build a Russian-designed PWR on the site instead.

Why Is Oil-Rich Iran Building Nuclear Power Plants? At the time the Shah's government first started a nuclear power program, questions were raised about the economic role nuclear power could play in a nation with vast oil and gas resources. In the 1970s, however, there was widespread belief that world oil supplies were limited and prices would continue to rise as they had during the 1973 Arab oil embargo. At the same time, nuclear power was viewed as a technology already cost-competitive with oil and gas and sure to become more so as it matured and as fossil fuel prices increased. In such a situation, oil and gas deposits were looked on by many as resources that would increase in value in the future, worth preserving by substituting cheap nuclear power.

Since the 1970s, however, the world energy picture has changed radically. World proved oil reserves, instead of declining, have increased by about 50% over what they were in 1973, and real prices have declined below what they were before the oil crisis. Iran's petroleum resources are thus declining in value, and exports are limited by world demand rather than supply. While this trend has been taking place, nuclear power has turned out to be more costly than anticipated. Nuclear plants may make economic sense for countries without domestic energy resources, like Japan, France, South Korea, and Taiwan, where they can contribute to energy security and save the cost of importing fuels for power generation. But it is difficult to argue that oil-rich countries like Iran will soon recover the high capital costs of building nuclear power plants through the increased sale of oil and gas in the current world petroleum market.

The Bushehr Project. In one respect, Bushehr is a bargain for Iran. The Russian offer to build a 1,000-megawatt plant at Bushehr for \$800 million is far below the typical cost of such a facility.

However, progress on the project has been slowed by technical and financial difficulties. Some 750 Russian technical personnel are reported to be on site. In February 1998, Viktor Mikhailov, then head of MINATOM, complained that the Iranian participants in the project, who had been responsible for preparing the site for the installation of the nuclear components, had not done so, and that this task would have to be done by the Russians also. Yevgeny Adamov, who was appointed Atomic Energy Minister in March after Mikhailov unexpectedly resigned, is cited in the press as confirming that the Russian agency would take over construction of the entire plant, adding that the 1995 contract would have to be renegotiated to reflect the additional work.³³

Adamov reportedly also said that the recent decision by the Ukraine government not to sell electric generating turbines for the Bushehr project would not delay its

³²Hoffman, David. "Russia Expanding Role in Iranian Power Plant." *The Washington Post*, February 22, 1998, p. A30.

³³"Russia Confirms Plan to Build Nuclear Plant in Iran." *Associated Press*. March 11, 1998.

completion. Ukraine's decision to cancel the \$45 million sale came at the urging of the United States. Adamov said the turbines could be built in a plant in St. Petersburg. However, the Ukraine has been the primary supplier of turbines for Russian-designed nuclear power plants.

U.S. Concerns about Proliferation

The United States has opposed the Bushehr project since the Islamic revolution, both during Iran's negotiations with KWU to finish the plant, and since the Russians took over the project. However, U.S. concerns are not focused primarily on the power plant itself. It is not expected that Iran would divert weapons material from the Bushehr PWR. If Iran has a program to produce nuclear weapons, as the United States believes, then it is aimed at producing or obtaining highly enriched uranium, or at clandestine construction of a small reactor specifically designed to produce bomb-quality plutonium.

The Bushehr plant itself is therefore not considered a source of weapons material. Rather, the project is viewed as a proliferation risk because it entails massive involvement of Iranian personnel in nuclear technology, and extensive training and technological support from Russian nuclear experts. This involvement and training may well provide a cover for those Iranians who are pursuing development of nuclear weapons. It would be much more difficult for Iran to conceal its weapons activities if the Bushehr project were canceled. As long as it continues, regardless of delays or difficulties, it can shelter the clandestine activities of the weapons program.

Iran's Nuclear Weapons Activities. The Shah's government reportedly had a small nuclear weapons research program. The present Iranian government denies having any interest in nuclear weapons, although Iranian officials have on occasion made statements supporting acquisition of nuclear weapons.³⁴ However, senior U.S. officials — including the Secretary of State, the Secretary of Defense, and past directors of the CIA, have stated repeatedly that Iran has a program to develop nuclear weapons.³⁵

This U.S. assessment is reportedly based partly on intelligence reports, but it is reinforced by Iran's continued efforts to procure equipment and technologies unnecessary for power production but needed for weapons development. Despite insisting that its interest in nuclear energy is only for civilian power production, Iran reportedly has attempted to obtain facilities such as uranium enrichment plants, which are necessary to produce highly enriched uranium for weapons, and heavy water, used in plutonium production reactors. Recently, an Iranian attempt to obtain from China large amounts of a chemical necessary to prepare natural uranium for

³⁴ Elaine Sciolino, "Report Says Iran Seeks Atomic Arms," *New York Times*, Oct. 31, 1991.

³⁵ Nonproliferation Center, Central Intelligence Agency, *The Weapons Proliferation Threat*, March 1995, p. 12; R. James Woolsey, Director of Central Intelligence, Testimony before a hearing on Proliferation Threats of the 1990's, Senate Governmental Affairs Committee, Feb. 24, 1993, S. Hrg. 103-208, p. 53; Elaine Sciolino, "CIA Says Iran Makes Progress On Atom Arms," *New York Times*, Nov. 30, 1992.

enrichment elicited a protest from the United States and a denial from China.³⁶ Similarly, news reports that Russia had agreed to sell Iran tritium, which is used in nuclear explosives, and was considering selling centrifuge technology for uranium enrichment, were denied by Adamov. Iran had had talks 18 months earlier with Mikhailov about obtaining a research reactor, Adamov said, but the Russian government has not yet approved the project.³⁷ A research reactor, although much smaller than the Bushehr PWR, might be technically easier to convert to weapons material production.

Other governments concur with the U.S. assessment. Although Russian officials now say they have no evidence of such a program, a 1993 Russian intelligence service report concluded that Iran “has a program of military-applied research in the nuclear sphere.” The report predicted that “without outside scientific and technical assistance, the appearance of nuclear weapons in Iran in this millennium is unlikely.”³⁸ A more recent Russian intelligence report — released after the controversy over Russian nuclear sales to Iran — backed away from the earlier assessment.³⁹ Russia, eager for income from the sales of nuclear plants abroad, insists that it is doing nothing more than fulfilling its obligation as a nuclear weapons state to provide peaceful nuclear technology to non-nuclear signatories of the Nuclear Nonproliferation Treaty (NPT).

The Russians also argue that the PWR reactors they are building in Iran cannot be used for bomb-making and will be closely monitored by Russian and IAEA safeguards, and that the Russian reactors are the same type that the United States is helping provide for North Korea — a state that is not in full compliance with IAEA safeguards. Nevertheless, Adamov was quoted in the press as acknowledging Iran’s weapons ambitions. “I am sure that Iran is trying to create a nuclear arsenal. It would be foolish to suppose that they do not want to create one,” he is quoted as saying after he was confirmed in his new job as MINATOM head by President Boris Yeltsin.⁴⁰

Iran and the NPT. Iran is a signatory of the NPT, and accepts International Atomic Energy Agency (IAEA) safeguards on its nuclear program. That program consists mostly of a small research reactor in Teheran. The uncompleted Bushehr project has not received any nuclear fuel and hence is not yet subject to IAEA inspection. In response to charges that it has a secret nuclear weapons program, in 1992 and 1993 Iran invited the IAEA to visit various facilities suspected of housing secret weapons work. The visits produced no new information about undeclared nuclear activities.

³⁶“Spokesman Denies Nuclear Sales to Iran.” *Agence France Press*, March 17, 1998.

³⁷Shepherd, Leslie. “Iranian Nuclear Chief to Visit Russia Amid Controversy.” AP, May 8, 1998.

³⁸ JPRS-TND-93-007, Mar. 5, 1993, “Russian Federation: Foreign Intelligence Service Report,” p. 28.

³⁹ JPRS-TAC-95-009-L, Apr. 6, 1995, “Russian Foreign Intelligence Service Report on Nuclear Nonproliferation Treaty,” p. 19.

⁴⁰“Russia Says Nuclear Sales to Iran Pose No Threat.” *Reuters*, May 11, 1998.

In the absence of IAEA evidence, the U.S. claim that Bushehr is a proliferation threat is difficult to openly demonstrate. Nevertheless, the United States maintains that Russia's nuclear cooperation with Iran will provide Teheran with the knowledge and technological foundation needed to operate a clandestine nuclear weapons program.

Iranian Issues

Iran's relations with Russia are based on strategic interests, but tempered by lingering fear of Russian power and intentions. In 1907 Russia concluded a treaty with Britain dividing Iran into spheres of control — Russia's in the north, Britain's in the south, and a neutral center for Iran. Russian troops occupied northern Iran during World War I. Soviet troops invaded again in 1941, in concert with Britain, when Iran was becoming sympathetic to Germany. The then Shah, Reza Shah Pahlavi, was forced to abdicate in favor of his son, Mohammad Reza Pahlavi, the last Shah of Iran. The Soviet Union refused to withdraw completely from Iran in 1945 and set up two autonomous republics in the north — one in Iranian Azerbaijan (inhabited by Azeris, a Turkic people) dominated by the pro-Moscow Tudeh Party and another in the Kurdish areas of northern Iran. These autonomous zones threatened to break up Iran and emboldened pro-Communist elements throughout the country. A combination of U.S. threats and Iranian oil concessions persuaded the Soviets to withdraw in 1946, and the Soviet-sponsored autonomous republics collapsed and were occupied by Iranian government forces.

Throughout most of the first decade of Iran's Islamic Republic, formed in 1979 after the fall of the Shah, the Soviet Union loomed as a potential threat. The Soviet invasion of Afghanistan (on Iran's eastern flank) in December 1979 revived Iranian fears that Moscow might have territorial designs on Iran. The Soviets also backed Iraq through the 1980-88 Iran-Iraq war. Iraq and the U.S.S.R. had close ties dating to a 1972 Treaty of Friendship, and Moscow was Iraq's most important arms supplier during that war. The United States and its allies also tilted toward Iraq, leaving Iran virtually isolated and with few outside sources of arms supply. Partly as a result of its isolation, Iran suffered a series of major battlefield defeats in 1988 that forced Ayatollah Khomeini to accept a U.N.-brokered end to the war.

Its armed forces devastated after the war, Iran looked to rebuild. It found a willing collaborator in the Soviet Union. A February 1989 visit to Tehran by Soviet Foreign Minister Edouard Shevardnadze, and his meeting with the ailing Ayatollah Khomeini, signaled a thaw in Iran's relations with the Soviet Union. Iran established an arms and technology transfer relationship in a key visit to Moscow by then parliament speaker Ali Akbar Hashemi-Rafsanjani, June 19-23, 1989. (The visit began two weeks after Ayatollah Khomeini died, and two months before Rafsanjani was elected president of Iran.)

The Rafsanjani visit represented a strategic breakthrough that set the tone for current Russian-Iranian relations. The joint communique issued at the conclusion of the Rafsanjani visit said that the two countries would collaborate in the "peaceful use of nuclear energy" and that the U.S.S.R. "agreed to bolster the military capacity of

the Islamic Republic.”⁴¹ The visit also resulted in agreements for Iran to export natural gas to the Soviet Union and participate in Central Asian railway construction.

Soon after the Rafsanjani visit, Soviet/Russian weaponry began flowing into Iran. Since 1991, Iran has taken delivery of 25 MiG-29 and about 12 Su-24 combat aircraft. Russia also has transferred to Iran 150 T-72 tanks, three Kilo-class diesel submarines, and SA-5 and SA-6 anti-aircraft missiles.⁴² This weaponry has helped Iran rebuild its arsenal, which was depleted in the eight-year war with Iraq. Even with these acquisitions, however, Iran is not as well equipped as Iraq in ground armor. It also lacks the logistical capabilities to cross the Persian Gulf in force. On the other hand, the Kilo submarines are a new capability for a Persian Gulf country. U.S. military officials are concerned that the submarines — coupled with other naval equipment received from China — enhance Iran’s ability to threaten commercial or military shipping in the Gulf and might enable it to lay mines undetected.⁴³

This strategic relationship with Russia might help explain why Iran, contrary to widespread expectations, has emphasized economic cooperation over religion and ideology in its relations with the predominately Muslim states of the former Soviet Union. After the Soviet Union broke up in 1991, Russia and the secular leaders of the Soviet successor states in the south were concerned that Iran might try to spread revolutionary Islam in Central Asia and the Caucasus. However, former President Rafsanjani and other Iranian pragmatists saw these regions as an export market and a means to thwart U.S. efforts to isolate Iran. Rafsanjani appears to have made a case within Iran that political meddling in Central Asia, which Russia considers its sphere of influence, could jeopardize continued sales of advanced conventional weapons and equipment related to weapons of mass destruction. Iran also saw Russia as an ally in arguing that all states bordering the Caspian Sea should share in Caspian oil and gas development.

The election in May 1997 of a relative moderate, Mohammad Khatemi, as Iran’s president produced speculation that Iran might try to scale back its weapons of mass destruction programs and, correspondingly, to distance itself from Russia. Since taking office in August 1997, Khatemi has tried to improve relations with the Arab Gulf states and the West, including the United States. At the same time, however, Iran’s weapons of mass destruction programs have reportedly continued apace and relations with Russia have broadened. In September 1997, the Russian gas company Gazprom announced it would invest \$600 million (a 30 percent share) in a tri-national project to develop Iran’s large South Pars offshore gas field. In February 1998, Iran’s Foreign Minister visited Moscow and stated, “the political will exists

⁴¹Islamic Republic News Agency [IRNA] on Communique, June 25, 1989, in FBIS-NES - 89-121, June 26, 1989, p. 31-33.

⁴²See Eisenstadt, Michael. *Iranian Military Power: Capabilities and Intentions*. Policy Paper Number 42. Washington Institute for Near East Policy, 1996, p. 36.

⁴³Gertz, Bill. “U.S. Commander in Gulf Sees Increased Threat From Iran,” *Washington Times*, January 29, 1997, p.A5.

between the leadership of our two countries to increase mutual cooperation in the economic and political fields and on the international stage.”⁴⁴

Israeli Security Concerns about Iran

Israel views Iran’s ballistic missile program as a threat to its security and national survival. Iranian leaders have called for Israel’s destruction and do not recognize its right to exist. While much of the Arab world has moved toward acceptance of Israel under various conditions, Iran still formally rejects the idea of coexistence, although there are signs that Khatemi might be trying to reduce Iran’s opposition to the Middle East peace process. Iran is loosely allied with Syria, with which Israel is still technically in a state of war. According to annual State Department reports on international terrorism, Iran gives financial and material assistance to groups such as Hizballah, Hamas, and Palestinian Islamic Jihad, that have committed acts of terrorism in Israel and fight Israeli troops in south Lebanon. Israeli concerns may be heightened by memories of Iraq’s firing of 39 Scud missiles at Israel during the 1991 Persian Gulf. Israel fears that Iran already has chemical warheads and might develop the capability to launch biological agents and eventually nuclear warheads at Israel on the ballistic missiles it is developing.⁴⁵ In view of Israel’s small size and the concentration of its population in a few urban centers, Israelis are vulnerable to even a small number of weapons of mass destruction.

Russian Issues

Russia’s multifaceted cooperation with Iran is motivated by geopolitical, economic, and political considerations. It is not a new policy. After Iran’s Islamic revolution in 1979, and especially after the Soviet withdrawal from Afghanistan a decade later, Moscow actively sought a rapprochement with Iran.⁴⁶ Rafsanjani’s 1989 visit to Moscow started the flow of sophisticated Soviet weapons to Iran. Through the 1990s, both Moscow and Tehran carefully broadened and extended their cooperation into what has become a mutually beneficial, though unofficial, alliance of convenience.

From a geopolitical perspective, no country is more important to Russia in the Middle East/Persian Gulf/Southwest Asia region than Iran. Iran’s location also enables it to play a role in Central Asia and the Caucasus. These are all areas of strong Russian interest. It appears that Russia’s top foreign policy priority is to be the dominant force on the territory of the former Soviet Union. As noted above,

⁴⁴Jones, Gareth. “Russia, Iran Vow to Beef Up Ties, United Over Iraq,” Reuters, February 25, 1998.

⁴⁵Ze’ev Schiff, “Iran’s Missiles — What’s New?” *Ha’aretz* [Tel Aviv], November 10, 1997, p. 3, cited in FBIS-TAC-97-314.

⁴⁶This overview of Russian-Iranian relations is based in part on the work of Robert O. Freedman. See, for example, his “Russia and Iran: A Tactical Alliance,” *SAIS Review*, v. 17, summer-fall 1997. See also, *Soviet Policy Toward Iran and the Strategic Balance in Southwest Asia*, CRS Report 87-592, June 19, 1987, by Stuart D. Goldman.

Moscow values Iran's restraint in the predominantly Muslim Soviet successor states in Central Asia. Russia and Iran also share an interest in countering Azerbaijan⁴⁷ and have cooperated against the puritanical Islamist Taliban movement in Afghanistan.

As Russian foreign policy became more nationalistic and resentful of American "global hegemonism" and "unilateralism" under Foreign Minister Yevgeny Primakov, Moscow turned further toward Tehran as a partner. Iran's low-keyed response to Russia's war in Chechnya and its pro-Serb policies in Bosnia, despite the "anti-Islamic" aspects of those Russian policies, also helped solidify their relations.

There is also an important economic dimension to Russia's cooperation with Iran: Russian defense and nuclear industries are in severe economic distress, and Iran reportedly pays hard currency for nuclear reactors, missile technology, and conventional weapons purchases.

In the Soviet period, the defense sector absorbed a huge percentage of GDP. In the space of just a few years, however, this sector was displaced from its position near the top of the pyramid to a relatively low status in which many of its major elements are struggling to survive. MINATOM, which employs about one million people, is in much the same economic condition as the rest of the defense industrial sector. Workers are being paid subsistence and below-subsistence wages while many enterprises and research institutes stand idle. Salaries often are months in arrears. The director of a prestigious nuclear institute committed suicide because he could not pay his workers. Against this background, foreign reactor sales are viewed as a matter of survival in MINATOM. Nuclear reactor sales worldwide have been slow since the accidents at Three Mile Island and Chernobyl. MINATOM reportedly is discussing reactor sales with China, India, Egypt, and Cuba. Those governments, however, unlike Iran, seek Russian loans to finance part or all of the sales.

MINATOM's first completed foreign sales contract was with Iran. The contract for the first reactor at Bushehr is valued at \$800 million. With recent contracts for two additional reactors at Bushehr, MINATOM spokesmen put the total Iran package at \$3-4 billion, over 15 years. U.S. estimates of the total Iran package are as high as \$8 billion. The entire Russian state budget for 1998 is less than \$80 billion and faces deep cuts because of a mid-year economic crisis. A multi-billion dollar sale to Iran would be a very significant input. Despite U.S. objections, Moscow appears determined to go ahead with the reactor deal. Missile technology transfers may also be motivated by economic factors. Russian advocates of close cooperation with Iran argue that profits from the reactor project and other deals far exceed the amount of U.S. aid that might be jeopardized by sanctions.

Although official U.S. foreign aid to Russia in FY1998 is expected to be \$120-\$130 million, the United States has much greater economic importance to Russia. The value of U.S. investments in Russia (where the United States is the largest foreign investor), of the U.S. market for Russian sales, and of indirect U.S.

⁴⁷Some Azeri leaders publically declare the goal of absorbing "southern Azerbaijan," which is part of Iran. Baku also resists Russian attempts to dominate Caspian Sea oil and regional pipelines. This provides a basis for Russo-Iranian cooperation against Azerbaijan.

Government assistance via multibillion dollar IMF loans (which have strong U.S. political backing within the IMF and on which Russia is highly dependent) and U.S. support of Russian space activities far exceeds the value of Iranian contracts with Russian enterprises. U.S. economic sanctions could be made to be very painful to Russia if a decision were taken to pursue such a course, especially in view of Russia's renewed economic crisis in mid-1998.⁴⁸ The Administration, however, clearly wishes to avoid this approach because of concerns that severe economic sanctions and pressure might seriously strain already tense U.S.-Russian relations and endanger Russia's fragile progress toward democratization and market reform. The Administration also argues that the Russian Government is now taking effective steps to curb missile technology transfers to Iran.

There are international and domestic political calculations that seem to reinforce Moscow's cooperation with Iran. Many Russians argue that close collaboration or alliance with Iran (and China) is an appropriate response to NATO enlargement. Also, as U.S.-Russian relations become more contentious and Russian resentment of U.S. global preeminence (and of Russia's dependence on U.S.-backed IMF loans) grows, many analysts believe it is politically expedient for Yeltsin to be seen as "standing up to America" by rebuffing U.S. pressure on Iran. This helps assuage Yeltsin's communist and nationalist opposition in the Duma. It also strikes a resonant chord in Russian public opinion. These political considerations, however, are probably not as important as the geopolitical and economic factors noted above.

Some observers believe there are serious policy differences within the Russian Government on issues of cooperation with Iran.⁴⁹ This view usually juxtaposes "reformers" such as Chubais, Nemstov, and their allies⁵⁰, who advocate close cooperation with the United States, against "hardliners" such as Foreign Minister Primakov, the national security apparatus, and their communist and nationalist allies, who seem to perceive Russian and U.S. interests as fundamentally antagonistic.

The clearly articulated policy of the Russian Government to treat Iran as a valued partner, if not an ally, may undermine Russian officials' willingness to effectively implement exports controls on sensitive technology to Iran. Furthermore, many Russian commentators and officials argue that U.S. opposition to Russia's cooperation with Iran is commercially motivated. There are two versions of this argument: a) the United States wants to cripple Russian enterprises that are powerful competitors to U.S. arms and nuclear reactor exporters; and/or, b) U.S. firms dream of eventually recapturing the Iranian market that they dominated until 1979.

⁴⁸A recent Russian newspaper article critical of the government's complicity in Iran's missile development program cautioned that, "Military assistance to Iran could bring Russia approximately \$2 billion annually. Possible losses from various sanctions [by] the EU and the United States total approximately \$50 billion." Albats, "Our Man in Tehran," p. 4. This was written before the July 1998 IMF-brokered \$22 billion loan package for Russia.

⁴⁹See, for example, Saradzhyan, "Missile Sales to Iran."

⁵⁰Economics Minister Urinson, who heads the new commission on export controls, is associated with Chubais.

U.S. Policy

Dual Containment

Throughout its first term, the Clinton Administration consistently characterized Iran as an “outlaw state” that should be contained and isolated. According to the Administration, the key U.S. objections to Iran’s international behavior include its support for international terrorism, its active opposition to the Arab-Israeli peace process, and its efforts to acquire weapons of mass destruction. In 1993, the Administration placed the containment of Iran within a broader policy framework of “dual containment” that casts both Iran and Iraq as “rogue regimes” that it seeks to keep weak.⁵¹

One of the elements of dual containment has been to cut off the supply of arms and technology to Iran. U.S. pressure on Russia, beginning in 1991, did not persuade Russia to cancel arms sales to Iran. However, after two years of talks on the issue, in May 1995 the United States and Russia finalized an agreement under which Russia pledged not to enter into any new arms agreements with Iran. On the basis of that understanding, the United States dropped its objection to Russian entry into a new, nonbinding export monitoring regime, the Wassenaar Arrangement. However, the U.S.-Russian agreement on conventional sales to Iran has not contributed to a resolution of bilateral differences on the nuclear power plant deal or on Russian entities’ assistance to Iran’s ballistic missile programs.

U.S. efforts to cut off Iran’s supply of strategic weapons and conventional arms has continued despite the election of Mohammad Khatemi as Iran’s president. His election, and subsequent statements indicating a desire for better relations with the United States, have produced signs of a possible easing of hostility between the United States and Iran. In January 1998, Khatemi publicly called for greater unofficial scholarly and cultural exchanges between the United States and Iran. Under pressure from more conservative senior leaders, including Supreme Leader Ali Khamenei, Khatemi stopped short of calling for dialogue with the U.S. government. U.S. officials, from President Clinton down, have responded that the United States would prefer a political dialogue with the Iranian government, but would look to facilitate the “people-to-people” exchanges mentioned by Khatemi.

On June 17, the Administration appeared to shift further toward conciliation in a speech by Secretary of State Albright. Secretary Albright said that the two countries should work to develop a roadmap of confidence building measures that could eventually lead to a normalization of relations. President Clinton echoed those comments the following day, and in a message broadcast in advance of the June 20 World Cup soccer match between Iran and the United States. Iran reacted cautiously to the statements, saying they need to be met with concrete deeds (such as easing of

⁵¹On May 19, 1993, former NSC Senior Director for the Near East Martin Indyk first described the Administration’s policy as one of “dual containment” of Iran and Iraq. Text of Martin Indyk’s speech can be found in the proceedings of the Soref Symposium, *Challenges to U.S. Interests in the Middle East: Obstacles and Opportunities*, May 18-19, 1993. Washington, Washington Institute for Near East Policy, p. 1 - 8.

U.S. sanctions on Iran) before relations could improve. President Khatami himself has not yet responded to the Albright speech specifically.

Members of Congress, although increasingly open to dialogue with Iran, oppose easing of sanctions in advance of concrete changes in Iranian behavior. Some Members of Congress opposed Administration consideration of removing Iran from the list of states that do not cooperate with U.S. anti-narcotics efforts. Iran was re-designated as non-cooperative in February 1998 (as it has been every year since 1987), although the Administration noted reports of Iranian progress on anti-narcotics efforts. Several Members also opposed the Administration's May 18 waiver of sanctions on the foreign firms that invested in Iran's South Pars gas field.

In addition, some pro-Israel groups and Iranian opposition groups want strict enforcement of all U.S. sanctions against Iran. Some of these groups oppose easing pressure on Iran as long as it supports terrorism, seeks weapons of mass destruction, and hinders the Arab-Israeli peace process. They also maintain that Khatami's grip on power is not firm, and he could quickly be ousted or neutralized by hardline elements within the regime. Others believe that Khatami himself has undertaken a "charm offensive" in an effort to blunt U.S. sanctions, with no real intention of improving relations with the West.

Missile Technology Transfers to Iran

The Arms Export Control Act (AECA, P.L. 90-629) restricts exports of military items, including missiles and related technology. The Export Administration Act of 1979 (EAA, P.L. 96-72), until it expired on August 20, 1994, contained the legal authority for the government to control exports of civilian goods and technology that are also useful for missile production. Congress has not passed a revised version of the EAA. President Clinton reimposed export controls under the authority of the International Emergency Economic Power Act (IEEPA). He did this by declaring a national emergency to deal with the threats to the United States caused by the lapse of the EAA and system of export controls (Executive Order 12924, August 19, 1994). Each year he has extended that national emergency.

On November 14, 1994, President Clinton declared a national emergency under the authority of the IEEPA in light of the dangers of the proliferation of nuclear, biological, and chemical weapons and the means of delivering such weapons (E.O. 12938). This executive order declared the export control regulations initiated by President Bush under the Enhanced Proliferation Control Initiative remained in force. On July 28, 1998, President Clinton issued an amendment to E.O. 12938 (effective July 29, 1998). The amendment adds penalties for contributions to foreign *nuclear weapons and missile programs* as well as the chemical and biological programs previously covered. Whereas E.O. 12938 required a finding that a foreign person "*knowingly and materially*" contributed to proliferation, the amendment requires a finding only that a foreign person made a "*material contribution*" (removing the factor that the person did so knowingly), or that a foreign person *attempted* to contribute materially to proliferation efforts. The amendment expands the range of potential penalties to include the *prohibition of U.S. government assistance*, as well as previously specified penalties prohibiting imports and procurement from the proliferating person. Also the amendment authorizes the Secretary of State to tailor

the U.S. response to proliferation efforts by *determining the extent to which these measures should be imposed*, considering national security and foreign policy interests, the likely effectiveness of such measures, and their costs and benefits.

In November 1990, Congress amended the AECA and the EAA to include export restrictions and penalties to be imposed on U.S. and foreign persons and firms that improperly transfer missile technology. In many cases, the sanctions provisions of these laws do not apply to companies or individuals exporting from countries that are adherents to the MTCR. (See p. 3, above, for a more detailed discussion.)

In addition to these general policies against missile proliferation, Congress sharpened U.S. policy toward Iran by passing and later amending the Iran-Iraq Arms Nonproliferation Act of 1992 (P.L.102 -484). This law requires sanctions against those who provide weapons of mass destruction or destabilizing types and numbers of advanced conventional weapons to Iran or Iraq, although it also gives the President waiver authority.

Congress also amended the Foreign Assistance Act of 1961 (FAA) to prohibit aid to: 1) states of the former Soviet Union that transfer technology that contributes to the production of missiles or weapons of mass destruction (sec. 498A), 2) countries that aid terrorist states (sec. 620G, 22 U.S.C. 2377), and countries that provide military equipment to terrorist states (sec. 620H). Finally, in the current Foreign Operations Appropriations Act (P.L. 105-118, Title II), Congress reduced aid to Russia unless the President certifies it has terminated its ballistic missile and nuclear technology assistance to Iran.

In addition to appealing to Russian national security interests and threatening economic sanctions, the Administration is using economic incentives to try to deny Iran missile technology. In March 1998, the Administration announced it was offering to increase the number of western commercial satellites Russia would be allowed to launch. Under a 1996 agreement, Russia was limited to launching 20 western geostationary satellites through the year 2000. Since then, the demand for commercial launches has increased. American businesses in joint ventures with Russians have urged the Administration to increase Russia's quota, but it had hesitated until now. Each launch costs \$60-\$100 million. U.S. officials say publicly that the additional satellite launches were not offered as a quid pro quo, nor merely as an enticement for Russian cooperation on Iran. But both sides privately acknowledge linkage between additional launches and more effective Russian control of missile technology.⁵²

Since early 1997, the Administration has considered Russian missile technology transfers to Iran a high priority. The President appointed a special representative for this issue, who met frequently with Russian officials in Moscow and Washington. In addition, Vice President Gore has taken the issue up directly with former Premier Chernomyrdin, most recently in their talks in Washington, March 10-11, where they agreed to set up a special expert joint commission to focus on issues of missile and nuclear technology transfers. Russian officials at that time reportedly gave

⁵²*Jamestown Monitor*, March 10, 1998; *Defense News*, March 16-22, 1998, p. 12.

assurances that tougher controls on missile technology transfers had recently been put in place and that some violators were already being prosecuted.⁵³

Russian Nuclear Cooperation with Iran

Following the announcement of the Russian-Iranian nuclear reactor deal in January 1995, the Clinton Administration mounted an intense effort to persuade Moscow to cancel the deal, with frequent meetings at the sub-ministerial level and between the U.S. Secretaries of State and Defense and their Russian counterparts and with Chernomyrdin. Moscow consistently rebuffed the U.S. overtures. At the Clinton-Yeltsin summit in Moscow in May 1995, Yeltsin made a significant concession by agreeing not to provide Iran with gas centrifuge equipment — which would have enabled Iran to produce highly enriched (weapons grade) uranium. (These centrifuges had been included in the January 1995 Russian-Iranian agreement.) Moscow also pledged to tighten its monitoring of Iran's nuclear program and to bring all spent nuclear fuel back to Russia.

Nevertheless, although the Administration has continued to view the Bushehr nuclear reactor program as a very serious matter, it apparently has come to believe that it cannot persuade the Russian Government to renounce the deal. As noted above, Congress has included economic sanctions against Russia in the foreign aid bill each year since 1995, but has acceded to Administration requests for inclusion of presidential waiver authority on national security grounds. (See p. 2, above.)

With H.R. 2709, Congress confronts Russia and the Administration with more stringent requirements for sanctions in connection with missile technology transfers, although the bill also provides authority for a presidential waiver on national security grounds. Final congressional action is expected in early June 1998.

Pending Legislation⁵⁴

A number of bills have been introduced in the 105th Congress dealing with Russian-Iranian missile technology and nuclear reactor transfers, arms sales, and energy sector investments. The "Iran Missile Proliferation Sanctions Act" (Title I of H.R. 2709, described above, p. 1, 3) has broad bipartisan support and was passed in both chambers by seemingly "veto-proof" majorities. H.R. 2709 combines sanctions on aid and trade with Russian missile proliferators with Chemical Weapons Convention (CWC) implementation legislation that the White House wants. The president vetoed the bill on June 23. A veto-override attempt is expected after the August recess. If it fails, it is not clear if or when Congress will vote to approve the CWC implementing legislation.

⁵³CRS interviews with congressional staff and Russian diplomats, March 1998.

⁵⁴Drawn in part from CRS reports and memoranda by Dianne Rennack, Analyst in Foreign Policy Legislation.

Two nonbinding resolutions, H.Con.Res. 121 and S.Con.Res. 48, introduced by Representative Harman and Senator Kyl respectively, express the sense of the Congress condemning Russian missile technology transfer to Iran and urging the President to impose sanctions. S.Con.Res. 48 was passed by the Senate on November 7, 1997 and sent to the House. Another bill, H.R. 3743, introduced by Rep. Menendez, cuts U.S. contributions to the IAEA by the amount that agency is providing in technical assistance to the Bushehr reactor.